The Question of ECO Stowage: A Response from the Study of the Misalignment of the CFA Franc in WAEMU

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

The objective of our work is to provide an answer to the question of whether or not to link ECO to EURO. For this, we assume that CFA franc is constantly misaligned. Based on WAEMU's equation of the real exchange rate estimated, we obtain the series of the real exchange rate of balance and the level of misalignment through the HP approach. We use annual WAEMU data for the period 1980-2017 from the World Bank, the International Monetary Fund and the Central Bank of West African States. This result questions the effectiveness of a fixed stowage of the new currency, the ECO to the EURO. However, before the adoption of this new currency, the evaluation of the position of exchange reserves in ECOWAS is necessary. In addition, strengthening productive capacity and better coordination of macroeconomic policies within the ECOWAS economies is highly recommended. It would also be wise to reconsider the budgetary management of ECOWAS states member in order to achieving more convergence.

Keywords: ECO; CFA franc; misalignment; WAEMU; ECOWAS.

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1. INTRODUCTION

The establishment of a common currency in the ECOWAS zone is not a new project. But this project is struggling to see the light of day. Today ECOWAS is made up of two zones including WAEMU[1] which has been a monetary zone since 1962 and the Non-WAEMU's zone[2] made up of countries having their own currency [1].

In the news of the achievement of this monetary union and the incessant controversy over the choice of an exchange rate regime which will make unanimity among economic theorists, would West Africa really benefit from moving towards a monetary union like which is used in the WAEMU?

In developing countries the policy of managing the exchange rate has long occupied a preponderant place [2]. In view of its macroeconomic benefits, the choice of an appropriate exchange rate regime is one of the most rewarding economic policy decisions for ECOWAS countries. In addition, the determination of equilibrium exchange rates and the related

imbalances arouses enthusiasm for central banks and financial institutions thanks to the introduction of new criteria of choice proposed by authors like [3], notably the variability of the TCR. These new criteria of choice favor the connection of the behavior of the TCR within an exchange regime and the crises which it can generate when this determination would allow the realignment of currencies and the reduction of global imbalances resulting from the instability of the global economic context [4]. Indeed, the evaluation of RER misalignments is necessary insofar as these misalignments could modify the allocation of resources, disrupt price formation as well as investment decisions? which compromises growth. Seen from this angle, reducing misalignment would also be a major objective of economic policy of which the choice of the exchange rate regime may be one of the determinants.

Be it theoretically [5,6,7,8] as well as empirical [9,7,10], the superiority of an exchange rate regime for a developing country remains ambiguous.

From the above, it appears that maintaining the value of currency at an appropriate level becomes a fundamental objective.

With the advent of the EURO since January 1, 1999, the value of the CFA franc on international markets depends on that of the EURO. It might be therefore believed that the repeated distortion phases of the real exchange rate in the WAEMU are partly linked to the fluctuations of the EUR against the Dollar and vice versa. [11,12] thus underline that the anchor currency is not neutral. Their estmations of equilibrium exchange rate for WAEMU[3] countries show that the CFA franc tends to be overvalued in periods when the EUR is strong. Thus, a strong currency would then be considered as an exportation tax, which makes the WAEMU countries less competitive.

This overvaluation matter is growing in WAEMU countries because their growth is mainly based on the exportation sectors. This is seen through the study by [13], which underlines that these sectors are of vital contribution to the entry of foreign currency. These sectors are also the main driver of public income and constitute the essential link in attracting FDI. [14] argues that the continual overvaluation of the real effective exchange rate in the WAEMU over the period 1985-2014, resulted in a loss of economic growth of 0.86 points and an increase in the level of volatility.

The real growth of ECOWAS countries illustrated in the data of the [15] reveals an economic divergence of the member countries. However, according to [16], the countries of West Africa which do not belong to WAEMU have practically similar characteristics to those of the WAEMU countries, both at the level of financial structures and the institutional organization of markets.

It therefore appears, faced with the disparities in the current economic dynamism of the countries of the area that the debate on the creation of a new currency, ECO, accentuates the controversy over a possible pegging to EURO. For some, anchoring to EURO is seen as a potential source of overvaluation and a brake on economic

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[1] *Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo constitute WAEMU.*
[2] *In the absence of an official name, the author calls the Non-WAEMU zone, the zone made up of ECOWAS countries that are not members of WAEMU. It is made up of Cape Verde, Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone having respectively the Cape Verdean Escudo, the Dalasi, the Cedi, the Guinean Franc, the Liberian Dollar, the Naira and the Leone as the national currency.*

[3] *The trade structure of the WAEMU countries is essentially based on the export of unprocessed basic products.*

development. For others, however, this pegging to the EURO is a means of resilience to internal and external shocks and therefore source of economic and social dynamism. However, [17] found a negative impact of the misalignment on economic growth in Nigeria. His study recommends continuing to use market-based exchange rate agreements as a means of ensuring a long-term alignment of the real naira exchange rate with its equilibrium trajectory. For him, this would complement other government policies aimed at promoting the country's economic growth.

As we can see, the literature has highlighted the non-neutrality of the anchor currency in the evolution of the peg. It should be noted that very few studies have examined the best strategy for anchoring the ECO in ECOWAS, thus motivating our study.

In addition, the debt crisis in the EURO area since 2011 has raised the question of anchoring ECO to EURO.

The interest of this study is based on the search for an answer to the problematic of the need to stow or not ECO to EURO. Furthermore, this study is based on the work of [18] which consisted in determining the equation of the real exchange rate in WAEMU zone.

To respond to this problem amounts to asking oneself whether twenty-seven years after the 1994 devaluation, CFA franc has recorded imbalances in REER.

To answer the fundamental question asked and achieve the objectives set, our article will be presented in five sections. The second will introduce the concept of misalignment of the real exchange rate, while the third will aim to estimate and interpret at the same time the results of the CFA franc real exchange rate misalignment. Regarding the fourth, its role will be to present the economic policy implications. Finally, the conclusion will be the subject of the section 5.

2. MISALIGNMENT CONCEPTS

There are two kinds of real exchange rate misalignment which are macroeconomic and structural misalignment.

We speak of macroeconomic misalignment when the observed real exchange rate moves away from its equilibrium value. This is caused by

dysfunctions between macroeconomic policies and the official nominal exchange rate system.

When variations in long-term sustainable values of the fundamentals of the real exchange rate equilibrium does not impact variations in the real exchange rate observed in the short term, one at this time can support the existence of structural misalignment. An external deterioration in a country's terms of trade, for example, will have an influence on the real exchange rate. This is explained by the fact that a high relative price for tradables would condition the economy to remain in balance. The real exchange rate will therefore be considered to be structurally misaligned when the adjustment in the observed real exchange rate reflects this variation in the equilibrium real exchange rate. The shock on the terms of trade explains such a mismatch.

The fundamental question then arises is whether the variations of fundamentals of the equilibrium real exchange rate are perceived to be fleeting or permanent. A temporary deterioration in the terms of trade could illustrate the significant deviation of the real exchange rate from its equilibrium level regarding temporary changes in these fundamentals [19]. The resolution of these short-term imbalances can most often go through specific policies such as the accumulation of international reserves or the use of certain compensatory facilities of the International Monetary Fund. What should be noted is that the main difficulty at this level lies in the very recognition of the temporary essence of these shocks.

Long-term distortions in the exchange rate can, unlike volatility, cause much larger disruptions to the economy. Indeed, long deviations in the exchange rate can result in the deterioration of market signals and the modification of internal relative prices. Thus inducing significant adjustment costs which could be avoided for exchange rate values close to equilibrium. In the case of a given country, the costs of lasting distortions in its exchange rate are easily seen through an increased unemployment in the case event of overvaluation and an inflation in the case of undervaluation. That being said to be compensated between one country to another, in the sense that high unemployment for one country results in a low, unemployment rate for another. Yet there are, certain costs resulting from exchange rate distortions that disrupt economies more

fundamentally. That is to say, which cause permanent disturbances in the behavior, and the production. This generates significant adjustment costs. At this level, [4] distinguishes six costs of this kind, most of which are likely to intervene alternately. These costs are, among others, linked to strong disturbances of the optimal structure of consumption, adjustments to restore balance, inflation, unemployment, the deficit in the trade balance and the reallocation of resources.

Foreign exchange rate distortions can have as repercussions, strong variations of internal consumption. Indeed, the deficits in the trade balance stem from the abnormally high consumption during a period of overvaluation. Thus, in accordance with the life cycle theory, the devaluation necessary in balance restoring leads to an abrupt contraction in consumption which is generally poorly accepted. We will therefore be faced with an alternation of phases of expansion and austerity. This causes disturbances in the optimal structure of consumption, leading to high adjustment costs. Thus, the change relative prices between the products of the exposed sector and those of the sheltered sector would result from a misalignment. This in turn causes a reallocation of resources between these two sectors. This reallocation, in turn, generates a long and costly adjustment process in terms of productive capital. This can be seen more in the reconversion of the workforce, hence the unemployment, which results from the slowness of the adjustments made necessary by the distortions. It would be wise to know that when excessive overvaluation causes the restructuring of entire industrial sectors, as it was the case in the United States in the early 1980s, unemployment becomes inevitable for a large part of the workforce concerned, even in this country where mobility is high.

The observation is that the difficulties in adjusting productive capacity arise from distortions of unemployment. In fact, in an uncertain environment, companies do not have the means that alowed then to judge whether the nature of distortion is temporary or not. As a result, they cannot make appropriate decisions regarding investment and optimal productive capacity. Clearly, an overvalued currency will force companies to drop unprofitable activities. What, from a certain level, will cause a deindustrialisation at the national level for sectors which did not profit from strong comparative advantages. This was the case in the United States and the United Kingdom in the early 1980s. On the price side, we observe that an alternation of overvaluation and undervaluation is the factor of the increase in the rate of inflation, all other things on another note, being equal to that obtained at a constant real exchange rate. It is observed that, for some reasons of real wage behavior, a depreciation pushes up wage costs much more than an appreciation would have brought them down. This implies in this case an acceleration of the rythm of inflation [20].

Finally, misalignments can be the basis of multiple protectionist pressures to the extent that overvaluation tends to generate strong protectionist pressures. What is worrying is that the latter tend to maintain themselves even after the return to a much more balanced situation.

3. MISALIGNMENTS OF THE REAL EXCHANGE RATE IN WAEMU

It is important to enderline that for the purposes of our study, the distortions of the CFA franc in the WAEMU will be calculated both aggregated and individually. All this to take into account the heterogeneities at level, of misalignment in the different countries. But well before, a highlighting of the method of misalignment determination is needed.

3.1 Method of Misalignment Determination

Several methods can be used to measure TCR misalignment. However, the existence of an abundant literature on exchange rate misalignment fails to find a consensus on the best way to measure it [21,22]. Nonetheless, based on empirical studies carried out in developing countries [23,24], the filter method of [25] will be used for construction of these unobserved variables. This approach highlights a decomposition of the fundamentals into permanent components and transient components. The function of the real exchange rate used is that obtained from the estimation of the long-term relationship in [18]. The permanent component denoted C_t^P is equivalent to the equilibrium value while the transient component, C_t^T, measures the transient fluctuations. This component results from the following minimization program:

$$min \sum_{t=1}^{\tau} (C_t - C_t^P)^2 + \lambda[(C_{t+1}^T - C_t^T) - (C_t^T - C_{t-1}^T)]^2$$

where λ which is an arbitrarily chosen constant indicates the evolution of the permanent component. Thus, $\lambda = 0$ translates the fact that the series is only a permanent component. However, the permanent component becomes a linear trend, when λ takes more and more important values. Since we have annual data, we choose $\lambda = 100$ [14].

For the estimation of the misalignment of the real exchange rate of CFA franc, we will firstly bring out the equilibrium exchange rate, then proceed to calculate the degrees of misalignment of CFA franc.

The equation of the real exchange rate estimated by [18] is presented as follows:

$$\widehat{tcer}_t = -3,87\, bc_t + 0,01\, ide_t + 0,37\, pibh_t + 0,79te_t \quad (1)$$

Thus, the description of the variables used in this model is identical to that of [18].

Based on the equation 1 above, we proceed to the HP decomposition in order to obtain the series on the level of the real exchange rate equilibrium. Next, we will make a comparison between the series on the current level of the real exchange rate (TCER) and its equilibrium value (BOTTOM). This comparison can only be made by taking not only each country individually but also WAEMU as a whole. It should be noted that the misalignment will be evaluated using the following expression:

Misalignment = $\dfrac{FOND - TCER}{TCER}$. A negative sign will be synonymous with overvaluation of the current real exchange rate and a positive sign is synonymous which undervaluation [23,17,26]. We can speak of undervaluation when the equilibrium real exchange rate exceeds the real exchange rate (MES> 0) and overvaluation in the opposite situation (MES <0).

Following the description of our methodological approach, it would be appropriate to reveal the empirical results to which this study has led. Long before, it would be imperative to present the data from our study.

3.2 Presentation of Data

In this article, we use the annual data covering the period 1980-2017 as in [18]. It is worth noting that data come from the World Bank database, the International Financial Statistics (IFC) of the International Monetary Fund (IMF) and the annual reports of the Central Bank of West African States (BCEAO). We also have recourse WAEMU zone, namely Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal and Togo. The data relating to Guinea Bissau being not available for the entire period of our study, we have decided to subtract this country from our sample.

3.3 The Determination of Misalignment Degree

The evolution of the real exchange rate misalignment in these different countries can be summarized in Figs. 1 to 7.
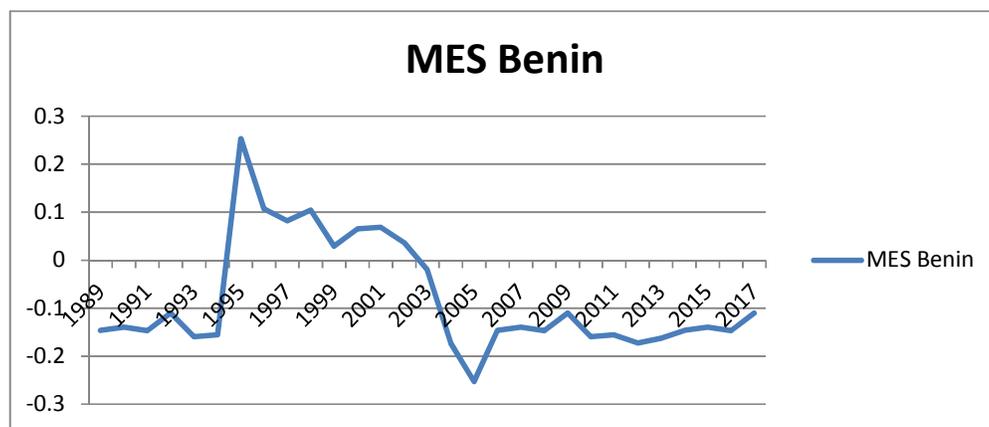

Fig. 1. Degree of misalignment in Benin
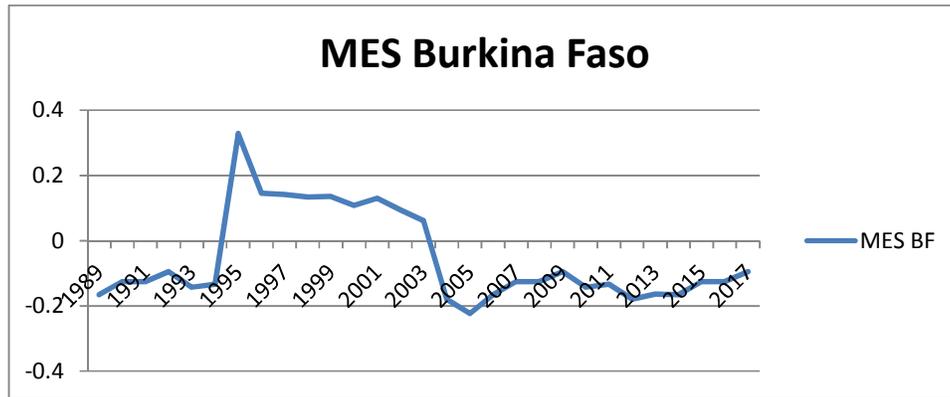*Source: Author's calculations based on World Bank, IMF and BCEAO data*

Fig. 2. Degree of misalignment in Burkina faso
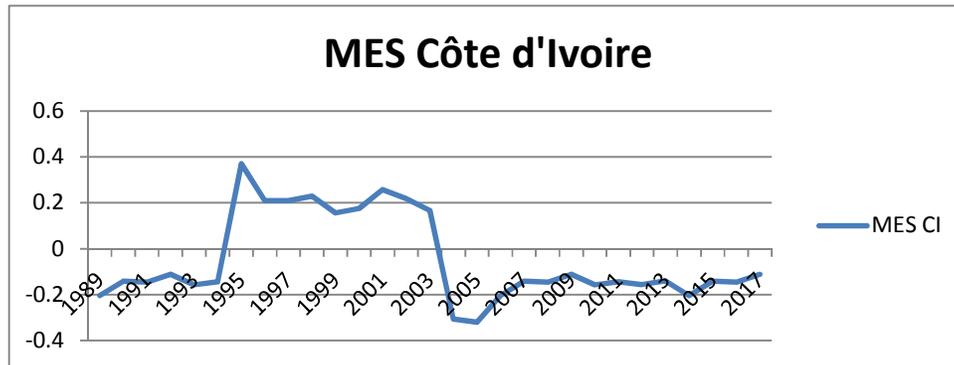*Source: Author's calculations based on World Bank, IMF and BCEAO data*

Fig. 3. Degree of misalignment in Côte d'Ivoire
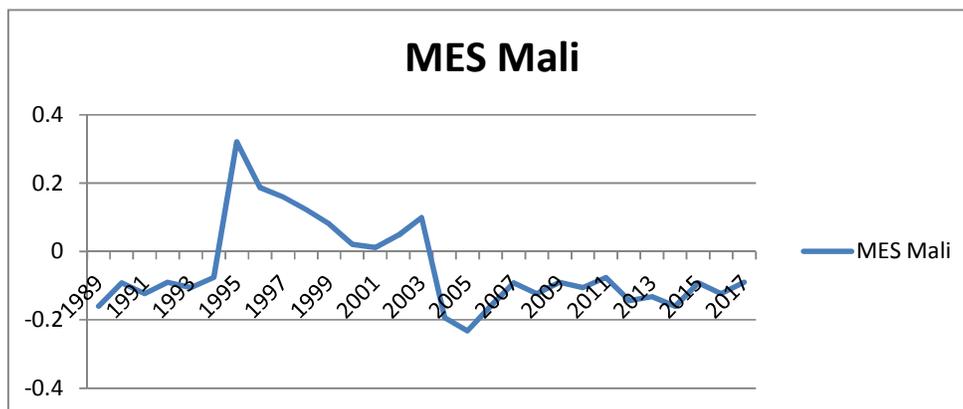*Source: Author's calculations based on World Bank, IMF and BCEAO data*

Fig. 4. Degree of misalignment in Mali
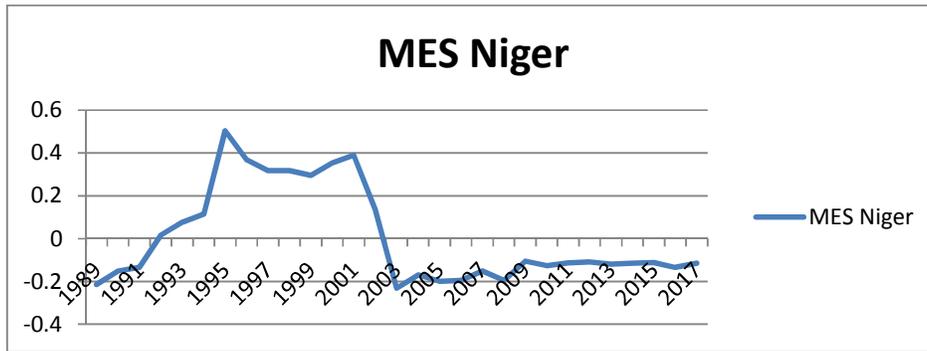*Source: Author's calculations based on World Bank, IMF and BCEAO data*

Fig. 5. Degree of misalignment in Niger
Source: Author's calculations based on World Bank, IMF and BCEAO data
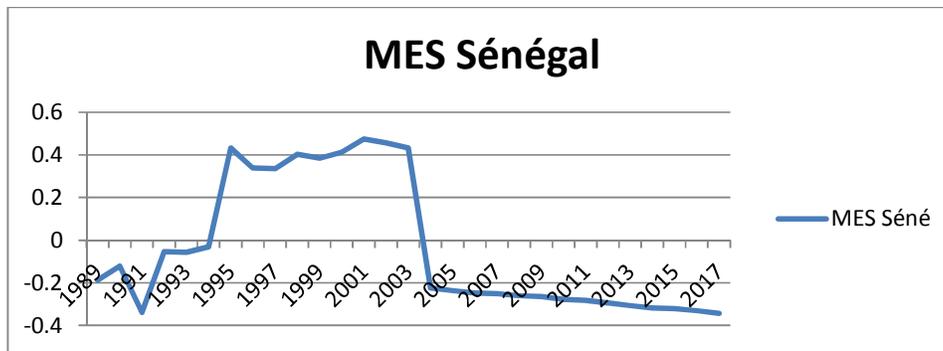

Fig. 6. Degree of misalignment in Senegal
Source: Author's calculations based on World Bank, IMF and BCEAO data
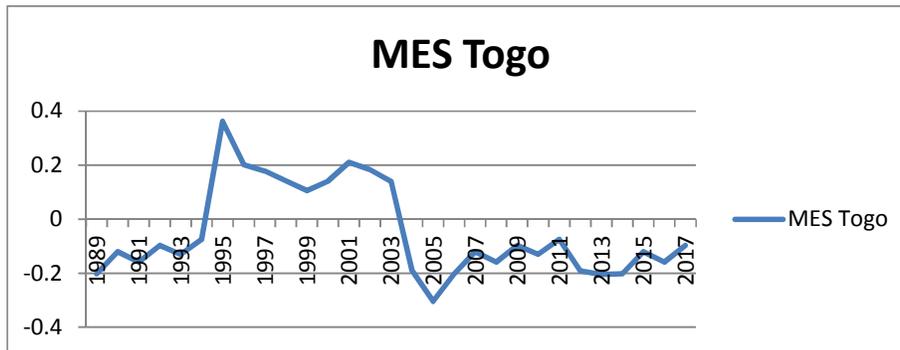

Fig. 7. Degree of misalignment in Togo
Source: Author's calculations based on World Bank, IMF and BCEAO data

A deeper analysis of the evolution of the exchange rate misalignment of member countries of WAEMU, requires to focus on three distinct sub-periods: the first is the one before the January 1994 devaluation of the CFA vis-à-vis the French Franc; the second is the one which covers the period from 1994 to 2003; the last one, started from 2003 to the present day. All the WAEMU countries clearly display an overvaluation of their exchange rates between 1989 and 1994. Concerning the post-devaluation period until 2003, all countries show an undervaluation of real exchange rates. But, we are again witnessing an overvaluation of real exchange rates until the present day, and this happens after the impacts of the adjustment

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have hardly passed. We can say without any doubt that the fixed exchange regime in force in WAEMU is therefore a factor of misadjustment in the real exchange rate. By referring to [4,3], we can attest that the behavior of the TCR in WAEMU and the crises which it can cause notably the misalignment of the exchange rate, is linked to the choice of fixed exchange regime. Which leads us to wonder if it is advisable for these countries in particular and for ECOWAS in general to adopt such a system in the management of the exchange rate plicy of the new currency?

3.4 The Determination of Misalignment Degree

In order to remove any ambiguity from our analysis, we will study the behavior of the real exchange rate of the CFA Franc at the aggregated level of the WAEMU zone. In terms of issues, our objective will be to demonstrate the confirmation yes or no of the results obtained aarlier at the aggregated level of the WAEMU. Which should lead to the clarification of the maintenace or not of the fixed exchange system in force in WAEMU with regard to the management of the new ECOWAS currency. The observation is that the misalignment the WAEMU behaves similarly to one of the economies that compose it. This is easily explained, since for [27] the post-devaluation period of the CFA Franc marks a primacy of economic convergence as basis of monetary management within the region. We can therefore conclude that it is inappropriate for ECOWAS to maintain a fixed exchange system in the management of the ECO exchange rate. Table 1 shows the evolution of the misalignment of the real exchange rate of the WAEMU zone.

Table 1. Degree of misalignment of WAEMU

Years	1989	1990	1991	1992	1993	1994	1995	
WAEMU MES	-0.1464	-0.1394	-0.1470	-0.0946	-0.1430	-0.1336	0.3210	
Years	1996	1997	1998	1999	2000	2001	2002	
WAEMU MES	0.1869	0.1594	0.3174	0.2940	0.3536	0.4740	0.3965	
Years	2003	2004	2005	2006	2007	2008	2009	
WAEMU MES	-0.3928	-0.2580	-0.2182	-0.1660	-0.3058	-0.3203	-0.1599	
Years	2010	2011	2012	2013	2014	2015	2016	2017
WAEMU MES	-0.2149	-0.1877	-0.2026	0.1394	-0.1252	-0.0916	-0.1521	-0.1605

Source: author's calculations based on World Bank, IMF and BCEAO data

4. ECONOMIC POLICY IMPLICATIONS

According to Zouri S. [27], whithout surprise, the results show a high degree of misalignment and similarity in the WAEMU zone over the entire study period. In addition, the results indicate an appreciation of the CFA franc observed since 2003. These results raise the problem of the adequacy of the fixed exchange system to the alignment of the new currency, the ECO, of the ECOWAS. In fact, given the extroverted nature of our economies and the general tendency to misadjustement of the CFA franc, it is imperative to reflect on the adequacy of the fixed exchange rate regime and the nature of the macroeconomic framework of the economies of Africa. Most attactive, it's good to know that a peg to the EURO would be subject to huge imbalances. which would be likely to cause a misadjustement of the ECO. One solution is that the central bank could appropriate over the total management of the foreign exchange reserves in the first instance, then opt for a less rigid management of the new exchange policy of ECOWAS countries. Macroeconomic policies in ECOWAS economies should therefore be better coordinated as recommended by [14,26] to ensure the viability of such a system. The budgetary policy of the member states of ECOWAS zone through the imposition of convergence criteria which are likely to help these countries to face up to the enormous economic challenges would also have to be reviewed. It is also imperative to strengthen the industrial fabric of these economies in an attempt to secure a large share of domestic demand. This increase in domestic supply will help to reduce the scale of the chronic deficit in the trade balance of ECOWAS countries.

In addition, the establishment of a policy that could allow these economies to benefit from trade liberalization is necessary. To achieve this goal, however, it would be important to promote exportations of high value-added products. As an instrument, an incentive tax policy for ECOWAS economies is needed to allow investors to establish themselves there and produce. Which will have the impact of improving local productive capacity and at the same time lead to a diversification of exportations.

5. CONCLUSION

The review of empirical literature on the determination of misalignment is vast. The objective of our work being to provide an answer to the question of the pegging or not of the EURO, a hypothesis has been put forward. It assumes that the CFA franc is constantly misaligned. Furthermore, with the introduction of TCR misadjustement in the choice of exchange rate regime by [4,3], it is now recognized that economic crises can result from the choice of the exchange rate regime. Our estimations reveal the continual misadjustement of the CFA franc over the entire period of our study. This result casts doubt on the effectiveness of a fixed peg of the new currency, the ECO to the EURO. However, before the adoption of this new currency, the assessment of the position of foreign exchange reserves in ECOWAS is necessary in making a better decision. In fact, what is fundamental is the ability of economies to maintain a reliable macroeconomic framework capable to reacting to the different internal and external shocks. A complementary solution is found in the strengthening of the productive capacity of the countries of the zone to satisfy a significant part of the domestic demand and the diversification of exportations. Wich will help to improve the balance of trade and will allow to benefit from the fruits of trade liberalization. There should also be a better coordination of macroeconomic policies within the ECOWAS economies, as proposed by [14,26]. Finally, it would be wise to reconsider the budgetary management of the ECOWAS member states through the imposition of convergence criteria which are likely to help these countries to face up to the enormous economic challenges.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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