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East African Community:

Pre-conditions for an Effective Monetary Union[1]

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Abstract: Kenya, Tanzania and Uganda signed the Treaty for the establishment of the East African Community (EAC) in 1999, which entered into force in July 2000. In 2007 it was signed by Burundi and Rwanda. According to the Treaty, EAC should first form a customs union, then a common market and a monetary union, and finally a political union. The Customs Union was formally completed in 2010, and Common Market Protocol was signed in 2009. Currently the intention is to sign the East African Monetary Union protocol 2012, while the date for actual implementation of the common currency is uncertain. The purpose of this note is to discuss preconditions for an effective monetary union among the EAC members, with a focus on Rwanda. It first outlines potential economic benefits and costs of a monetary union, and then discusses political and institutional preconditions. It concludes that although there are potentially substantive economic net-benefits, a monetary union is a risky project for political reasons. The political will among policymakers is key to successful implementation, and it could vanish with a change of government or because of discontent among influential lobby groups. However, the process towards forming are monetary union is appears to be highly beneficial the EAC members, both directly by improving monetary policy and indirectly by contributing to economic integration.

Keywords: Africa, Burundi, common currency, EAC, Kenya, monetary union, regional integration, Rwanda, Tanzania, Uganda

JEL classification: F15, F5

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1. Introduction

Kenya, Tanzania and Uganda signed the Treaty for the establishment of the East African Community (EAC) in 1999, which entered into force in July 2000. In 2007 the Treaty was signed by Burundi and Rwanda, expanding EAC to five countries. According to the Treaty, EAC should first form a customs union, then a common market and a monetary union, and finally a political union. The Customs Union became operational in 2005, and was formally completed in 2010. The Common Market Protocol was signed in 2009, and the plan is that the creation of a common market, which includes free movement of goods, labour, persons, services and capital, and the right of residence and establishment, will be completed by 2015.

The work on forming a monetary union started early, but proceeded slowly. Thus, in 2007 the EAC member countries decided to fast track its establishment and aimed for 2012. Currently the intention is to sign a protocol to establish the East African Monetary Union (EAMU) in 2012, while actual implementation, though planned to be completed by 2015, is now expected to take several years (EAC, 2011a).

As evident from the experience of the European Monetary Union (EMU), forming a monetary union is a complicated project, and there is a non-negligible risk of failure. It is therefore necessary to ensure that the pre-conditions for forming the EAMU are adequate. This entails making sure that economic, political, and institutional requirements are in place, since benefits are likely to be less visible than short-run costs.

The purpose of this note is to discuss preconditions for an effective monetary union among the EAC members, with a focus on Rwanda. Section 2 describes potential costs and benefits of joining a monetary union, in the spirit of the literature on Optimum Currency Areas (OCAs). The focus is on aspects that are likely to have some bearings on how the EAMU will function. Although the theory of OCAs sets out the required conditions for forming a monetary union, over time it has become clear that an extensive institutional framework that handles both political and

technical issues is also needed. Thus, Section 3 focuses on political and institutional preconditions. Section 4 discusses economic convergence criteria for joining the EAMU, and Section 5 discusses fiscal policy rules for union members. Section 6 summarizes and concludes the note.

2. Costs and Benefits of a Monetary Union

Before discussing issues raised by the OCA literature, it is helpful to look at some indicators of the economic structure of the EAC countries. Table 1 shows that GDP per capita is similar except for Burundi whose GDP per capita is only 25% of that of Kenya, the country with the highest GDP per capita. This is less of a difference than in the EMU, where Estonia's GDP per capita is only 20% of Luxemburg's GDP per capita (in 2010). Compared to Germany, a more relevant country, Estonia's GDP per capita is 50%. There are also differences in the composition of GDP across the EAC countries; agriculture is relatively large in Rwanda, 34%, compared to 23% in Kenya, which has the smallest share, while industry is about 15% in both Rwanda and Kenya, compared to 26% in Uganda and 24% in Tanzania. Unfortunately we do not have data from Burundi. Trade in per cent of GDP also differs somewhat, Rwanda being the least open economy with 41%, compared to Kenya's 65%. In spite of these differences, the countries must be considered quite similar when compared to other countries in the world. All are heavily dependent on agriculture; the majority of the work force is in agriculture, their exports are largely resource-based, and not too different, particularly when trade outside EAC is considered, and they are probably culturally much more similar than the EMU countries.

Table 1. Indicators of economic structure

	Kenya	Rwanda	Tanzania	Uganda	Burundi
GDP per capita (current US$) in 2010	767	548	527	503	189
GDP per capita, PPP (current international $) in 2010	1621	1194	1423	1249	399
Industry, value added (% of GDP) in 2009	15.3	14.5	24.3	25.8	
Manufacturing, value added (% of GDP) in 2009	8.7	6.4	9.5	8.0	
Agriculture, value added (% of GDP) in 2009	22.6	34.2	28.8	24.7	
Services, etc., value added (% of GDP) in 2009	62.1	51.3	46.9	49.5	
Trade (% of GDP) in 2010	63.5	40.9	58.4	58.0	57.7*

Notes: The source is World Development Indicators. * measured in 2006.

The traditional approach of deciding whether a set of countries should form a monetary union is to evaluate whether the countries constitute an OCA (Mundell, 1961; McKinnon, 1963). The standard question addressed is if the benefits of eliminating exchange rate fluctuations between member states outweigh the costs of not being able to use monetary and exchange rate policy for macroeconomic stabilization of country-specific (asymmetric) shocks. Usually a number of aspects are considered relevant, such as: the amount of trade among potential members of the union; similarity of external shocks; degree of economic openness; degree of price and wage flexibility; degree of labour and capital mobility; diversification of production and consumption structure; financial integration; fiscal integration; and the degree of political integration.

Surveying the literature on monetary unions in developed economies, Beetsma and Giuliodori (2010) conclude that it is hard to make the case for a common currency based only on macroeconomic stabilization, with the possible exception of countries where large politically-induced shocks cause excessive volatility of nominal variables and when nominal exchange rates cause shocks, instead of absorbing them as usually assumed. In fact, as Cohen (1993) argues, it seems unlikely that any monetary union has been formed on the basis of being an OCA. Beetsma and Giuliodori (2010) also note that cost-benefit trade-off can be different for developing countries, making them even less likely of being an OCA. There is usually less trade among the potential union members, they are more specialized and often highly dependent on natural resources, and thus more exposed to terms of trade shocks that are unlikely to affect all countries in the same way. Moreover, there are large differences in the need to raise government revenue from money printing. All these factors tend to increase costs.

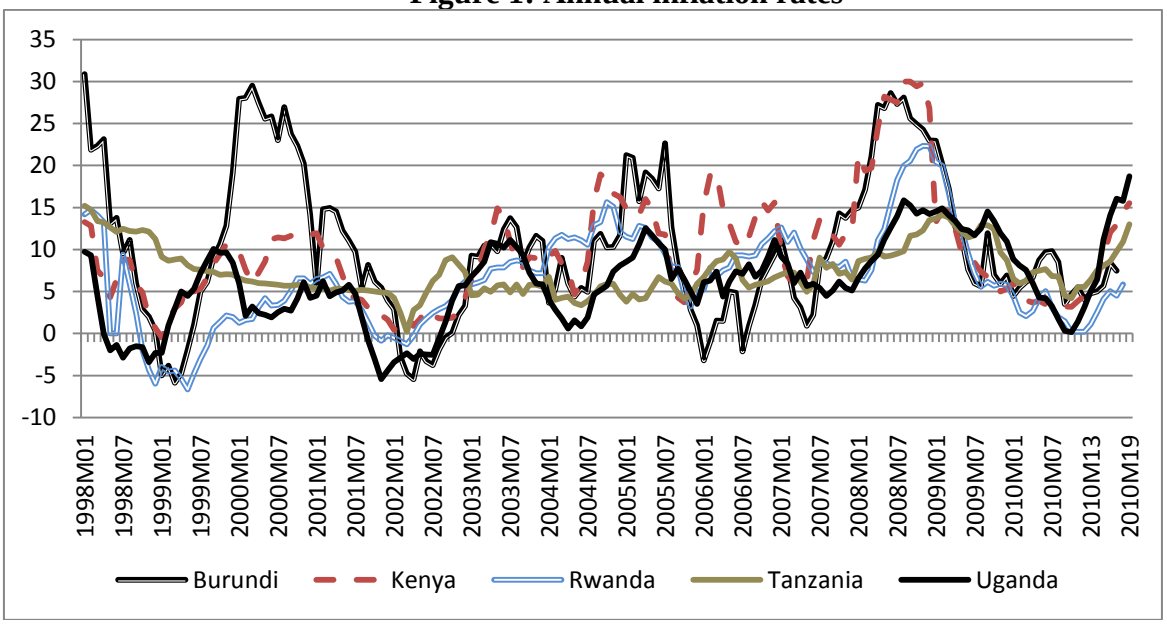
There exist a number of studies on the conditions for monetary integration in Africa, and they generally find that the countries are too different to reap any net benefits from a monetary union (Tavlas, 2009; Debrun et al., 2011). However, it is a challenge to evaluate whether countries are an OCA, so most studies on African economies focus on specific aspects such as external shocks, i.e., they do not estimate potential costs and benefits. One exception is Debrun et al. (2011). They calibrate macroeconomic models to African data and simulate the formation of a monetary union. Their results are more favourable to monetary unions than earlier studies, partly because the

benefits are due to enhanced monetary stability, not trade integration, which other studies have shown to be small (Masson, 2008). It is thus enhanced monetary stability that has the potential to offset the costs of not being able to stabilize asymmetric shocks.

Debrun et al. (2011) find that the net benefits for the EAC are positive but small and that they vary across countries: a monetary union would improve welfare in Burundi and Kenya, while the gains would be modest but positive for Rwanda and Uganda, and slightly negative for Tanzania. The main benefit for Rwanda is increased monetary stability and the main cost is its asymmetric terms of trade shocks. Tanzania's net loss is due to its good record of macroeconomic stability.

To provide a rough indication of monetary stability in EAC, the annual change in consumer prices, the CPI, for the five countries are depicted in Figure 1 over the period 1998:1-20011:6. Although the degree of monetary stability should be evaluated by considering external shocks, the figure is illuminating. Tanzania's inflation rate varies less than the other countries' inflation rates, but it hardly provides evidence of a high degree of monetary stability. In fact, Rwanda's inflation is clearly lower during some periods, and Uganda's inflation is similar after 2006. The same conclusion is reached by, for example, plotting the money stock.

Figure 1: Annual inflation rates



Source: IFS.

Since the East African Central Bank (EACB) is planned to be independent of the governments, have clear objectives, be accountable, etc., one would expect monetary policy in EAMU to be clearly better than in any single EAC country. In fact, a historic record of relatively lax monetary policy in Africa is an argument for a delegation of monetary policy and formation of monetary unions, as argued by Honohan and Lane (2000). To this should be added that financial integration (discussed below) might improve monetary transmission mechanisms, which seem to be weak in most EAC countries. Thus Debrun et al. (2011) might underestimate the benefits due to improved monetary stability.

Yet, if all governments have a history of weak monetary discipline, there might not be sufficient support for an independent the central bank (Beetsma and Giuliodori, 2010). Without such support, there might be even less monetary stability in the monetary union than in the individual countries. This is a relevant for EAC as there currently are IMF programs in all countries,[2] imposing discipline by constraining the scope for fiscal and monetary policy. The experience of the EMU highlights the difficulty facing a monetary union; ECB has been under pressure to lower interest rates by several individual politicians, and recently it has had to buy bonds from countries to reduce the likelihood of default on public debt. Moreover, fiscal constraints have been broken by a number of member states with no consequences in the form of sanctions.

The main cost in the study by Debrun et al. (2011) is asymmetric shocks. If shocks are country-specific, the required adjustment in exchange rates will differ, and having a common exchange rate is thus a drawback. Two recent studies on EAC that look at shocks are Kundan and Ssozi, (2009) and Opolot et al. (2010a). They find that business cycles are quite dissimilar, but that synchronisation has increased since the 1990s.

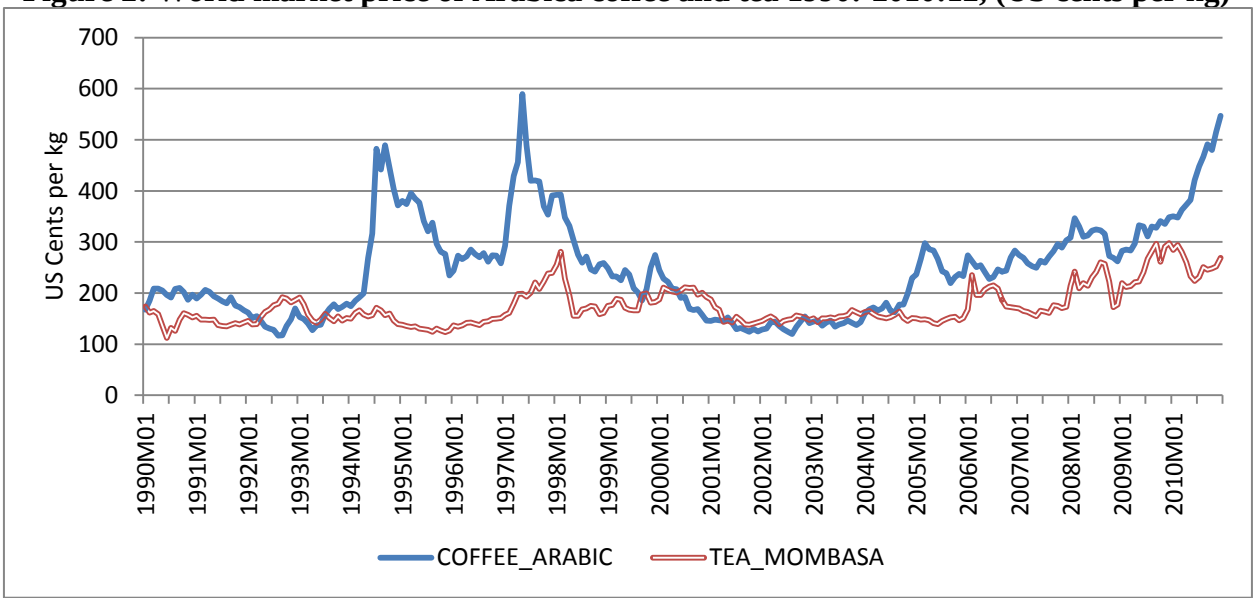
Several issues related to asymmetric shocks are worth discussing. First, as long as agriculture remains a major sector in EAC countries, there will be important asymmetric shocks due to

[2] Burundi and Kenya have the Extended Credit Facility, which includes IMF financial assistance, while Rwanda, Tanzania, and Uganda have the Policy Support Instrument, designed for countries that do not need IMF financial assistance.

variations in rainfall. This is not an argument against an OCA, however. In a common market for all EAC countries, asymmetric shocks due to drought, for example, would have a smaller effect on the availability and prices of food than currently in the national food markets. The main benefit would accrue from market integration, but the use of a common currency would facilitate trade in food items.

Cash crops that are exported, such as coffee, are also affected by variation in rainfall. But it is not desirable to counteract these with monetary and exchange rate policy because the effects are likely to only last one season. Terms of trade shocks, on the other hand, are large and a serious problem if they are asymmetric. Figure 2 shows world market coffee and tea prices for 1990:1-2010:12, two commodities that make up about 35% of Rwanda's exports. Both price series fluctuate greatly, particularly the one for coffee, and the swings last for quite some time, often several years. There is thus a need for some sort of adjustment. Other EAC countries also export coffee and tea, but the shares can be very different. For example, coffee is 3% of Kenya's exports.

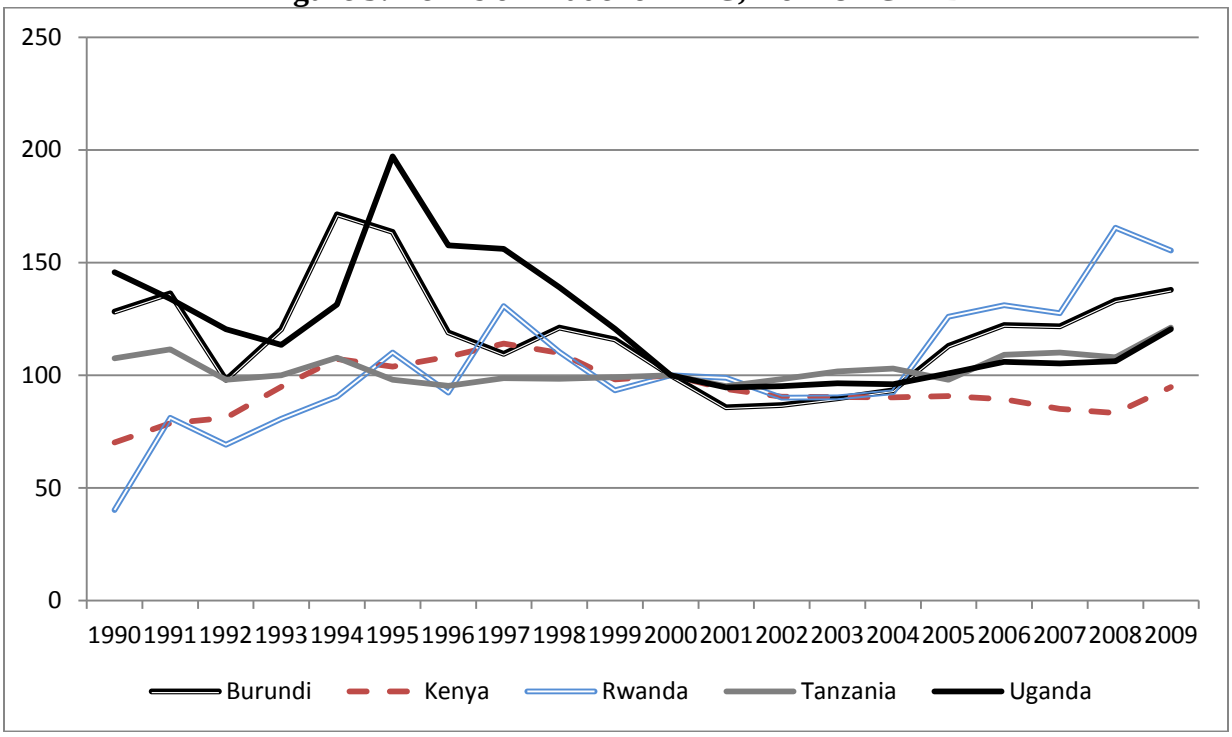
Figure 2: World market price of Arabica coffee and tea 1990:-2010:12, (US cents per kg)



Source: The World Bank Pink Sheets.

The most straightforward way of comparing movements in terms of trade across the EAC countries is to plot them. There exist two easily accessible measures of terms of trade, one from UNCTAD and one from the World Bank, but unfortunately they are quite dissimilar in some countries, such as Rwanda, and similar in other countries, such as Uganda. UNCTAD's measure of terms of trade is reported in Figure 3 for all EAC countries and the World Bank's measure is reported in Figure 4 for Burundi, Kenya, Rwanda and Uganda, the data for Tanzania is incomplete. The time period is 1990-2009. The information provided by the series is clearly inconsistent and thus highly uncertain; in Figure 3 Rwanda's terms of trade differ from the others, improving over the sample, while in Figure 4 they follow Uganda's terms of trade quite closely, and decrease after mid-1990s.

Figure 3: Terms of Trade for EAC, from UNCTAD

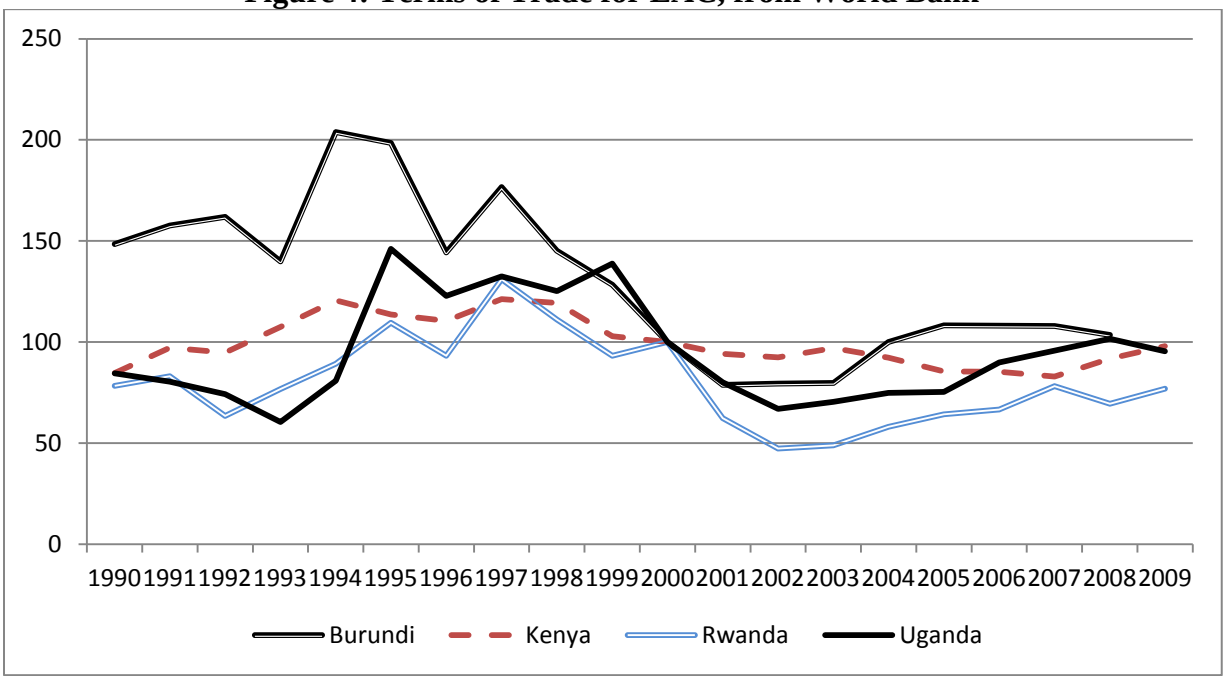


Source: WDI, and UNCTAD, Net barter terms of trade index (2000 = 100)

Aydin (2010) shows that terms of trade, and relative productivity, are the main drivers of real exchange rates in sub-Saharan Africa. Hence another way to shed light on the role of shocks is to

compare real exchange rates; if shocks are similar, the real exchange rates should evolve in a similar way. Figure 5 shows real effective exchange rates for the five EAC countries for 1998:1-2010:12. All except the one for Kenya have a similar pattern, indicating that external shocks might be similar for these countries, at least on average and over a periods of a couple of years.

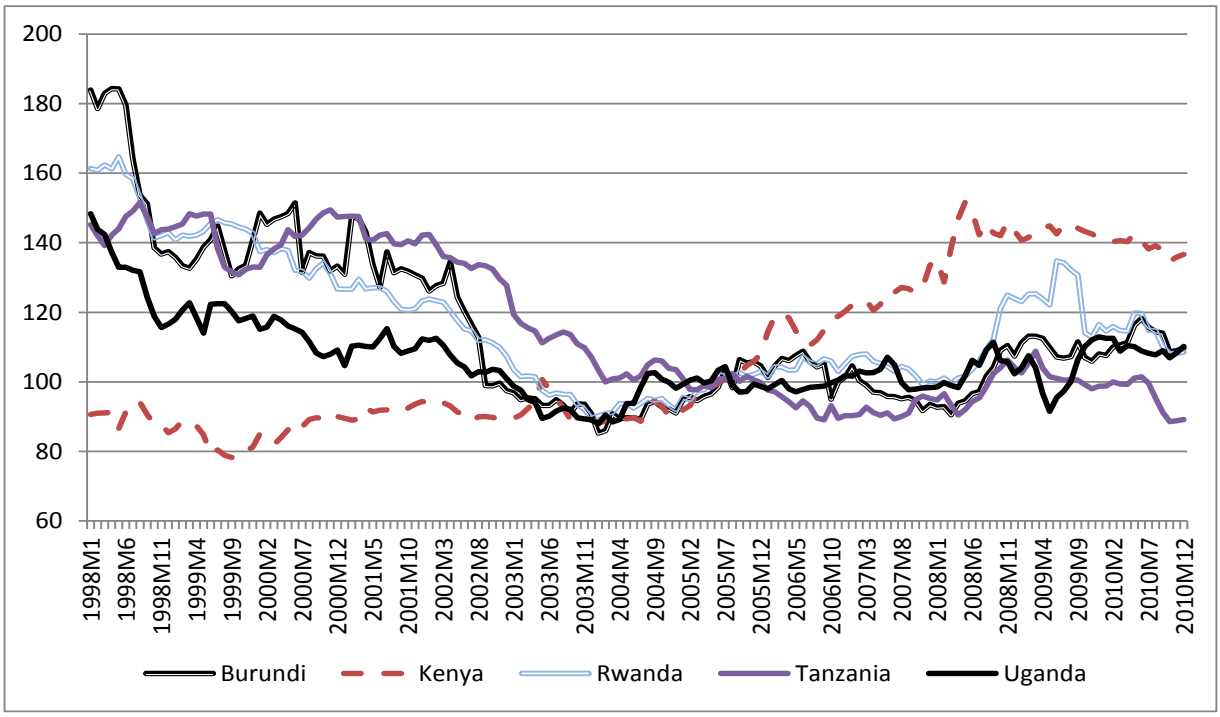
Figure 4: Terms of Trade for EAC, from World Bank



Source: African Development Indicators, Merchandise terms of trade (2000 = 100)

Thus, there seems to be large differences in terms of trade shocks across the countries, but the informative content of the series is uncertain. There is some indication that terms of trade shocks in Rwanda are similar to those of Uganda, and possibly Burundi and Tanzania. Kenya, however, seems to be different; both terms of trade series are relatively stable, and the behaviour of its real exchange rate differs greatly from those of the other countries. The findings of Debrun et al. (2011) on the cost of asymmetric shocks are thus uncertain.

Figure 5: Real effective exchange rates (1998:1-2010:12)



Source: International Financial Statistics.
Note: A decline is depreciation. 2005=100.

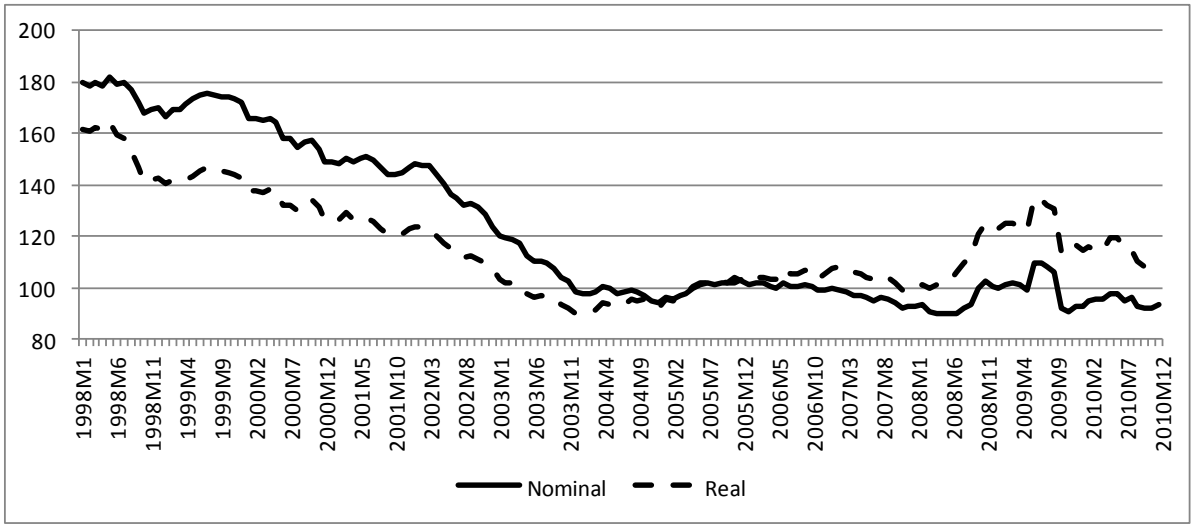
As Table 1 shows, all countries are relatively open in the sense there is a great deal of international trade relative to GDP. As in many other sub-Saharan African countries, price levels are thus likely to be sensitive to exchange rate changes, though there is a lack of empirical studies for some EAC countries. One reason prices are sensitive is the direct mechanical effect of a change in the exchange rate on the prices of imported goods. The exchange rate also affects many non-tradable goods prices as imported intermediate goods are used in the production. Then there are second round effects, due to factors such as expectations and market power. As a result, a decline in the value of a currency would raise prices, reducing or preventing an impact on the real exchange rate, which is what matters for adjustment. In a monetary union, the mechanic effect of depreciation would be smaller because part of the trade would be among member countries. This is particularly the case for a country such as Rwanda, because it is small. Belonging to a monetary union would probably reduce the second round effect as well, as a well-functioning

central bank would moderate inflation expectations. Moreover, with the Common Markets there would most likely be more competition, which makes it pore difficult for firms to raise prices.

In a small open economy with a large tradable goods sector, there would be a weak short-run relationship between nominal and real exchange rates. This is apparent by imagining an extreme case, a small country that produces and exports one good, and imports another good. The prices of both goods are determined in the world market. As a result, the real exchange rate would be relatively stable at purchasing power parity, while the nominal exchange rate would adjust to changes in relative prices, or vice versa if the exchange rate is not allowed to change. The cost of losing the exchange rate as an instrument for external balance would be small in this case.

A look at the nominal and real effective exchange rate in Rwanda, depicted by Figure 6 for the period 1998:1 - 2010:12, indicates that nominal exchange rate movements might have played a role in depreciating the value of the real exchange rate until the beginning of the 2000s. However, the appreciation observed from 2008 had little effect. It is thus an open question how important exchange rate flexibility is for Rwanda, and more research is needed.

Figure 6: Nominal and real effective exchange rates in Rwanda (1998:1-2010:12)



Source: International Financial Statistics.
Note: A decline is depreciation. 2005=100.

The degree of price and wage flexibility is one of the important aspects considered by the OCA literature: adjustment costs due to asymmetric shocks in the form of loss of jobs and production are smaller with flexible prices and wages. In the EAC, prices and wages are probably quite flexible compared to the EU, at least in large sections of the economies. Although there is a lack of data and studies on labour markets in the EAC, we know that the majority of the people are small-scale farmers and/or work in the informal sector, where wages and prices are likely to be highly flexible. There is less flexibility in the formal sector, but an extensive review of labour markets in Sub-Saharan Africa, including Kenya, Tanzania and Uganda, shows that real wages are downward flexible (Kingdon et al., 2005). Wages also seem to respond strongly to unemployment. On the other hand, there is little flexibility across sectors, i.e., workers in large firms earn much more than those in small firms.

Furthermore, actual and potential labour mobility is probably quite high. It is common that ethnic groups live in several of the EAC countries, so many people speak the same language, and many have relatives in other countries. In addition, there is a long tradition of moving across countries for work since borders are porous in many places. And English is an official language in all countries except Burundi, and widely used in the formal sector, and many people speak Swahili.

Several of these arguments are likely to apply to Rwanda: Close to 80% of the labour force work in the agricultural sector (World Bank, 2011a). The formal sector is small and dominated by Government, which is the largest employer. Wages are not flexible in the public sector, but the private formal sector is likely to bear the brunt of adjustment. Moreover, the country's small size and large neighbours make it in principle easy for Rwandans to go and work in other countries. However, currently the openness of labour migration varies greatly; Uganda is open while it is difficult to go to Tanzania. And it is probably easier for manual workers to move across borders. A factor that might inhibit labour mobility for other Rwandans is insufficient knowledge of English, though this problem might decrease over time. Nonetheless, a functioning common market with free labour mobility would facilitate the adjustment after asymmetric shocks greatly.

Professionals are now allowed to work in all EAC countries, but it is vital that free mobility is extended to all people, as in the EU. It is noteworthy that the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) have had a common labour market since 1954, and it has made adjustment to shocks much easier as workers have been able to find jobs in other countries.

There is no doubt that trade integration among EAC countries is small, though it is increasing. According to EAC Trade Report 2008, gross intra-EAC trade was 7.8% of the members' total gross trade, and 3.1% of their GDP (EAC, 2010). In EU, the value of trade was 26% of GDP in 1998 in the area that would adopt the Euro; by 2007 it had increased to 33% (EU, 2010). Thus, trade integration in EU was much larger than it currently is in EAC. The benefits in the form of reduced transaction costs due to a common currency were small in the EMU, and will thus be even smaller in the EAMU.

For Rwanda the shares are clearly higher than for total trade by the EAC members: 26.9% of total imports and 23.6% of total exports in 2010 (NISR, 2011). These numbers are uncertain however: some exports to EAC are re-exported to other countries, Rwandan tea is officially exported to Kenya but sold at the auction in Mombasa; there are large measurement errors, measuring international trade accurately is notoriously difficult even within the EU; there is a great deal of informal cross-border trade, the value of informal exports is about 20% of the value of official exports, while the value of informal imports are of less significance, making actual trade larger than indicated by the statistics. In any case, currently there is probably not much demand for Rwanda's exports in the EAC member countries as coffee, tea and minerals make up 70% of all export (IMF, 2011a).

Nonetheless, as the Customs Union and the Common Market become fully implemented, including removal of many non-tariff barriers (NTBs), Rwanda will be situated next to some large markets, ameliorating the negative impact of being a landlocked country. It will thus be in a position similar to Switzerland. Although this does not require the formation of a monetary union, a common currency will facilitate trade.

Rwanda's trade with countries outside EAC might also benefit since transporting goods to or from Rwanda is very expensive. For example, exporting and importing a container takes about 35 days, and the cost is as high as US$3,275 and US$ 4,990, respectively (World Bank, 2011b).[3] This contributes to the current account deficit by preventing many goods from being exported and requires large service imports for actual trade with goods. These costs are primarily not due to tariffs, but a number of other factors such as NTBs, lack of competition, red tape and inadequate infrastructure. Several of these obstacles should be reduced as the Common Market is implemented, and a common currency is adopted. However, to really boost Rwanda's overseas trade, there needs to be much more inter-government co-operation and joint investments in infrastructure that reduce transport costs.

Another potentially beneficial consequence of a monetary union is financial integration (Honohan and Lane, 2000), which is essential for an efficient monetary policy. This aspect is highlighted by Aryeetey (2004) in a survey on financial markets in Africa. He describes African financial systems as characterized by fragmentation, illiquidity, informational inefficiency, limited size and capacity, inefficient regulatory schemes, excessive risk factors, dearth of risk-sharing and hedging mechanisms, and legal and contract enforcement issues. Though there has been rapid improvement in recent years, there is thus ample scope for improving the financial sector. Although financial integration can be achieved through the Common Market, a monetary union would reduce transaction costs and uncertainty, enhancing the pooling of financial resources and increasing access to capital for development.

The focus of Aryeetey (2004) is on the role international capital markets, i.e., attracting capital inflows. International investors can benefit from portfolio diversification, to the extent that business cycles in Africa might differ from those in US and Europe and bargains are available due to Africa's gross undercapitalization. Increased access to diversified sources of external capital has several benefits: it reduces the cost of capital through increased risk sharing in local markets by international investors, creates discipline and exposure to best practices; and possibly

[3] De Melo et al. (2011) provide a review of Rwanda's trade policy.

stops capital flight (as happened Latin America and East Asia when local markets became globalized).

There are of course drawbacks with increased integration with international markets, as evident from the recent financial crises. For example, there can be sudden outflows of short-term capital (sudden stops), generating credit crunch with severe effects on domestic economies. It is therefore not at all obvious that EAMU should allow perfect external capital mobility; the degree of financial openness has to be evaluated carefully.

On the other hand, a high degree of financial integration is required within EAC for a common central bank to be able carry out monetary policy effectively. This requires that companies from all EAC member countries face a single set of rules, have equal access and are equally treated, implying equal access to the money market of every EAC partner country for all banks and other financial companies (Wang, 2010). The EAC has decided to abolish existing capital controls by 2015 as part of the common market, and there is ongoing work to harmonize regulations, etc. (Monetary Affairs Committee, 2011).

An interesting question is thus to what degree the EAC member countries are financially integrated. There is no data on capital flows but Wang (2010) shows that there are substantial financial barriers between Kenya, Tanzania and Uganda. This result is obtained by testing each country's financial openness with the US, and finding substantial differences. Unfortunately Rwanda and Burundi have no forward foreign exchange market, and could not be included in the analysis.

Another question is how deep and sophisticated the financial sectors are in the EAC countries, and if there are obvious short-run benefits for Rwanda. Although there is little doubt that Kenya is more advanced in several aspects, the spread between lending and deposit rates is actually higher than in Rwanda, 10.4 compared to 7.6 (in April 2011). In fact, Rwanda has the lowest spread of all member countries (EAC Statistics, 2011). On the other hand, indicators such as the M3-to-GDP ratio are low in Rwanda. The long-run prospects of regional financial integration should be good for the EAC countries. The most obvious risk is that integration will give large

financial institutions the opportunity to dominate the whole market, most likely concentrating in Nairobi.

Another issue is the possibility of real divergence; countries might become more dissimilar over time in spite of the monetary union. In the EMU countries, the dispersion of labour costs grew sharply between 1999 and 2010 (De Grauwe, 2010b). Among EAC member countries, natural resource discovery, which is high on the agenda, might have a major impact on several economies; Collier (2010) argues that most of Africa's natural resources have not been discovered yet. One example is the recent discovery of a large oilfield in Uganda. Successful exploitation of natural resources increases export revenue and leads to appreciation of the real exchange rate. In principle this should only lead to higher prices in Uganda, and thus increased demand for imports from other member countries. However, since the policy of the common central bank will based on the performance of the average of all EAC economies, there is a risk of overheating in Uganda, as happened in Ireland. Tight fiscal policy should thus be used, but might be politically difficult to implement in practice. Moreover, terms of trade shocks might become even more asymmetric. Furthermore, large increases in exports in some countries could appreciate the exchange rate, reducing competiveness in the other countries. In the medium-term, such development might cause tensions within the EAMU.

To summarize, according to arguments based on the OCA literature it is not unlikely that Rwanda ant the other EAC countries would benefit from a membership in EAMU. However, this requires that the Common Market is properly implemented; it will affect the efficiency of monetary policy and reduce the number and consequences of asymmetric shocks. Moreover, the Common Market will by itself provide greater benefits than a common currency.

The benefits of a monetary union would be due to increased monetary stability, resulting from the positive effect of an external constraint on monetary policy and deeper financial markets. The combination of the Common Market and a common currency would lower transactions costs for international trade, which are exceptionally high in Rwanda, lead to financial market integration

and increased availability and reduced cost of finance for development. However, there is a possibility that the financial sector in EAC will be concentrated in Nairobi.

Asymmetric shocks are a problem, but the importance of exchange rate changes in adjusting for these is uncertain, and the labour market is probably fairly flexible, both in terms of wages and labour supply. Moreover, some of the asymmetric shocks are due to variations in rainfall across the EAC countries, so food prices might become more stable in EAMU. Again, the importance of implementing the Common Market Protocol before launching EAMU is thus evident. Two other issues that should be considered is how open EAMU should be to financial flows from the rest of the world, and how natural resource discovery, such as oil in Uganda, should be handled.

3. Political and Institutional Pre-conditions

Since the formation of a monetary union implies surrender of national sovereignty in the field of monetary policy, there is a need for strong political support and an extensive institutional framework that handles both current political and technical issues. This section discusses political and institutional pre-conditions for a successful launch of EAMU.

Forming a monetary union has a major impact on the scope of policy making of the governments. The power to manage the exchange rate will obviously be lost. Since it is not unusual that African governments manage the exchange rate in accordance with short-run political goals, such as maintaining a stable nominal exchange rate to avoid price increases of food, fuel, luxury imports, or on payments on international debt, this might entail a major loss of political power. The issue of legal tender and the possibility to obtain income by raising seigniorage and inflation tax will also be forgone, in other words, a government cannot print money to finance its expenditures. And central bank lending public enterprises will be banned. Moreover, there will most likely be some restrictions on budget deficits and government debt, though these are unlikely to be strictly binding, as discussed in Section 5.

An important question is thus why the EAC governments are willing to let go of a part of their political power. In the EU there was political interest in collaborating to maintain exchange rate

stability, which paved the way for EMU. As there was a large degree of trade integration, stable exchange rates were preferred. However, another important factor was EU's Common Agricultural Policy (CAP), which included a price support system with subsidies of large sums. When deciding on the value of these, the EAU, a forerunner to ECU and the Euro, was used. Large changes in the countries' exchanges rates caused large changes in the value of the EAU and the subsidies transferred, and thus serious problems for this approach. It was therefore in the interest of the policymakers to have fixed exchange rates.

Although most studies focus on the theory of OCA it does not seem relevant for the decision to form a monetary union (Rose, 2008); political considerations have played, and play, a much larger role in both the creation and demise of monetary unions. Historically, most monetary unions have actually been preceded by advanced political integration or unification, such as forming a federal state, e.g. Germany, Italy, and the US. And most monetary unions without a large degree of political integration have failed (Buiter, 2008). Some former colonies decided to continue with common currency unions after independence, though they hardly qualified to be OCAs. Among these are the East African Currency Area (Kenya, Tanzania and Uganda), which collapsed for political reasons in 1966, only five years after independence. The three countries struggled to be sovereign states and form their own identities, as colonization does not seem to have left a feeling of solidarity among them (Cohen, 1993). This contrasts with the thriving East Caribbean Currency Union (ECCU), which also was formed during the colonial era by Great Britain. People in the eight East Caribbean islands define themselves primarily in regional terms, and there is an intense and institutionalized set of political and economic relationships between them (Cohen, 2003). The two unions in the CFA Franc zone, the West African Economic and Monetary Union (WAEMU) and the Central African Economic and Monetary Community (CEMAC), are also working well. The main reason for their survival is probably the involvement of France and budget transfers to the member states (Buiter, 2008). Even the EMU came into being as part of a long-term process of economic and political integration, and was, according to Buiter (2008, p. 609), just a step towards an 'ever closer union'. He calls EU a 'political wolf dressed up in economic sheep's clothing'.

Considering the history of monetary unions, the incentives of the policymakers seem vital for their creation and survival. Although the leaderships in the EAC member states seem determined to push ahead, it is not obvious how the respective governments or politicians will benefit from EAMU, even if there is a positive overall impact on economic performance. The benefits of a fixed exchange rate among the EAC members do not seem to be large, since no attempts have been made to implement a common exchange rate system within the EAC. The reason is obvious, trade integration is still limited and there is no system of transfers of funds such as CAP. Instead the political leaders seem to have a vision that a monetary union will put an end to artificial separation of peoples of East Africa, revitalise the region's economy, boost investment and competition and create monetary stability, as stated by Uganda's minister of finance, Syda Bumba (AU Monitor, 2007). With such grand incentives, politicians face a challenge when agreeing on issues that entail visible short-run costs for their respective economies and citizens.

In the OCA literature there is an implicit assumption that the actual formation of a monetary union and a common central bank is a simple matter. However, as emphasized by De Grauwe (2010a), there is a need for a well-functioning supranational institutional structure to both establish and run a monetary union. Lobby groups or new anti-EAMU governments should not be able to derail the monetary union, at least not without a large political cost. To form such a set of institutions, there has to be both political will and long practice in dealing with related issues. In EU, these institutions are the result of 40 years of collaboration that grew out a series of failures to peg exchange rates. One example is the European Monetary System, EMS, formed in 1979, which aimed to create a system of fixed (adjustable peg) exchange rates among the EU members. It generated a need for intense consultations among the central banks, and led to the creation of cooperation. This culture, and institutions such as the European Commission, European Court of Justice, ECOFIN and the European Parliament, was vital for the successful formation of ECB.

In EAC, Kenya, Tanzania and Uganda also have a long history of collaboration. Nonetheless, there are substantial differences. As mentioned, collaboration did not last long after independence, and already by the middle of the 1960s all countries had decided to have their own central banks and currencies. Attempts were made to continue cooperation and the East African

Community was formed in 1967, which allowed for free exchange at par of their currencies. However, by the mid-1970s it had more or less vanished. There has been considerable progress since the mid-1990s, leading to the signing of the EAC Treaty, the formation of several new intergovernmental institutions, a Customs Union, etc. But compared to EU this is a short period, and Rwanda and Burundi became full members first in 2007.

Although political will is vital for the formation of a well-functioning monetary union, the views of the general public also matter. As evident to many citizens in the EU, surrendering national sovereignty to a supranational entity is not always popular; there is an issue of legitimacy. Since there should be a similar transfer of power from EAC member governments, EAMU must be viewed as legitimate by the citizens. Will the surrender of political sovereignty that a monetary union entails be acceptable for people and policymakers in general? Most likely the project will be challenged, at least by those who are adversely affected, i.e., business sectors who experience increased competition or groups of consumers who face higher prices for certain products, as well as by politicians who can exploit the discontent for their own benefits.

The EACB is planned to be a politically independent central bank, and monetary policy will be executed by experts, many of them foreigners. For legitimacy, there is a need for a system where EACB is accountable for its polices in front of a body considered representative and legitimate. For such a system to work, EACB has to have clear and unambiguous objectives, and there needs to be both openness and transparency in the dealings with this body and in the procedures of the EACB (individual voting records of the members of the EACB's decision-making council, minutes from meetings, and in-depth analyses such as quarterly inflation reports). The members of the decision-making Council should also regularly meet with a legitimate committee that represents all EAC member states (Buiter, 2008).

An important question is thus how far EAC has advanced along these lines. Is the plan to form a monetary union known to people in general, or even among the well-educated upper and middle classes and the business community? Do they have an idea what it means to be part of a monetary union (including a common market)? And how is the issue of legitimacy incorporated in the

preparation for the monetary union? There seems to be a need for an analysis of how various segments of society might be affected by a monetary union and possible reactions.

The importance of having an adequate structure in place before launching the monetary union should not be underestimated, since there is a risk that the monetary union collapses. The economic cost of a breakup might be substantial, as evident from the current crisis in the EMU which could lead to widespread bank failures, a new credit crunch, and a sharp contraction in output and employment. Nonetheless, the economic costs does not need to be very high if the breakup is due to political disintegration or a desire by an individual government to use seigniorage to finance budget deficits, which have been the case in several breakups in the past (Bordo and Jonung, 1999; Cheikbossian, 2001, 2002; Rose, 2006;). Thus, the economic costs depend on the cause of the breakup. There will of course also be substantial political costs, as leaders have invested time and money, and their reputation, in establishing the monetary union.

3.1 Institutional Pre-conditions

As De Grauwe (2010a) argues, in EU several years of exchange rate pegging worked as a device for institution building. Such a mechanism has not been present in EAC. Thus, it is unrealistic to form a monetary union in the near future, as ECB (2010) concludes in its study on EAMU. There is a great deal of preparation left to do.

There are several reasons for the conclusion of the ECB study. First, EAC formally completed the formation of the Customs Union in 2010, but it is probably far from complete in practice as many NTBs remain. This view is also supported by Mugisa et al. (2009) and De Melo et al. (2011). And the process of creating the Common Market begun recently, in 2009, and it will not be completed until 2015. Second, there is a need to adopt, prepare, and ratify necessary legal instruments and set up institutions. Third, it is necessary to carry out technical preparatory work to create the operational and regulatory foundation of EAMU.

The EAC has a number of established organs that are similar to those of EU, the most important being the Council of Ministers, East African Legislative Assembly, East African Court of Justice,

and sectoral committees. However, their mandates need to be extended and revised. A major difference between the EU and EAC is that EAC's supranational institutions do not have legal rights to force national governments to implement integration measures. There is thus a concern that the relation among the EAC members is better characterized as inter-governmentalism than supranationalism. The EACB needs support by a robust supranational political legitimizing structure to function well. An additional reason is that supranational institutions are needed to drive the process of forming a union forward as national interests inevitably will conflict with the interest of EAC on a number of issues. Even if a government has signed protocols, there might be an unwillingness to comply, not the least when there has been a change of party in power.

The ECB (2010) study provides detailed suggestions on how EAC can proceed on a number of issues, and notes where more preparatory work is required. The reaction of EAC to the report seems to be an acknowledgement of a lack of preparedness. Still, the aim is to have a signed protocol of a monetary union by 2012, but the actual implementation of the EAMU is expected to take quite some time (EAC Press Release 2011b). Thus, the main view seems to be to get the work done, not that there currently are fundamental political difficulties.

Before a monetary union can be formed, there is a need for a set of pre-established rules, i.e., a legal framework and an institutional structure specifically for the monetary union, including a regional monetary institution (ECB, 2010, Chap III). The framework would include legal binding terms for the process leading to the establishment and operation of EAMU in the form of a Monetary Union Protocol, which lays down the foundations for EAMU, the Statutes of new monetary institutions, and the relevant Treaty provisions. The institutional framework would consist of the East African Monetary Institute (EAMI), an interim institution that should prepare analytically and technically for EACB, and EACB itself, which preferably would be a transformation of EAMI. There is also a need to decide how EACB will function with regards to independence, objectives, tasks, transparency, accountability, etc. Moreover, EACB needs to be integrated into the institutional framework of EAC, while maintaining its independence. Here issues such as how to handle accountability, how to conduct dialogue with the authorities of the member states, how to monitor and assess economic convergence and fiscal discipline, must be

decided. There is also a need to make sure there is an independent body, such as the East African Court of Justice, ensures EAMU law is applied in all parts of the currency area.

There is on-going work to address these and other issues, and it is difficult to judge how rapidly it is advancing. Nevertheless, in its comments on the ECB study, the Monetary Affairs Committee, the governors of the five EAC central banks, reefers to the enormous challenge facing the EAC Partner States in addressing the issues of harmonizing of policies and practices and in concluding negotiations for the EAMU Protocol (Monetary Affairs Committee. 2011).

To summarize, creating a monetary union is a political project, and there is a need to keep track of the political will among policy makers in the EAC member countries to go ahead; a change of government could create serious problem for the monetary union. Moreover, the required institutions should be in place before introducing a common central bank and common currency, to reduce the risk of a collapse of the monetary union. To facilitate the process and make sure EACB will be able to act as an independent central bank, supranational institutions needs to be formed that impose legal constraints on policymakers. Moreover, legitimacy of the supranational institutions should be ensured.

4. Convergence Criteria

Since the EU has a set of criteria for would-be members, other existing and planned monetary unions also have similar criteria. One set of conditions are the so called convergence criteria. They can be divided up into real (structural), monetary and fiscal convergence. The real ones, which include economic structure (production and employment), productivity levels, GDP per capita levels and growth rates, etc., are usually not specified explicitly as convergence criteria or have the character of benchmarks or second-level criteria. Most of them are the aspects considered in the theory of OCA. Real convergence is not essential for joining a monetary union according Buiter (2008), since it is likely to occur after adopting a common currency. Moreover, it is challenging for governments to generate real convergence. Monetary convergence criteria include monetary variables such as inflation, interest rates, and exchange rate. The fiscal criteria

focus on budget deficits and sometimes on public debt. They apply to both potential and current union members. Fiscal criteria rules are discussed in some detail in Section 5.

EMU's convergence criteria, the Maastricht criteria, impose restrictions on inflation, long-term interest rate, exchange rate stability, budget deficits and public debt. EAC has a more extended set of criteria, consisting of two Stages, 2007-2010 and 2011-2015, and Primary and Secondary levels (see Table 1A in Appendix). Here it suffices to list EAC's Stage II (2011-2015) criteria. The Primary criteria are: the overall budget deficit-to-GDP ratio should not be more than 5% excluding grants, and 2% including grants; annual average inflation should not exceed 5%; and external reserves should cover six months of imports. The Secondary criteria are: maintenance of market-based interest rates, sustainable real GDP growth of no less than 7%, sustained pursuit of debt sustainability, domestic savings-to-GDP ratio of at least 20%, maintenance of a sustainable level of current account deficit excluding grants. Note that the secondary criteria mainly are real criteria.

By now we should know if Stage I criteria were reached, but there does not seem to exist a final official evaluation, possibly because all data are not available yet. However, an evaluation of the situation in 2009 shows that many of the criteria were not met (EAC Monetary Affairs Committee, 2009). For example, no country had an average inflation rate below 5% for the period 2007-2009, though Tanzania's annual underlying inflation was close, 6%. Budget deficits were reasonable for most countries but only Uganda was below the limits for budget deficits with and without grants, and Rwanda was below for the deficit without grants.

In any case, the convergence criteria have a number of weaknesses, which make a detailed evaluation very challenging. There is a lack of definitions of several of the concepts, i.e., what price index should be used? what is the definition of domestic saving? what is a sustainable level? Moreover, the measurement and definition of most variables differ across countries, and there is a need for harmonization before the criteria become comparable and operational (ECB, 2010). For example, EU had to construct a new consumer price index with prices of comparable goods, the Harmonized Index of Consumer Prices (HIPC), a complicated project that took several

years. Though a harmonized consumer price index needs to be constructed by EAC for monetary policy purposes, a relevant question is how much effort EAC member states should put into harmonising measurements before the monetary union is formed, considering how large measurement errors actually are.

It is also noteworthy that it is bordering on impossible for the national governments to achieve some of the EAC criteria, except by luck. Real GDP growth and domestic saving can be influenced by policies but are not controlled by government. Moreover, it is odd to have a requirement for budget deficits with and without grants, since the amount of foreign aid received by government affects the difference. In Stage I, the criteria were 6%, excluding grants, and 3%, including grants, a mere difference of 3 percentage points. Not surprisingly, during 2003-2008 only two countries (Kenya and Uganda) had a deficit of less than 6%, excluding grants, some years. In general, foreign aid was too large for achieving the target deficit that excludes grants. This is particularly the case for small (and poor) countries, which tend to get more foreign aid. Rwanda's budget deficit varied between 9.8% and 13.1%, excluding grants, in spite of being below 3%, including grants, every single year. And Burundi had a budget deficit of 18.9% in 2007, excluding grants, and 2.9%, including grants. According to IMF (2011a), Rwanda is expected receive grants of about 10% of GDP until 2015. It is thus in Rwanda's interest to change this criterion, removing or downgrading the deficit that excludes grants.

Another dubious criterion is the maintenance of a sustainable level of current account deficit excluding grants. For Rwanda, which has a current account deficit in per cent of GDP of close to 20%, excluding grants, this is not achievable. This is due to both foreign aid inflows and to high transport costs for exports and imports. In fact, an important argument for Rwanda's participation the Common Market and EAMU is to improve its external balance.

The use of absolute levels in the criteria is also a dubious. When forming the monetary union, the dispersion across countries, for instance of inflation, is more important than being below 5% (ECB, 2010). This is evident after the world market food and oil price hikes in the first half of 2011, which have raised inflation rates in all EAC countries. The EMU criteria are relative, so

that inflation should not be more than 1.5% higher than the average of the three lowest inflation rates among the EU members.

Though generally adopted, the use of monetary criteria is controversial. Both Buiter (2008) and De Grauwe (2010a) have written extensively on EU's criteria, and argue that they are useless at best, and even might be harmful. Moreover, they are arbitrary. In EU, the main purpose was to oblige countries to show they were prepared to reduce inflation to the same level as Germany, to avoid introducing an inflationary bias in EMU. It was a result of Germany's lack of trust in some of the other member states. In fact, there will be convergence in inflation and other nominal variables after the monetary union has been formed (De Grauwe, 2010a). Thus, for EAMU the key question is the credibility of the monetary policy framework adopted by the EACB. Nonetheless, it is obvious that there will be less adjustment costs for a country that enters a monetary union with low inflation.

The EAC has a criterion for the real exchange rate in Stage I, it should be stable, but there is no criterion for nominal exchange rates. The EU, in contrast, only has a criterion for the nominal exchange rate: a country should have a fixed exchange rate to the euro and no devaluations in two years before joining EMU. The purpose is according to De Grauwe (2010a), to show that the authorities are disciplined, since the exchange rate by definition will be stable after joining the union. He argues that the requirement of a fixed exchange rate is too demanding since we know from experience that most fixed-exchange rate arraignments fail, even when polices are disciplined.

Although De Grauwe's arguments are correct, it is important that exchange rates are reasonably close to their equilibrium values when the union is formed. There will most certainly be unpopular changes in relative prices even in the best of cases. And if the currency is undervalued, there can be substantial across-the-board increases, as well as complaints for other union members who thus have overvalued exchange rates. Moreover, many firms will probably take the opportunity to raise prices when the new currency is introduced, hoping that consumers suffer

from money illusion. This seems to have happened in some Euro zone countries. Such a start for the union would instantly make it unpopular even if prices decline afterwards.

Thus, there needs to be reasonable nominal exchange rate convergence among the currencies of the member states prior to forming the union, that is, a reduction in fluctuations in bilateral exchange rates, and an alignment of real exchange rates. For EAC this would require a change of monetary policy in several or all countries. This is evident from recent volatility: during the first six months of 2011 the Rwandan franc appreciated by 9%, 7% and 5% versus the Kenya, Tanzanian and Ugandan shillings, and depreciated by 1% versus the Burundi franc. Convergence criteria for nominal exchange rates are missing for the EAC, as well as a policy framework for the individual central banks that can achieve exchange rate stability.

5. Fiscal Policy Rules

Fiscal convergence criteria do not only apply to would-be members of a monetary union, but also to members in the form of fiscal rules or constraints. The main argument for having rules for fiscal policy is the free-rider problem, some of the costs associated with large budget deficits in one country are borne by the other member countries. There is thus an externality, making fiscal policy too expansionary (Beetsma and Giuliodori, 2010).

EMU's fiscal rules are specified in the Maastricht Treaty, 1992, and the Growth and Stability Pact in 1997 and 2005. They consist of limits on budget deficits of 3% of GDP and debt-to-GDP ratios of 60%, and sanctions for breaking the limits. The sanction for excessive deficit is a fine of a value up to 0.5% of GDP. Although the rules play a large role in EMU, they are highly controversial.

Buiter (2006) argues strongly against the usefulness of supranational restrictions on national fiscal policy, particularly the way they are formulated in the Maastricht Treaty and Stability and Growth Pact. Yet, after surveying the theoretical literature Beetsma and Giuliodori (2010) conclude that there definitely is a rationale for fiscal constraints. This conclusion is supported by the current debt crisis in several EMU countries; several countries have incurred huge budget

deficits and public debts, and their solvency is questioned, and Ireland Greece and Portugal have already received financial support from EU. The EMU project is clearly at risk of collapsing.

Recently De Grauwe (2011) has highlighted another weakness of monetary unions, which makes the need for efficient fiscal rules even more imperative. This can be illustrated by comparing Spain, which uses the euro and the UK which has its own currency. Although the budget deficit and public debt were similar in Spain than the UK during the first half of 2011, it is facing much higher borrowing costs due to high interest rates on Spanish government bonds. This has led to a liquidity crisis in Spain though it is solvent. And worse, there is a risk it becomes insolvent due to high borrowing costs. A similar phenomenon is probably occurring in Ireland, Italy and Portugal. The basic reason is that Eurozone countries do not have the capacity to issue debt in a currency they control.

The mechanics are as follows: Assume a member of a currency union, such as Spain, has a relatively high debt, and for some reason there is a loss of confidence among investors. The first thing that happens is that they sell Spanish government bonds, the price declines and interest rates increase. The funds obtained from the sales can be invested in Spain, but most likely they are invested in other member countries, draining Spain of liquidity. This is evident from the sharp decline in yields on 10-year German bonds. If the same loss of confidence happens in a country with its own currency, such as the UK, the money stays in the country. This is because investors who wish to buy German bonds sell pounds to somebody else and buy euros. Some of those who buy pounds might then buy British government bonds. Moreover, the pound depreciates and stimulates demand for domestically produced goods. And if necessary, Bank of England can monetize the public debt. Not surprisingly, the UK has fared much better than Spain during the debt crisis. This potential problem should be considered by EAC when forming fiscal policy rules.

It is straightforward to enforce fiscal criteria on non-members: they must fulfil them to join the union. In most cases this is how it has worked in EMU, with exceptions such as Belgium, Greece,

and Italy that had too high public debt-to-GDP ratios. Ensuring that member states follow the rules agreed upon is much more difficult. The question is how to formulate such a system.

The challenge is easily recognized by reviewing existing monetary unions; there are several cases where members have sidestepped or ignored the rules. The most conspicuous one is the EMU. In early 2000 the budget deficits of France and Germany surpassed 3%, the maximum level allowed. No sanctions were imposed. According to ECB (2010) this was because the deficits, though excessive, were relatively small. Yet, another explanation is that it was politically impossible to impose sanctions on two heavyweight members in a system where the accused also belong to the judge and jury, i.e., the Council (Buiter, 2006). Consequently the Pact was reformulated so a deficit in excess of 3% is acceptable if it is the result of unexpected adverse economic events. This seems to have had a negative effect on the fiscal discipline. In 2010 the average budget deficit of the Eurozone was 6%, and several countries had deficits around 10% and above. And the 60% public debt-to-GDP ratio was broken by the majority of the members (Eurostat, 2011). No sanctions have been imposed, possibly because the excess deficits and debts are viewed as the result of adverse economic advents (the financial crisis) though this is hardly the case for Greece. Nevertheless, EMU's fiscal policy rules do not seem to have worked before or after the financial crisis.

Other monetary unions have had similar experiences. In the 1980s most governments in CFA Franc zone side-stepped restrictions of borrowing from the central bank by borrowing from commercial banks, which in turn borrowed from the central bank. The result was excessive budget deficits, a prolonged economic crisis and devaluation. The ECCU did not get fiscal policy rules until early 2000. It then decided to set a target of a public debt limit of 60% of GDP for 2007. Nonetheless, in 2010 the average debt-to-GDP ratio for ECCU was over 100%, and all of the countries exceeded the 60% target (IMF, 2011b). The debt of the worst country, St. Kitts and Nevis, was 170%.

Imposing fiscal policy rules is obviously a challenge. There are several reasons for this. Since members of a monetary union cannot use monetary or exchange rate policy, they have to rely on

fiscal policy. Thus, the rules have to allow for counter-cyclical policy. But governments only have limited control over deficits in the short-to-medium run, so mechanical rules are unlikely to work well. It is therefore a matter of judgment whether deficits are excessive or not. Moreover, apart from shame and blame, sanctions are difficult to impose both for political reasons and because they increase the deficit, most likely making it even more difficult to comply with the rules. There seems to be no good suggestions on how to punish those who violate rules.

One solution is fiscal federalism and a common fiscal policy, but this might not be acceptable to sovereign states. It is also possible to create institutions at national level, such as independent fiscal policy councils, as suggested by Wyplosz (2005, 2008). Another suggestion is to oblige all countries to balance their budget deficits over the business cycle by law. It could be combined with a stabilization fund that supports countries in difficulties, if they carry out structural reforms and automatic sanctions. Yet another suggestion is that each country finances its deficit with bonds issued jointly by all members up to a certain level, such as the maximum permitted debt-to-GDP ratio. When the public debt reaches this level, only national bonds would be issued. National bonds will then have much higher interest rates and clearly signal that fiscal adjustment is needed. The drawback is that interest rates on the jointly-backed bonds will be higher than on government bonds issued by solvent states. Although not fully worked out, this suggestion seems to gain popularity in EU. De Grauwe (2011) discusses it in the context of the EMU and provides references.

Formulating fiscal policy rules before forming EAMU is thus of utmost importance, lack of coordination of fiscal policy seems to be one of the weakest spot in monetary unions. The current convergence criteria for budget deficits and public debt are far from not sufficient: they lack a clear definition of what should be included in the measure; they don’t incorporate fluctuations due to external shocks; and there is no mentioning of fiscal policy coordination. Moreover, there no mentioning about how to handle countries that do not follow the.

6. Summary and Conclusion

The East African Community (EAC) consists of five countries Burundi, Kenya, Rwanda, Tanzania and Uganda. The EAC formally completed a Customs Union in 2010, and a Common Market is planned to be completed by 2015. The work on forming a monetary union is underway and the intention is that the five members will sign a protocol to establish the East African Monetary Union (EAMU) in 2012. The adoption of a common currency and a common central bank was planned for 2015, but it is currently expected to take place later (EAC, 2011).

As indicated by a review of various economic arguments, considered by the literature of Optimum Currency Areas and previous empirical studies, there seems to be some support for the plan to create EAMU. However, this conclusion is highly tentative, and based on a successful implementation of the Common Market Protocol, i.e. the integration of goods and services, financial, and labour markets, and provisions agreed upon. The major challenge is that a monetary union requires strong political support and an extensive institutional framework. Membership in a monetary union impedes government's ability to use monetary and exchange rate policy, and imposes restrictions on fiscal policy. The question is thus if policymakers have the strength or will to accept these limitations as economic benefits might not be as visible as costs. Moreover, it is a complicated process to build the necessary institutions, and a huge amount of political negotiations and technical work is needed before the EAMU can be launched.

The main direct benefit of a monetary union would be due to increased monetary stability, while the main cost would be due to asymmetric shocks. The establishment of a Common Market plays a key role because financial integration would make monetary policy more efficient, and trade and labour market integration would reduce the impact of asymmetric shocks. Moreover, asymmetric shocks due to variations in rainfall across the EAC countries would be ameliorated by integration of agricultural markets. There would probably also be additional benefits from financial market integration, as the availability capital would increase. Trade integration would by itself also generate benefits, particularly in conjunction with removal of non-tariff trade barriers and joint-government investments in infrastructure. Transaction costs in international

trade, which are high in general in EAC, and very high in Rwanda, could be reduced substantially.

The establishment of a monetary union also has risks. The loss of exchange rate policy not only reduces a country's ability adjust to country-specific shocks, but it also prevents the use of exchange rate policy to avoid overvaluation, or undervalue the real exchange as a development strategy. Another risk is economic divergence due to natural resource discovery, i.e., structural change, as sub-Saharan Africa is likely hide large natural resources. One example is the recently discovered oilfields in Uganda. Export booms in one country would strain the union in various ways. One possibility is that it leads to inflation and the appreciation of real exchange rate, undermining exports from the other countries.

In spite of the focus on economic arguments about costs and benefits in the literature, the creation of a monetary union is primarily a political project. The political will among policymakers is thus a key factor, and a change of government or influential lobby groups could create serious problem for the monetary union. EAC thus needs to create supranational institutions that drive the process of forming a union forward as national interests inevitably will conflict with the interests of EAC on a number of issues.

EAC has a number of established organs that are similar to those of EU, the most important being the Council of Ministers, East African Legislative Assembly, and East African Court of Justice. However, their mandates need to be extended and revised to build supranational institutions that have the legal rights to force national governments to implement integration measures.

The legitimacy of the supranational institutions, in the eyes of both policymakers and citizens in general is also important, particularly for the East African Central Bank (EACB). It is planned to be a politically independent central bank, and monetary policy will be executed by experts, many of them foreigners. For legitimacy there is a need for a system where EACB is accountable in front of a body considered representative and legitimate.

Before a monetary union can be formed, it is necessary set up a framework that includes legal binding terms for the process leading to the establishment and operation of EAMU in the form of a Monetary Union Protocol. It should specify the foundations for EAMU, the Statutes of new monetary institutions, and the relevant Treaty provisions. The institutions would consist of the East African Monetary Institute (EAMI), an interim institution that should prepare analytically and technically for EACB, and EACB itself. There is also a need to decide how EACB will function with regards to independence, objectives, tasks, transparency, accountability, etc. Moreover, EACB has to be integrated into the institutional framework of EAC, while maintaining its independence. Thus, a large amount of work needs to be completed before the EAMU can be a reality.

EAC has a number of convergence criteria, but they need to be improved and revised. There is a lack of definitions of several concepts, such as price index and sustainable level. Some of the criteria are too difficult to achieve by national governments, except by luck. For instance, real GDP growth and domestic saving are not controlled by government. The criteria for budget and current account deficits without grants should either be scrapped or based on the amount of foreign aid received. The use of absolute levels in the criteria is also dubious, since the dispersion across countries, for instance of inflation, is more important than being below an absolute value. The EMU criteria are relative, so that inflation should not be more than 1.5% higher than the average of the three lowest inflation rates. Convergence criteria for nominal exchange rates are missing; in fact, a decision has to be taken on what policy framework to use to deal with exchange rates prior to the adoption of a common currency. Starting a monetary union with over or undervalued exchange rates could create rapid price increases in some countries, and widespread public discontent. Finally, the measurement and definition of most variables differ across countries, so there is a need for harmonization before the criteria become comparable and operational. It is necessary to harmonize consumer price indexes because they will be used by EACB, but the cost of harmonization of other indicators should be considered carefully as measurement errors might make the effort pointless.

Uncoordinated fiscal policies have been a major cause of tension in several monetary unions, and possibly the cause of their dissolution in some cases. Formulating adequate fiscal policy rules before forming EAMU is thus of utmost importance. The current convergence criteria for budget deficits and public debt are far from sufficient as rules for future members of EAMU: they lack a clear definition of what should be included in the measure; they don't incorporate fluctuations due to external shocks; there is no mentioning of fiscal policy coordination; and there are no sanctions for countries that do not comply with the rules.

There are several suggestions how to formulate fiscal policy rules, but none is perfect. It is possible to oblige all countries to balance their budget deficits over the business cycle by national law, use automatic sanctions, as they otherwise might not be implemented, set up a stabilization fund that supports countries in difficulties, conditional on the implementation of structural reforms. Another suggestion is to have a system where deficits are financed with bonds backed by all members up to a certain level. When the public debt reaches this level, only national bonds would be issued. National bonds will then have much higher interest rates and clearly signal that fiscal adjustment is needed.

The importance of having an adequate structure in place before launching the monetary union should not be underestimated, since there is a risk that it collapses. The cost of a breakup could be substantial, both in economic and political terms. A requirement is thus that the Common Market is working well, i.e. that the markets for international trade, financial services, and labour are integrated. Moreover, there is a lot of work to be done in other areas of co-operation, as specified the Common Market Protocol, such as effective competition and consumer protection and transport policies, including railway and airline transport. Apart from providing an adequate foundation for EAMU, such work would contribute to collaboration among governments, which is the basis for the viability of monetary unions. The EMU had 40 years of practice in intergovernmental collaboration before the monetary union was launched.

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Table 1A: EAC Convergence Criteria

Stage 1 (Year 2007-2010)

Primary Criteria
a) Overall Budget Deficit to GDP Ratio (excluding grants) of not more than 6.0%, and Overall Budget Deficit to GDP Ratio (including grants) of not more than 3.0%;
b) Annual Average Inflation Rate not exceeding 5%;
c) External Reserves of more than 4 months of imports of goods and non-factor services.

Secondary Criteria
a) Achievement and maintenance of Stable Real Exchange Rates;
b) Achievement and maintenance of Market Based Interest Rates;
c) Achievement of sustainable Real GDP Growth Rate of not less than 7.0%;
d) Sustained pursuit of debt reduction initiative on domestic and foreign debt i.e. reduction of total debt as a ration of GDP to s sustainable level;
e) National Savings to GDP Ratio of not less than 20%;
f) Reduction of Current Account Deficit (Excluding grants) as a % of GDP to sustainable level consistent with debt sustainability;
g) Implementation of the 25 Core Principles of Bank Supervision and Regulation based on agreed Action Plan for Harmonization of Bank Supervision; and
h) Adherence to the Core Principles for Systematically Important Payment Systems by modernizing payment and settlement systems.

Stage II (2011-2014)

Primary Criteria
a) Overall Budget Deficit to GDP Ratio (excluding grants) not exceeding 5%; and Overall Budget deficit to GDP Ratio (including grants) not exceeding 2%;
b) Annual Average Inflation Rate of not more than 5%;
c) External Reserves of more than 6 months of imports of goods and non-factor services.

Secondary Criteria
a) Maintenance of Market Based Interest Rates;
b) Maintenance of high and sustainable rate of real GDP growth of not less than 7.0%;
c) Sustained pursuit of debt sustainability;
d) Domestic Savings to GDP Ratio of at least 20%; and
e) Maintenance of sustainable level of Current Account Deficit (excluding grants) as % of GDP.

Stage III (2015)
Introduction and circulation of a single East African Currency