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# **Choice of exchange rate regimes for African countries: Fixed or Flexible Exchange rate regimes?**

Simwaka, Kisu

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**Choice of exchange rate regimes for African countries:  
Fixed or Flexible Exchange rate regimes?**

By Kisu Simwaka<sup>1</sup>

**Summary**

*The choice of an appropriate exchange rate regime has been a subject of ongoing debate in international economics. The majority of African countries are small open economies and thus where the choice of the exchange rate regime is an important policy issue. Aside from factors such as interest rates and inflation, the exchange rate is one of the most important determinants of a country's relative level of economic health. For this reason, exchange rates are among the most watched analyzed and governmentally manipulated economic variables.*

*This paper revisits the debate on the choice of an appropriate exchange-rate regime for African countries. It starts by reviewing literature on the debate of appropriate exchange rate regimes. It then discusses relevant considerations for the choice of the exchange rate regimes for African countries. The debate revolves around the effect of exchange rate on macroeconomic management, particularly inflation and export competitiveness. The paper recommends the conventional peg arrangement as a viable option for the majority of low-income African countries. But this is contingent on a number of important pre-conditions. For middle-income African economies, with relatively developed financial markets and linkages to modern global capital markets, floating arrangements, including the managed floating exchange rate regime, look more promising. In conclusion, the paper cautions that no single exchange rate regime is right for all countries or at all times.*

**Keywords:** Exchange rate options, sub-Saharan African countries

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<sup>1</sup> Kisu Simwaka is a PhD Scholar with the School of Economics & Finance, University of KwaZulu-Natal, Durban, South Africa. His e-mail address: [kisusimwaka@yahoo.co.uk](mailto:kisusimwaka@yahoo.co.uk). This paper is a chapter in a Book Project entitled: Perspectives on African Currencies. I would like to thank Prof. Olutayo Adesina and Prof. Adekunle Amuwo for their support. I also thank an anonymous referee for valuable comments. The usual disclaimer applies.

## **1.0 Introduction**

The choice of an appropriate exchange rate regime for developing countries has been at the centre of the debate for a long time. The choice is essential for monetary policy, the main responsibility of central banks. Yet, despite much debate on this subject over a number of decades, many issues remain unresolved. A government's choice of exchange rate has significant consequences for the entire economy. The proper exchange rate regime depends on a country's particular circumstances.

Over the past two and a half decades, many African countries have been encouraged by the International Monetary Fund (IMF) and World Bank to adopt floating exchange-rate regimes. In reality, most countries have implemented a managed or 'dirty' float. However, since the ascendancy of the Poverty Reduction Strategy approach to development for such countries in the late 1990s, issues of exchange-rate regimes, and indeed trade policy more generally, seem to have attracted less attention in the policy dialogue between the international financial institutions and governments of low-income countries (Ladd, 2003). The implicit assumption seems to be that floats and dirty floats are the most appropriate regime, and that extensive intervention by the authorities in exchange-rate management represents an inappropriate price distortion.

The above position is however in conflict with both findings in empirical literature regarding the most appropriate exchange-rate regime for African countries and the reality on the ground in terms of the number of countries moving away from floats and back towards pegged regimes. The rest of the paper is organized as follows: Section 1.2 reviews exchange rate options available for different countries. Section 2.0 reviews literature on the debate on appropriate exchange rate regimes. Section 3.0 outlines the evolution of exchange-rate regimes in African countries. Section 4.0 examines macroeconomic performance under different exchange rate regimes. Section 5.0 discusses the choice of appropriate exchange rate regimes for sub-Saharan African countries. Section 6.0 makes concluding remarks.

### **1.1 Objectives of the Study**

The main objective of this study is to analyze the choice of exchange rate regime for developing countries in sub-Saharan Africa. Specifically, the study attempts to answer the following questions: what are the costs and benefits of the fixed and flexible exchange rate regimes for sub-Saharan African countries. What are the determinants of the choice of an exchange rate regime and how would

country circumstances and experiences affect the choice? Does macroeconomic performance differ under alternative regimes?

## **1.2 Exchange rate regime options**

Exchange-rate regimes range from fixed (hard peg) regimes at one end and floating (fully flexible) regimes at the other. Under fixed exchange rate, a country fixes its exchange rate to another currency, for instance, the US dollar or a basket of currencies. To maintain the fix, monetary authorities buy or sell foreign exchange in order to balance demand and supply in the currency market. To do this successfully, the country normally needs foreign-currency reserves equivalent to three months' worth of imports. Under a freely floating exchange-rate regime, the authorities simply allow the exchange rate to fluctuate according to market forces, i.e. the demand and supply of foreign and domestic currency as determined by foreign trade and international capital flows (Harrigan, 2006)

In between these two end solutions are a number of intermediate types of regimes. Next to a fixed regime is an adjustable peg (a fix which will be adjusted in exceptional circumstances). Then moving gradually towards a free float, we have a crawling peg (a fix which is gradually and periodically adjusted according to a set of indicators e.g. to accommodate differences between the country's inflation rate and world inflation); then a crawling band (where exchange rate is forced to fluctuate inside a narrow band around a fixed central rate that is adjusted periodically to keep it in line with fundamentals like inflation differentials); and then a managed float (no commitment to any particular exchange rate or pre-announced path but periodic intervention by the authorities at their discretion); and a wide-band system (the exchange rate is allowed to float freely within a predetermined broad band over time). The closer the intermediate system is to a pure float, the less the need for the authorities to intervene and hence the less the need to hold international reserves for this purpose (Harrigan, 2006).

## **2.0 Literature review on the debate on appropriate exchange-rate regimes**

The standard theory of choosing an exchange rate regime is mainly based on the theory of optimal currency areas of Mundell (1961) and Poole (1970). These models of choosing an exchange rate regime typically evaluate such regimes by how effective they are in reducing the variance of domestic output in an economy with sticky prices.

Calvo and Mishkin (2003) discuss the standard theory of choice between exchange rate regimes and its weaknesses which arise when applied to emerging market economies. They try to establish a

relationship between a range of institutional characteristics of a country and choice of its exchange rate regimes. They investigate if there is causality between the development of successful fiscal, financial and monetary institutions and the country-specific fact that whether a floating or fixed exchange rate is preferred.

Empirical research based upon *de facto* rather than *de jure* exchange-rate regime classification indicates that for low-income countries (although not for emerging transitional economies), a hard peg might be the most suitable regime in terms of achieving low inflation levels without sacrificing growth (Husain et al., 2005; Bleaney and Fielding, 2002; Ghosh et al., 1997, 2003), whereas floating rates induce volatility, which may damage growth (Rogoff, 1999).

These empirical findings have received support from a number of developments in literature. Theoretical literature reveals suggests that, for developing countries, pegs or an exchange rate anchor allow policy makers in countries with a high propensity to inflation to import credibility and low inflation (Dornbusch, 2001; Edwards, 2001). Alongside these developments in research literature, developing countries themselves have been moving towards less flexible exchange rate regimes, with an increase in such regimes over the past decade. In particular, a greater number of low-income countries have shifted towards less flexible than towards more flexible regimes (Husain et al., 2005: 42).

Harrigan (2006) reviews evidence suggesting that for low-income countries with good fiscal discipline, it is a fixed rate which is likely to bring the biggest benefits in terms of economic performance. The counter-argument that such a regime distorts a key price variable which is an important determinant of both exports and imports is not strong in the context of low income countries. Econometric work shows that for developing countries, the domestic output levels are much more important determinants of exports and imports than the real effective exchange rate..

In general, empirical literature has not yet developed a strong position on which exchange rate system developing countries should adopt. Frankel (1999 and 2004) and Mussa *et al* (2000) emphasize that "no single currency regime is right for all countries or at all times". Nonetheless, Rogoff *et al* (2003) summarize their review of the evidence of the impact of the exchange rate regime on developing countries' economic performance thus: "relatively rigid regimes – pegs and intermediate flexibility arrangements – appear to have enhanced policy credibility and thus helped achieve lower inflation at little apparent cost in terms of lost growth, higher growth volatility, or more frequent crises."

Mussa *et al* (2000) provide a list of factors that would favour a country pegging its rate: (i) low capital mobility; (ii) a high share of trade with the country to which it is pegged; (iii) the shocks it faces are similar to those facing the country to which it pegs; (iv) it already relies extensively on its partners' currency; (v) fiscal policy is flexible and sustainable; (vi) its labour markets are flexible; (vii) it has high international reserves.

In other words, to sustain a pegged rate a developing economy should have the capacity to perform well and flexibly, and maintain low inflation. Otherwise it would be advised to adopt a floating exchange rate regime, thereby allowing the exchange rate to act as an extra shock absorber. Of course, the requirements listed by Mussa *et al.* (2007) are also those that, together with a strong financial system, would enable the country successfully to maintain a flexible exchange rate system. Mussa *et al* (2007) also note that as countries develop and become more financially sophisticated and more integrated into global markets, they should consider more flexible exchange rate regimes.

Proponents of the bipolar view, including Obstfeld and Rogoff (1995) and Eichengreen (1998), predict that countries that have integrated, or are integrating, their domestic capital markets with global capital markets will be unable to sustain intermediate regimes and will be forced to choose one of the two extremes: either a hard fix or a freely floating exchange rate regime. In their opinion, the middle ground—made up of adjustable (soft) pegs—will eventually vanish for countries that are open to international capital flows.

Harrigan, J (2006) analysis of exchange rate theories on the effects of exchange rate regimes on macro policy, inflation and trade performance suggest that the most appropriate exchange rate regime for any given developing country is likely to be contingent on a number of country-specific factors. These include the degree of exposure to global capital markets, the maturity of the domestic financial sector, the attitude of the authorities towards fiscal and monetary policy discipline, and the price elasticities of imports and exports. The implication is that for low-income, small, open economies, which have limited exposure to international capital flows, an undeveloped financial sector, a tendency towards expansionary fiscal monetary policies and inelasticities in tradable markets, perhaps the most appropriate regime is a fixed exchange rate. With regard to international trade and exchange rate regime, it is strongly argued that if a country is a price taker in world markets or if its export competitiveness is dependent and on non-price factors, depreciation will not have any effect on export competitiveness.

### **3.0 Evolution of exchange rate regimes for African countries**

From 1946 to 1973, exchange rate policy was dominated by the Bretton Woods Agreement of 1944, with its commitment to currencies convertible for current account transactions and fixed exchange rates (beyond a narrow band of permissible flexibility) but adjustable if necessary.

The Bretton Woods arrangement came under strain in the late 1960s, and in March 1973, the practice of fixing exchanges was generally abandoned by the major countries of Europe and Japan. Countries entered another period of floating exchange rates. Many countries, however, chose to fix their currencies to some major currency e.g. the United States dollar.

The advent of IMF and World Bank Stabilization and Structural Adjustment Programmes in the early 1980s signalled a change in developing countries' approaches to exchange-rate regimes. For many countries with severe balance-of-payments difficulties reflected in sizeable payments arrears, the IMF recommended the adoption of floating exchange rates (Quirk et al., 1987). In this respect the Fund was influenced by the neoclassical advocacy of floating exchange-rate regimes (Friedman, 1953; Frankel and Johnson, 1976). By the 1990s the majority of World Bank and IMF policy packages in developing countries addressed the question of exchange-rate management. The World Bank (1994) argued that most African countries required a real depreciation to compensate for worsening terms of trade in the 1990s, and that countries with flexible exchange rates which, either devalued from time to time or had a crawling peg or managed float, could achieve real depreciation quickly. The case for floating was comprehensively summarised by Krugman and Obstfeld (1994: 559).

Table 1 shows the evolution of exchange rate arrangements for selected African countries. This classification system is based on members' actual, *de facto*, arrangements as identified by IMF staff. In 2000, out of the 35 countries in the sample, almost half (16 countries) had floating exchange rate regimes. This was a marked rise from a mere five in 1995. However, by 2008, the number of floating regimes had dropped to 8 while the numbers of countries with pegs had risen to 26 (about three-quarters the countries). Thus, during the past decade, the majority of sub-Saharan African countries have been moving back towards less flexible exchange rate regimes. In particular, a greater number of low-income countries have shifted towards less flexible than towards more flexible regimes.

Table 1: Evolution of exchange rate regimes for selected African countries

Country	1975	1980	1985	1990	1995	2000	2005	2008
<b>Southern Africa</b>								
Angola	N/A	N/A	N/A	N/A <sup>2</sup>	Interim <sup>3</sup>	Float	Conventional peg <sup>6</sup>	Conventional peg
Botswana	Fix	Fix	Fix	Fix	Conven. peg managed	Conventional peg	Conventional peg	Crawling peg <sup>7</sup>
Malawi	Fix	Fix	Fix	Fix	float <sup>4</sup>	Managed float	Independent float	Conventional peg
South Africa	Float	Fix	interim	Fix	float <sup>4</sup>	Float	Independent float	Independent float
Lesotho	Fix	Fix	Fix	Fix	Fix	Conventional peg	Conventional peg	Conventional peg
Zambia	Fix	Fix	Interim	Interim	Fix	Independent float	Managed float	Independent float
Mozambique	N/A	N/A	N/A	N/A	Fix	Independent float	Managed float	Managed float
Namibia	N/A	N/A	N/A	Fix	Float	Conventional peg	Conventional peg	Conventional peg
Swaziland	Fix	Fix	Fix	Fix	Fix	Conventional peg	Conventional peg	Conventional peg
<b>East Africa</b>								
Uganda	Fix	Fix	Float	Fix		Conventional peg	Independent float	Managed float
Kenya	Fix	Fix	Fix	Fix	Fix	Managed float	Managed float	Managed float
Tanzania	Fix	Fix	Float	Interim	Interim	Independent float	Independent float	Managed float
Ethiopia	Fix	Fix	Fix	Fix	Fix	Managed float	Managed float	Crawling peg
Eritrea	N/A	N/A	N/A	N/A	Float	Independent float	Conventional peg	Conventional peg
Rwanda	Fix	Fix	Fix	Fix	N/A Interim	Independent float	Managed float	Conventional peg
<b>West Africa</b>								
Nigeria	intern	Float	Float	Fix		Managed float	Managed float	Managed float
Ghana	Fix	Fix	Fix	Interm	Float	Independent float	Managed float	Conventional peg
Senegal	Fix	Fix	Fix	Fix	Fix	Currency board <sup>5</sup>	Currency board	Conventional peg
Togo	Fix	Fix	Fix	Fix	Fix	Currency board	Currency board	Conventional peg
Benin	Fix	Fix	Fix	Fix	Fix	Currency board	Conventional peg	Conventional peg
Burkina Faso	Fix	Fix	Fix	Fix	Fix	Currency board	Conventional peg	Conventional peg
Cote d'Ivoire	Fix	Fix	Fix	fix	Fix	Currency board	Currency board	Conventional peg
Mali	Fix	Fix	Fix	Fix	Fix	Currency board	Conventional peg	Conventional peg
Sierra Leone	Fix	Fix	Interm	Interm	Interm	Independent float	Independent float	Conventional peg
Niger	Fix	Fix	Fix	Fix	Fix	Currency board	Currency board	Conventional peg
Guinea Bissau	N/A	N/A	N/A	Fix	Fix	Currency board	Currency board	Conventional peg
Guinea	Fix	Fix	Fix	Fix	Float	Independent float	Conventional peg	Conventional peg
Liberia	Fix	Fix	Fix	Fix	Fix	Independent float	Independent float	Managed float
<b>Central Africa</b>								
C .African Rep	Fix	Fix	Fix	Fix		Conventional peg	Conventional peg	Conventional peg
Cameroon	Fix	Fix	Fix	Fix	Fix	Currency board	Conventional peg	Conventional peg
Gabon	Fix	Fix	Fix	Fix	Fix	Currency board	Currency board	Conventional peg
DRC	Fix	Interm	Fix	Interm	Fix	Independent float	Independent float	Independent float
Chad	Fix	Fix	Fix	Fix	Interim	Currency board	Currency board	Conventional peg
Equator. Guinea	Fix	Fix	Fix	Fix	Fix	Currency board	Currency board	Conventional peg
Rep. of Congo	Fix	Fix	Fix	Fix	Fix	Currency board	Currency board	Conventional peg

<sup>2</sup> This means not available

<sup>3</sup> This stands for intermediate regime between fixed and flexible exchange rate

<sup>4</sup> The monetary authority influences the movement of the exchange rate through active intervention in foreign exchange market without specifying, or pre-committing to, a pre-announced path for the exchange rate

<sup>5</sup> A monetary regime based on explicit legislative commitment to exchange domestic currency for a specified foreign currency at a fixed exchange rate, combined with restrictions on the issuing authority to ensure the fulfillment of its obligations

<sup>6</sup> The country (formally or de facto) pegs its currency at a fixed rate to another currency or a basket of currencies where the exchange rate fluctuates within a narrow margin.

<sup>7</sup> The currency is adjusted periodically in small amounts at a fixed rate in response to changes in selective quantitative indicators



Source, IMF staff reports (various); C. African rep (Central African Republic); DRC (Democratic Republic of Congo), Rep of Congo (Republic of Congo), Equator. Guinea (Equatorial Guinea)

#### **4.0 Exchange rate regimes and macroeconomic performance**

Sub-Saharan African countries have enjoyed strong economic performance during the past decade (see table2). Between 2002 and 2007, sub-Saharan Africa's output grew annually by some 6.5 percent – the highest in more than thirty years. During the same period, most sub-Saharan African countries operated pegged exchange rate regimes. The table also show that output is slightly lower for under pegged exchange rate regimes compared to floating regimes. This finding corroborates with Gosh *et al.* (1996) whose study of 136 countries show that floating regimes delivered higher real gross domestic product (GDP) compared to fixed regimes. However, this does not necessarily imply causality as there might be other economic developments that may have affected economic performance during the different periods. In addition, table 2 indicates that variability of output growth is higher under pegged regimes. On balance, however, fixed regimes performed better during the 2001-2008 period compared to the 1997-2001.

Table 2: Real Economic growth rate and exchange rate regimes

Economic indicator	1997-2001	2001	2002	2003	2004	2005	2006	2007	2008
<i>Real GDP (percent)</i>									
Angola	4.8	3.1	14.4	3.4	11.2	20.6	18.6	20.3	13.2
Botswana	6.2	5.2	5.0	6.6	6.0	1.6	5.1	4.4	2.9
Malawi	1.6	-4.1	2.1	5.7	5.4	3.3	6.7	8.6	9.7
South Africa	2.5	2.7	3.6	3.1	4.9	5.0	5.3	5.1	3.1
Lesotho	1.4	3.3	4.5	3.9	4.6	0.7	8.1	5.1	3.5
Zambia	2.4	4.9	3.3	5.1	5.4	5.3	6.2	6.3	5.8
Mozambique	9.2	13.0	7.4	6.5	7.9	8.4	8.7	7.0	6.8
<b>SADC</b>	2.3	2.7	3.8	3.9	5.9	6.5	6.9	7.2	5.1
Uganda	5.5	4.9	3.3	6.5	6.8	6.3	10.8	8.4	9.0
Kenya	1.3	1.1	1.1	2.8	4.6	5.9	6.4	7.1	1.7
Tanzania	4.4	6.2	7.2	6.9	7.8	7.4	6.7	7.1	7.4
Ethiopia	4.5	7.7	1.6	-3.5	9.8	12.6	11.5	11.5	11.6
Eritrea	N/A	N/A	N/A	-2.7	1.5	2.6	-1.0	1.3	1.0
<b>EAC</b>	N/A	N/A	N/A	4.6	6.2	6.4	7.5	7.4	5.8
Nigeria	2.7	3.1	1.5	10.3	10.6	5.4	6.2	7.0	6.0
Ghana	4.2	4.2	4.5	5.2	5.6	5.9	6.4	5.7	7.3
Senegal	4.3	4.7	1.1	6.7	5.9	5.5	2.4	4.7	2.5
Togo	0.8	0.6	4.5	5.2	2.4	1.2	3.9	1.9	1.1
Benin	5.1	5.0	6.0	4.0	3.0	2.9	3.8	4.6	5.0
Burkina Faso	5.8	6.7	5.2	7.3	4.6	7.1	5.5	3.6	5.0
Cote d'Ivoire	2.0	0.1	-1.5	-1.7	1.6	1.9	0.7	1.6	2.3
Mali	5.1	12.11	4.3	7.2	1.2	6.1	5.3	4.3	5.1
Sierra Leone	-0.9	18.1	27.5	9.5	9.7	7.1	5.1	6.4	5.5
<b>WAEMU</b>	3.6	4.4	2.1	3.8	2.8	4.5	3.2	3.3	3.9
C.African Rep	3.4	0.3	-0.6	-7.1	1.0	2.4	3.8	3.7	2.2
Cameroon	4.8	5.3	6.5	4.0	3.7	2.3	3.2	3.3	2.9
Gabon	0.1	2.0	N/A	2.4	1.1	3.0	1.2	5.6	2.3
DRC	-4.1	-2.1	3.5	5.8	6.6	7.9	5.6	6.3	6.2
Chad	3.9	9.9	9.9	14.7	36.6	7.9	0.2	0.2	-0.2
Equator. Guinea	38.0	40.5	9.6	14.0	38.0	9.7	1.3	21.4	11.3
<b>CEMAC</b>	7.3	10.6	6.2	5.5	12.5	5.1	2.5	5.9	4.2
<b>Sub-Saharan Africa</b>	3.1	3.8	3.5	5.1	7.2	6.2	6.4	6.9	5.5
<b>Fixed regimes</b>	3.7	4.9	2.6	4.7	7.4	4.3	3.4	4.6	3.9
<b>Floating regimes</b>	2.9	3.5	3.7	5.2	7.2	6.6	7.1	7.4	5.8

Source: IMF Staff reports; World Economic Outlook database

SADC stands for Southern African Development Community; WAEMU (West African Economic and Monetary Union); EAC (East African Economic Community), CEMAC (Economic Community of Central African States)

With regards to exports, fixed exchange rate regimes delivered higher exports compared to floating regimes (see table 3). This is in line with findings from Harrigan (2006). Harrigan states that for developing countries, which are price takers in world markets, flexible exchange rate depreciations will not have any effects on export competitiveness.

Table 3: Exports of goods and services and exchange rate regimes

Economic indicator	1997-2001	2001	2002	2003	2004	2005	2006	2007	2008
<i>Exports of goods and services (percent of GDP)</i>	75.2	76.6	77.6	69.6	69.7	79.3	73.8	75.4	75.6
Angola	55.0	51.5	52.3	45.4	44.2	51.4	47.0	47.6	43.5
Botswana	27.2	28.0	24.3	19.7	20.6	20.4	19.1	22.2	22.5
Malawi	26.7	29.8	32.5	28.1	26.7	27.4	29.7	31.5	35.4
South Africa	30.8	45.9	52.5	52.3	60.0	51.1	50.0	52.7	46.8
Lesotho	29.0	29.0	28.6	28.6	37.7	34.5	37.5	41.9	35.9
Zambia	18.5	29.2	33.0	30.1	32.2	33.2	40.6	37.8	34.1
Mozambique	30.4	32.2	31.3	31.7	31.7	34.0	36.8	39.7	43.3
<b>SADC</b>	11.8	12.0	12.0	11.4	12.5	13.1	15.5	16.9	21.7
Uganda	26.4	26.5	26.7	23.7	26.9	28.4	25.9	26.1	27.8
Kenya	14.5	15.2	15.2	14.7	18.0	19.7	21.7	21.2	20.2
Tanzania	15.2	15.1	16.2	14.2	14.9	15.1	13.9	12.7	11.6
Ethiopia	N/A	N/A	N/A	6.4	5.8	6.2	6.9	5.8	5.0
Eritrea	N/A	N/A	N/A	17.6	20.2	21.5	21.6	21.8	23.2
<b>EAC</b>	43.0	43.3	40.8	43.2	44.5	45.8	41.0	41.0	41.6
Nigeria	38.5	45.2	42.5	40.7	39.3	36.4	40.2	40.0	42.5
Ghana	30.1	30.7	30.6	26.6	27.1	27.0	25.6	25.5	24.9
Senegal	30.4	33.7	35.2	34.7	37.2	36.9	24.7	26.3	23.5
Togo	15.9	15.0	13.8	13.7	14.3	12.9	11.4	16.2	15.3
Benin	9.9	9.1	9.0	8.4	10.9	9.9	11.5	10.6	9.3
Burkina Faso	44.6	45.1	54.4	45.8	48.6	51.1	52.7	47.8	46.5
Cote d'Ivoire	24.2	29.0	31.9	26.0	24.3	24.5	30.0	26.6	25.0
Mali	15.4	16.0	16.4	23.2	22.5	23.6	24.9	20.8	15.8
Sierra Leone	30.8	31.2	34.5	29.9	31.3	31.6	31.9	30.1	29.0
<b>WAEMU</b>	27.8	31.8	27.4	24.0	22.7	24.5	28.1	33.1	33.4
Cameroon	19.9	16.5	15.5	13.5	13.8	12.8	14.2	14.1	10.8
Central African Republic	59.3	59.1	56.0	55.1	62.2	64.7	61.9	62.2	66.6
Gabon	22.2	18.6	21.2	26.0	30.1	33.3	37.7	65.3	61.1
DRC	17.2	15.2	12.1	24.6	51.4	55.5	56.4	54.8	54.1
Chad	100.1	105.7	112.9	96.8	90.1	87.4	86.8	81.9	78.3
Chad	43.9	48.5	45.7	44.1	48.1	54.2	56.4	57.0	58.1
Equator. Guinea	31.9	33.8	32.8	33.3	34.2	36.6	37.6	38.9	41.0
<b>CEMAC</b>	38.4	36.7	30.1	38.4	41.0	44.1	45.3	44.7	44.6
<b>Sub-Saharan Africa</b>	30.1	33.0	33.9	32.0	32.5	34.8	35.9	37.6	40.2

Source: IMF Staff reports; World Economic Outlook database; GDP (gross domestic product)

Table 4 shows that inflation was on average significantly higher among countries with flexible exchange rates than among countries with fixed exchange rates. This suggests that there is inflation cost to floating the exchange rate. This finding is in line with Gosh *et al* (1996) who show that that pegs and other limited flexibility regimes lower average inflation rates than managed and free floats.

Table 4: Inflation and exchange rate regimes

Economic indicator	1997-2001	2001	2002	2003	2004	2005	2006	2007	2008
<i>Consumer prices (annual average percent change)</i>									
Angola	211.2	152.6	108.9	98.3	43.6	23.0	13.3	12.2	12.5
Botswana	7.7	6.6	8.1	9.2	7.0	8.6	11.6	7.1	12.6
Malawi	28.1	27.2	14.9	9.6	11.4	15.5	13.9	7.9	8.7
South Africa	6.4	5.7	9.2	5.8	1.4	3.4	4.7	7.1	11.5
Lesotho	7.6	6.9	11.2	7.3	5.0	3.4	6.1	8.0	10.7
Zambia	24.7	21.7	22.2	21.4	18.0	18.3	9.0	10.7	12.4
Mozambique	6.3	9.0	16.8	13.5	12.6	6.4	13.2	8.2	10.3
<b>SADC</b>	21.0	12.5	17.7	12.3	6.3	6.8	6.8	8.2	11.6
Uganda	2.9	-2.0	5.0	5.7	5.0	8.0	6.6	6.8	7.3
Kenya	8.0	5.8	2.0	9.8	11.6	10.3	14.5	9.8	13.1
Tanzania	9.8	5.2	4.6	4.4	4.1	4.4	7.3	7.0	10.3
Ethiopia	0.6	-5.2	-7.2	151	8.6	6.8	12.3	15.8	25.3
Eritrea	N/A	N/A	N/A	22.7	25.1	12.5	15.1	9.3	12.6
<b>EAC</b>	N/A	N/A	N/A	7.1	7.7	7.8	9.8	8.2	11.2
Nigeria	10.0	18.0	13.7	14.0	15.0	17.9	8.2	5.4	11.6
Ghana	22.6	32.9	14.8	26.7	12.6	15.1	10.2	10.7	16.5
Senegal	1.5	3.0	2.3	0.0	0.5	1.7	2.1	5.9	5.8
Togo	2.4	3.9	3.1	-0.9	0.4	6.8	2.2	1.0	8.4
Benin	3.4	4.0	2.4	1.5	0.9	5.4	3.8	1.3	8.0
Burkina Faso	2.2	4.9	2.3	2.0	-0.4	6.4	2.4	-0.2	10.7
Cote d'Ivoire	3.3	4.4	3.1	3.3	1.5	3.9	2.5	1.9	6.3
Mali	1.3	5.2	2.4	-1.2	-3.1	6.4	1.5	1.5	9.1
Sierra Leone	17.3	2.6	-3.7	7.5	14.2	12.1	9.5	11.7	14.8
<b>WAEMU</b>	2.6	4.2	2.7	1.1	0.3	4.7	2.2	2.0	7.9
C.African Rep	1.1	3.8	2.3	4.4	-2.2	2.9	6.7	0.9	9.3
Cameroon	2.9	2.8	6.3	0.6	0.3	2.0	4.9	1.1	5.3
Gabon	1.6	2.1	0.2	2.1	0.4	1.2	-1.4	5.0	5.3
DRC	284.1	357.1	25.3	12.8	4.0	21.4	13.2	16.7	18.0
Chad	3.5	12.4	5.2	-1.8	-4.8	3.7	7.7	-7.4	8.3
Equator. Guinea	5.6	7.3	5.9	7.3	4.2	5.7	4.5	2.8	5.9
<b>CEMAC</b>	3.9	4.5	4.9	1.6	0.4	2.7	4.1	1.0	6.0
<b>Sub-Saharan Africa</b>	14.6	15.7	12.5	10.9	7.6	8.9	7.3	7.1	11.6
<b>Fixed regimes</b>	9.8	13.4	16.7	2.5	1.2	4.1	4.0	2.5	7.8
<b>Floating regimes</b>	15.8	16.3	11.5	13.0	9.2	10.1	8.0	8.1	12.4

Source: IMF Staff reports; World Economic Outlook database

This finding is also in agreement with other studies, Gosh et al (2003), Levy-Yeyati and Sturzenegger (2003) who found that hard pegs have the lowest inflation than more flexible regimes, and that in developing countries, exchange rate flexibility is associated with significantly higher inflation (Husain et al, 2005)

### **5.0 Choosing appropriate regime for African countries**

The conclusion drawn from empirical literature is that the most appropriate exchange rate regime for any given developing economy is likely to depend on its degree of exposure to international capital and the level to which its domestic financial sector has matured, (Harrigan, 2006; Williamson, 2000). For countries that are heavily exposed to international capital flows, with fairly mature and well regulated domestic financial sector, a float may be the most appropriate regime and vice versa.

The strong argument in favour of floating exchange rate regime is that it prevents distortions of the key price – that of foreign currency and ensures competitiveness in international trade. The exchange rate is free to respond to changes in demand and supply of foreign and domestic currency, changes that reflect the underlying trends in balance of payments. It plays the role of equilibrating demand and supply, which can not be performed by the fixed exchange rate. However, the ability of the exchange rate to play this equilibrating role in developing countries depends on a number of other factors and often unrealistic assumptions – such as price flexibility and elasticity of both import demand and export supply with respect to prices

As already indicated, if a country is a price taker on the international markets, like most developing countries in Africa, or if its export competitiveness is dependent on non-price factors – such as quality, branding and reliability, a depreciation of the exchange rate will not have any effect on the competitiveness of exports. Additionally, if a country is highly import-dependent and if imports take the form of intermediate and capital goods then import demand may not respond to changes in the exchange rate, i.e. it will be price-inelastic. Furthermore, for developing countries under balance-of payments growth constraint (shortage of foreign exchange), imports are more likely to be determined by the availability of foreign exchange (determined by aid and exports), with the exchange rate playing only a minor role. All of the above characteristics tend to apply to small open low-income economies, and much of the empirical work suggests that in such countries changes in the exchange rate, as under a free float, have little impact on imports and exports. With such a scenario, the most

appropriate exchange rate regime is the one leaning towards a fixed regime. It brings advantages in terms of lower inflation rates and higher growth rates particularly to low-income countries. Thus a return to a peg may well offer the best option for such countries.

## **6.0 Conclusion and the way forward**

In analysing the choice of exchange rate regimes for developing countries in sub-Saharan African countries, it is necessary to distinguish between those countries with substantial involvement in international financial markets and those where involvement is limited. Though the current thinking, especially among international financial institutions is that market determined exchange rates are the most appropriate for developing countries, recent empirical work and evidence, using de facto classifications of the exchange rate regime suggest that fixed regimes may be more appropriate for low-income countries.

For the majority of sub-Saharan African countries, with less linkage to global capital markets, traditional exchange rate pegs and intermediate regimes are more viable and retain important advantages. Other factors aside, evidence shows that most low-income countries have performed well during peg regimes. The counter-argument that an exchange rate fix, by distorting prices acts as a disincentive to exporters does not hold at least for low-income African countries as empirical work concludes that the real effective exchange rate is not a key determinant of either export supply or import demand – non price factors are more important.

For middle-income African economies, with relatively developed financial markets and linkages to modern global capital markets, floating arrangements, including the managed floating exchange rate regime, look more promising. If supported by the required policy discipline and institutional structures, however, hard currency pegs may also be appropriate for some of these countries. The general presumption then is that as countries become more developed; they should be moving away from intermediate regimes, towards greater flexibility of the exchange rate – or a hard peg in cases of a monetary union or currency board.

In conclusion, it should be emphasized that no single exchange rate regime is right for all countries or at all times, and no regime can act as an alternative for good policies and strong institutions. The exchange rate regime should be looked at as part of a monetary policy framework, which itself is an essential part of a sound macroeconomic framework.

## References

- Andrew Berg (2000). *Exchange Rate Regimes in an Increasingly Integrated World Economy*. IMF Occasional Paper 193.
- Bird, G. (1979) 'The Choice of Exchange Rate Regime in Developing Countries', *Philippine Economic Journal* 2.
- Black, S. W. (1976) 'Exchange Policies for Less Developed Countries in the World of Floating Rates', *Princeton Essays in International Finance* 119.
- Bleany, M. and Fielding, D. (2002) 'Exchange Rate Regimes, Inflation and Output Volatility in Developing Countries', *Journal of Development Economics* 68 (1): 233-45.
- Bordo, M. D. (2003) *Exchange Rate Regime Choice in Historical Perspective*. NBER Working Paper 9654. Cambridge, MA: National Bureau of Economic Research.
- Calvo, G. A. and Reinhart, C. M. (2000) *Fear of Floating*. NBER Working Paper 8006. Cambridge, MA: National Bureau of Economic Research.
- Crockett, A. D. and Nsouli, Saleh M. (1977) 'Exchange Rate Policies for Developing Countries', *Journal of Development Studies* 13: 125-43.
- Dornbusch, R. (2001) *Fewer Monies, Better Monies*. NBER Working Paper 8324. Cambridge, MA: National Bureau of Economic Research.
- Edwards, S. (2001) *Exchange Rate Regimes, Capital Flows and Crisis Prevention*. NBER Working Paper 8529. Cambridge, MA: National Bureau of Economic Research.
- Edwards, S. and Magendzo, I. (2003) *A Currency of One's Own? An Empirical Investigation on Dollarization and Independent Currency Unions*. NBER Working Paper 9514. Cambridge, MA: National Bureau of Economic Research.

Edwards, S. and Levy-Yeyati, E. (2003) *Flexible Exchange Rates as Shock Absorbers*. NBER Working Paper 9867. Cambridge, MA: National Bureau of Economic Research.

Eichengreen, B. (1994) *International Monetary Arrangements for the 21st Century*. Washington, DC: The Brookings Institution.

Fischer, S. (2001) 'Exchange Rate Regimes: Is the Bipolar View Correct?', *Journal of Economic Perspectives* 15 (2): 3-24.

Frankel, J. A. (1999) *No Single Currency Regime is Right for all Countries or at all Times*. Princeton Essays in International Finance No. 215. Princeton, NJ: Princeton University Press.

Frankel, J. A. and Rose, A. (2000) *Estimating the Effect of Currency Union on Trade and Output*. NBER Working Paper 7857. Cambridge, MA: National Bureau of Economic Research.

Frankel, J. A. and Johnson, H. G. (eds) (1976) *The Monetary Approach to the Balance of Payments*. London: Allen and Unwin. 222 *Jane Harrigan*

Friedman, M. (1953) 'The Case for Flexible Exchange Rates', in *Essays in Positive Economics*. Chicago: University of Chicago Press.

Ghosh, A., Gulde, M. and Wolf, H. (2003) *Exchange Rate Regimes: Choices and Consequences*. Cambridge, MA: MIT Press.

Ghosh, A., Gulde, M., Ostry, J. and Wolf, H. (1996), "Does Nominal Exchange rate Regime Matter?" NBER Working Paper 5874.

Goldstein, M. (1995) *The Exchange Rate System and the IMF: A Modest Agenda*. Washington, DC: Institute of International Economics.

Grier, K. and Hernandez-Trillo, F. (2003), "The real exchange rate process and its real effects: the case of Mexico and the USA", *Journal of Applied Economics*, Volume 7, Number 1



Harrigan, J., Banda, W. and Nixon, F. (2001) 'The Determinants of Export Performance: Results of a 1997 Survey of Malawian Exporters', *Journal of African Business* 2 (3): 33-64.

Harrigan, J (2006) 'Time to Exchange the Exchange Rate Regime: Are Hard Pegs the Best Options for Low-income', *Development Policy Review* 24 (2): 205-223

Husain, A., Mody, A. and Rogoff, K. (2005) 'Exchange Rate Regime Durability and Performance in Developing Versus Advanced Economies', *Journal of Monetary Economics* 52(25): 35-64.

Krugman P. R. and Obstfeld, M. (1994) *International Economics: Theory and Policy*, 3rd edn. Donnelley and Sons. New Jersey: Addison Wesley Longman, Pearson Education.

Ladd, P. (2003) *Too Hot to Handle? The Absence of Trade from the PRSPs*. London: Christian Aid.

Larrain, F. and Velasco, A. (2001) *Exchange Rate Policy in Emerging Market Economies: The Case for Floating*. Essays in International Economics No. 224. Princeton, NJ: Princeton University Press.

Levy-Yayati, E. and Sturzenegger, F. (2003) 'To Float or to Fix: Evidence on the Impact of Exchange Rate Regimes on Growth', *American Economic Review* 93 (4): 1173-93.

Lipschitz, L. (1978) 'Exchange Rate Policies for Developing Countries: Some Simple Arguments for Intervention', *IMF Staff Papers* 25, September.

Masson, P. R. (2001) 'Exchange Rate Regime Transitions', *Journal of Development Economics* 64 (2): 571-86.

McKinnon, R. and Pill, H. (1999) 'Exchange Rate Regimes for Emerging Markets: Moral Hazard and International Over-borrowing', *Oxford Economic Review* 15: 19-38. *Time to Exchange the Exchange-Rate Regime* 223

Milner, C. and Zgou, E. (2003) *Export Response to Trade Liberalisation in the Presence of High Trade Costs: Evidence for a Landlocked African Economy*.

Credit Research Paper 03/04. University of Nottingham, UK: Centre for Research in Economic Development and International Trade.

Mussa, Michael (2007). "IMF Surveillance over China's Exchange Rate Policy", Peterson Institute for International Economics, Washington, DC.

-----, Paul Masson, Alexander Swoboda, Esteban Jadresic, Paulo Mauro, and

Obstfeld, M. (1994) 'The Logic of Currency Crises', *Cahiers Economiques et Monetaires* 43: 189-213.

Obstfeld, M. (1996) 'Models of Currency Crisis with Self-Fulfilling Features', *European Economic Review* 40: 1037-48.

Obstfeld, M. and Rogoff, K. (1995) 'Mirage of Fixed Exchange Rates', *Journal of Economic Perspectives* 9: 73-96. Polak, J. J. (1957) 'Monetary Analysis of Income Formation', *IMF Staff Papers* 6, November.

Quirk, P. J.; Christensen, B. V.; Mo Huh, K. and Sasaki, T. (1987) *Floating Exchange Rates in Developing Countries: Experience with Auction and Interbank Markets*. Occasional Paper No. 53. Washington, DC: IMF.

Reinhart, C. M. and Rogoff, K. (2004) 'The Modern History of Exchange Rate Arrangements: A Reinterpretation', *Quarterly Journal of Economics* 119 (1): 1-48. Reserve Bank of Malawi (2005) 'Evolution of Exchange Rate Determination in Malawi:

Rogoff, K. (1999) 'Perspectives on Exchange Rate Regimes', in M. Feldstein (ed.), *International Capital Flows*. Chicago: University of Chicago Press.

Williamson, J. (2000) *Emerging Markets: Reviving the Intermediate Option*.

Washington, DC: Institute of International Economics

World Bank, (1994), "Choice of Exchange rate Regimes For Developing Countries," Africa Region Working Paper Series No.16