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### **Liquidity premia and external financial fragility in the West African Economic and Monetary Union, Ghana and Nigeria**

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ZÖSS

ZENTRUM FÜR ÖKONOMISCHE  
UND SOZIOLOGISCHE STUDIEN

ZÖSS-Discussion Papers

ISSN 1868-4947/89

Discussion Papers

Hamburg 2021

# **A post-Keynesian perspective on the eco zone project:**

## **Liquidity premia and external financial fragility in the West African Economic and Monetary Union, Ghana and Nigeria**

Florian Lampe  
Universität Hamburg  
florian.lampe@uni-hamburg.de

Anne Löscher  
Universität Siegen  
anne.loescher@uni-siegen.de

Discussion Paper  
ISSN 1868-4947/89  
Zentrum für Ökonomische und Soziologische Studien  
Universität Hamburg  
Oktober 2021

**Impressum:**

Die Discussion Papers werden vom Zentrum für Ökonomische und Soziologische Studien veröffentlicht. Sie umfassen Beiträge von am Fachbereich Sozialökonomie Lehrenden, NachwuchswissenschaftlerInnen sowie Gast-ReferentInnen zu transdisziplinären Fragestellungen.

**Herausgeber/Redaktion:**

Zentrum für Ökonomische und Soziologische Studien (ZÖSS)

Florian.Lampe@uni-hamburg.de

Universität Hamburg

Fakultät für Wirtschafts- und Sozialwissenschaften

Fachbereich Sozialökonomie

Welckerstr. 8

20354 Hamburg

## Abstract

The paper treats the eco currency union project in West Africa and its implications for monetary policies against the backdrop of the international monetary order from a post-Keynesian perspective. The eco zone project envisions a common monetary union of the West African Economic and Monetary Union (WAEMU), i.e. the independent Western subzone of the CFA franc union, and the remaining non-CFA countries of the Economic Community of West African States (ECOWAS) with Nigeria and Ghana as the economically most important member states. The literature on the international currency hierarchy developed by Latin-American structuralists and the post-Keynesian Berlin School of thought focuses on the notion of a currency-specific liquidity premium that structurally determines the interest rate level in the corresponding currency areas. Based on this set of literature, we conduct a comparison between the liquidity premia of the Western CFA-franc, the Nigerian naira and the Ghanaian cedi to make conjectures about what implications a common ECOWAS currency union would have regarding monetary policy space. Being a non-pecuniary variable, the liquidity premium cannot be observed directly. We therefore approximate the liquidity premium by calculating differences in interest rates such as the central bank's base rate, the coupon rate on T-bills and bonds and the interest rate spread between Eurobonds and bonds denominated in local currency. Besides, we use balance of payment data to identify external financial fragilities that might become a crucial factor for monetary policy due to an increasing financialisation in West African economies.

We find that investors demand structurally higher yields on bonds originating in Ghana and Nigeria than in the CFA-franc zone. One could interpret this as the CFA-franc conveying over a higher liquidity premium because it has to have lower yields rates to compensate for liquidity-differences to financial assets denominated in the US dollar or euro. However, another explanation is that expectations about the future developments of the cedi's and naira's exchange value by investors are more pessimistic in comparison to that of the CFA-franc. This is rooted in two major factors: Firstly, under the current arrangement, France still has leeway in monetary policy making and acts as exchange rate stabiliser by pushing for restrictive monetary policies and guaranteeing foreign exchange reserve provision. Secondly, the estimation of external financial fragility in the WAEMU, Nigeria and Ghana shows that the naira implies a greater risk of sudden devaluation compared to the Western CFA franc and the cedi due to Nigeria's higher exposure to mobile liabilities vis-à-vis its asset endowments.

**Keywords:** West African Economic and Monetary Union, CFA franc, eco zone, international currency hierarchy, external financial fragility

**JEL codes:** E12, F33, F41, G11, O57

# 1. Introduction

A growing discontent with France's influence on monetary policy issues in its former colonies in West Africa led to an intensified debate about the future of the African CFA-franc zone in recent years. In December 2019, as reaction to sustained criticism of the colonial continuities of the CFA currency regime, the president of Ivory Coast, Alassane Ouattara and the French president Emmanuel Macron announced a reform of the West African Economic and Monetary Union (WAEMU)<sup>1</sup>, i.e. the institutionally independent Western subzone of the CFA-franc zone made up of Senegal, Ivory Coast, Benin, Burkina Faso, Guinea-Bissau, Mali, Niger, and Togo. The political and symbolic elements of the reform entail (i) the abandonment of the requirement to deposit at least half of the WAEMU countries' foreign reserves at the "operations account" of the French treasury, (ii) the end of France's representation in the decision-making bodies of the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO)<sup>2</sup> and (iii) a renaming of the union's currency from CFA-franc to eco (IMF, 2021). Even though these changes constitute an important step forward in the process of monetary decolonization in the WAEMU, as they strengthen de jure the central bank's autonomy, the fixed exchange rate arrangement vis-à-vis the euro and the French guarantee to ensure an unlimited convertibility of the CFA-franc will remain unchanged, thereby maintaining de facto a considerable degree of monetary dependency.

At the same time as the reform puts an end to the most direct forms of France's political influence on monetary policy in the WAEMU, it also represents another attempt to push forward the project of a common currency for the Economic Community of West African States (ECOWAS) that comprises the countries of the WAEMU and the seven non-CFA countries Nigeria, Ghana, Cape Verde, Guinea, Liberia, Sierra Leone and Gambia. The introduction of a common West African eco zone had been announced multiple times in the past, but its planned launch failed once again in 2020 for the fourth time since the idea was born in 2000. Nevertheless, at the ECOWAS summit in June 2021, the head of states reaffirmed their commitment to the goal of a common currency union and rescheduled the launch of the expanded eco zone for 2027. However, it still remains unclear what the transition to such a currency union, that integrates the euro-pegged CFA-franc of the WAEMU with seven other national currencies operating under different exchange rate regimes, would look like. A simple enlargement of the WAEMU under its current monetary principles appears rather unlikely due to the opposition of, among others, the economic heavyweight Nigeria.<sup>3</sup> Even more importantly, the currency union project raises the question about the degree of monetary policy space that a common

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<sup>1</sup> The WAEMU is also known by its French acronym UEMOA, which stands for *Union Economique et Monétaire Ouest Africaine*.

<sup>2</sup> The BCEAO is the common central bank of the WAEMU.

<sup>3</sup> A more promising scenario could be the adoption of an transitory "African Payment Union" based on the model of the European Payment Union, practiced during the 1950s, with a common unit of account whose exchange rate is flexible regarding international currencies but fixed yet adjustable vis-à-vis the local currencies of the ECOWAS countries (Amato and Nubukpo, 2020, p. 23).

eco zone central bank would have. And more specifically: Which effects on the interest rate level on the regional local currency debt markets are to be expected from this ambitious project? The present study addresses these questions.

An eco-zone that brings together all ECOWAS countries aims to strengthen monetary sovereignty and to break with colonial continuities. This paper's main contribution consists of assessing whether the eco-project can live up to those hopes. The paper assesses the potential introduction of the eco and its implications for monetary policies against the backdrop of the international monetary order from a post-Keynesian perspective. The literature on the international currency hierarchy developed by Latin-American structuralists (Paula and Alves, 2000; Andrade and Prates, 2013), the post-Keynesian Berlin School of thought (Riese, 1986; Lüken-Klaßen, 1993; Herr and Hübner, 2005) and new Minskyan literature (Kaltenbrunner, 2015; Bonizzi, 2017; Bonizzi and Kaltenbrunner, 2019) focuses on the notion of a currency-specific liquidity premium that structurally determines monetary policy space in corresponding currency areas. This set of literature centres Emerging Markets Economies (EMEs), Brazil in particular, and the effects capital in- and outflows have on local currencies. We supplement this literature by adding West African countries as the analytical focus. The discussed results connect to the growing debate about the impact of the currency hierarchy on monetary sovereignty in low-income countries.

By applying the currency hierarchy literature on monetary unions, we formulate an alternative to the Optimal-Currency-Area (OCA) approach most common in mainstream economics to explain the emergence of monetary unions (Krugman, 2012). This is motivated by two reasons: Firstly, the OCA approach is largely devoid of considerations of colonial heritage that are essential to understand monetary integration processes in West Africa. Secondly, the question of whether the ECOWAS meets the requirements of an OCA has already been studied by a set of econometrical literature concluding that the respective economies react largely asymmetrically to exogenous (supply) shocks (Mati, Civcir and Ozdeser, 2019) and that the asymmetry of response is particularly strong between WAEMU countries and non-WAEMU countries (El Jai, 2020). On the heterodox side, post-Keynesian analysis that focuses on (nominal) labour costs differentials to evaluate the risk of unsustainable current account imbalances among the member countries of a monetary union as the European Union is not suitable for West African economies, where labour markets are predominantly informal and characterized by a high share of self-employment (Mbaye and Gueye, 2018). Therefore, the theoretical framework of an international currency hierarchy can contribute new insights about the conditions and challenges of monetary integration and autonomy in West Africa.

Based on the literature of the currency hierarchy, we conduct a comparison between the liquidity premia of the Western CFA-franc, the Nigerian naira and the Ghanaian cedi to make conjectures about what implications the monetary union would have for their monetary policy space, that is how the integration of other ECOWAS currencies would influence the liquidity premium of the planned eco. Being a non-pecuniary variable, the

liquidity premium cannot be observed directly. We therefore approximate whether the monetary union will imply improvements of the liquidity premium by calculating differences in interest rates such as the central bank's base rate, the coupon rate on T-bills and bonds and the interest rate spread between Eurobonds and bonds denominated in local currency. Besides, we use balance of payment data to identify external financial fragilities that might become a crucial factor for monetary policy due to an increasing financialisation in West African economies. Nigeria and Ghana receive special analytical attention here, as they are by far the economically most important member non-CFA-states of the expanded monetary union.<sup>4</sup>

The following section provides an introduction to the theoretical basis used by this paper, that is the post-Keynesian notion of a currency's liquidity premium and its determinants. The third section gives a historical account of the institutional setting of the CFA-franc zone, which is the foundation of the eco-projects' trajectories. Section four conducts a comparison between the determinants of liquidity premium of the CFA-franc, the naira and cedi, to make conjectures about in how far the eco might improve the liquidity premium faced by the member states of the monetary union. The last section summarises the findings and outlines potential monetary policy challenges for a common ECOWAS currency area.

## **2. The liquidity premium and its implication for monetary policy from a post-Keynesian perspective**

The post-Keynesian analytical concept of a *liquidity premium*<sup>5</sup> is a proxy for the liquidity levels attached to assets – that is their ability to fulfil the functions of money both on in a domestic and international context. Whilst in a closed economy, liquidity describes the immediate and cost-less convertibility of an asset into money, on an international level, liquidity encompasses the degree of convertibility of financial assets into assets denominated in the currency hegemon, i.e. the one at the top of the currency hierarchy (Kaltenbrunner, 2010, p. 299). The currency hierarchy is hence an expression of the hierarchical ranking of currencies along their liquidity premia and the resulting asymmetric nature of the international monetary order. Currently, the US-Dollar is the currency hegemon at the top of this hierarchy, followed by the Euro, Yen, Chinese Renminbi, Pound-Sterling, Swiss Franc etc. Currencies of developing and emerging economies (DEE) are positioned in the lower ranks of this hierarchy (Prates, 2020).

The determinants of a currency's liquidity premium are manifold and complex. Under fundamental uncertainty, liquidity is founded in confidence meaning the psychological assessment of how liquid an asset is by market participants (Herr and Hübner, 2005, p.

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<sup>4</sup> In 2019, Nigeria made up for 66.7 per cent of the overall ECOWAS GDP, followed by Ghana with 10 per cent and Ivory Coast, as the first CFA country in this list, whose share amounts to 6.6 per cent (Prasad and Songwe, 2021, p. 4).

<sup>5</sup> Herr and Hübner (2005) speak of a *currency premium* in the context of currencies. For convenience and in accordance with other literature, we only speak of the liquidity premium of a currency.

100). What decides over the confidence put forward against it, is subject to different foci: Whilst the Berlin School of post-Keynesians (Riese, 1986; Herr, 1992; Lüken-Klaßen, 1993; Herr and Hübner, 2005) highlights the importance of a currency to act as means to store value (e.g. via low inflation and stable exchange rates; Herr and Hübner, 2005, p. 103ff.), the more recent Minskyan literature (Kregel, 2006; Kaltenbrunner, 2010, 2015; Bonizzi and Kaltenbrunner, 2019) focuses on a currency's ability to act as unit of account and to settle outstanding liabilities (Kaltenbrunner, 2015, p. 429; Kaltenbrunner, 2010, p. 299).

Having a currency ranking low in the currency hierarchy comes with severe cuts in economic policy autonomy. The liquidity premium is the most important structural component of a currency's *own rate of return*, which is represented in the Equation 1 (Chick, 1983):

$$(1) \quad r = (q - c) + a + l$$

r... own rate of return

q... yields

c... carrying costs

a... expectations of appreciation

l... liquidity premium

An asset's own rate of return is the main determinant of acceptance in economic agents' portfolios and as a consequence a major determinant of exchange rate movements under floating exchange regimes in DEE (Kaltenbrunner, 2015). Policy makers in countries with a low liquidity premium have to compensate the difference to the currency hegemon's liquidity premium by adjusting other factors. Kaltenbrunner (2015, p. 433) highlights that the yield structure ( $y$ ) of the financial assets denominated in DEE currencies is the major adjusting factor, whilst for Andrade and Prates (2013) the expectations of appreciation vis-à-vis the currency hegemon ( $a$ ) are the primary reason why DEE currencies can cyclically ensure demand. In this paper we approximate both components with the domestic interest in the currency areas under consideration as indicator for the yields ( $y$ ) of the financial assets denominated in the respective currency; and a country's degree of *external financial fragility* as proxy for the expectations of appreciation ( $a$ ).

The latter crucially depends on a country's or monetary union's ability to defend the nominal exchange rate at a given interest rate to avert sudden depreciations and therefore positively influence the expectations of appreciation of its currency (Andrade and Prates, 2013). This ability essentially depends on the "available reserves and inflows and outflows of foreign currency [...] in the economy as a whole" (Paula and Alves, 2000, p. 598) which are subject to the dynamics in international financial markets and a country's or monetary union's balance-of-payments, i.e. it is closely interlinked with what is captured in the Minskyan concept of external financial fragility.

External financial fragility tries to capture the risk of not being able to meet outstanding external (short-term) foreign exchange commitments – in other words: an "economy's



need to resort to the international capitals market in order to renegotiate outstanding financial positions (that is, that cannot be settled immediately)." (Paula and Alves, 2000, p. 598) External financial fragility is key for a currency's acceptance as balance-of-payments difficulties imply the risks of massive devaluation pressure on the nominal exchange rate when deteriorated confidence in a currency translates into self-accelerating capital flight. For the purpose of our comparative analysis, we draw on the External Financial Fragility Index (EFFI), developed by de Paula and Alves (2000) to study the Brazilian currency crises in 1998-1999, and apply it to the WAEMU, Ghana and Nigeria. Following Sarto and Almeida (2015, p. 900f.), who built on the work of de Paula and Alves, the

"EFFI measures the real and potential needs of an economy to renegotiate its financial external open positions by the ratio between their immediate obligations, or short-term, and the foreign exchange available to meet them. [...] The higher the index, the lower the country's ability to meet the most immediate external financial commitments, which puts it in a situation of greater dependence on foreign refinancing, increasing their propensity to be affected by changes in the international environment that alter the external financing conditions."

The original version of the EFFI by de Paula and Alves (2000, p. 598) is represented in Equation 2:

$$(2) \quad \text{EFFI} = \frac{M + D_i + D_{OS} + A + \text{STC}_{t-1} + \text{NIP}_{t-1}}{X + R_i + R_{OS} + \text{RE}_{t-1} + \text{FDI} + L_{ml}}$$

M... imports  
 X... exports  
 D... expenditures on interest "i" and other services (OS)  
 R... revenues from interest "i" and other services (OS)  
 A... loan amortisations  
 STC<sub>t-1</sub>... short-term capital stock, with a quarter-year lag  
 NIP<sub>t-1</sub>... stock of net investment in portfolio, with a quarter year lag  
 RE<sub>t-1</sub>... aggregate official reserves at prior quarter-year end  
 FDI... foreign exchange inflows corresponding to direct investments  
 L<sub>ml</sub>... medium- and long-term loans

In regard to different accounting practices and the availability of data we adapted the original equation to ensure the calculability and comparability between EFFI's of different countries whilst keeping the gist of the original index. For the variable 'short-term debt' we use 'gross portfolio investments' from the balance-of-payments data, which is available for all countries. The underlying idea here is that whilst portfolio investments often have long-term maturities, they are traded internationally and hence are mobile financial assets that can cause abrupt capital outflows and in consequence a critical devaluation pressure on the exchange rate.

Putting the real and potential financial needs in relation to the foreign reserve inflow connected to direct investments and the available foreign reserves at the end of the preceding year, our adjusted EFFI can be formalised as done in Equation 3:

$$(3) \quad \text{EFFI} = \frac{\text{CuA}_{\text{debit}} + \text{CaA}_{\text{debit}} + \text{PI}_{\text{debit}, t-1}}{\text{CuA}_{\text{credit}} + \text{CaA}_{\text{credit}} + \text{R}_{t-1} + \text{FDI}}$$

CuA... current account  
 CaA... capital account<sup>6</sup>  
 PI<sub>debit</sub>... portfolio investments liabilities at the end of the year proceeding  
 R<sub>t-1</sub>... stock of reserves at the end of the year proceeding  
 FDI... Foreign direct investments, net inflows

If the debit side of the current account and the capital account (see footnote 5) exceed their credit side, the economy as a whole has to borrow funds from the rest of the world or to reduce its stock of foreign assets. While a reduction of foreign reserves is directly reflected in the equation, increasing foreign liabilities are only regarded as potential financial needs if they are classified as (principally liquid) portfolio investments. Foreign liabilities originating from direct investment are excluded in the numerator as direct investments have commonly a rather long-term perspective, and, for this reason, are supposed to be less volatile.

### 3. Exchange rate regimes and monetary institutional settings in the WAEMU, Nigeria and Ghana

#### WAEMU

The CFA-franc zone exemplifies the weakness of mainstream economics approaches to monetary unions as represented in the OCA-literature. Economic and financial integration of the CFA member countries were no driving factor for the establishment of the CFA zone. Instead, this currency union was born out of French colonialism – still visible in the acronym CFA, which originally stood for *Franc des Colonies Françaises d'Afrique*. Its major objective was to ensure the external exchange parity vis-à-vis the Euro (until 1999 the French Franc, respectively) instead of facilitating intraregional trade, which in fact did not benefit from the imposed currency union (Canac and Garcia-Contreras, 2011, p. 65) and remains low compared to e.g. the East African Community (EAC) and the Southern African Development Community (SADC; Taylor, 2019, p. 1075). In contrast to the Eurozone, monetary integration in West Africa did not follow economic integration but was imposed by France before the political independence of the nowadays CFA countries. The foundation of the CFA-franc zone in 1945 with its own colonial currency reinforced France's privileged access to the natural resources of its colonies by fixing the CFA-franc (or Franc-CFA; FCFA) to the French Franc (FF) at a strongly overvalued rate of 1 FCFA to 1.7 FF (Koddenbrock and Sylla, 2019, p. 8f.).

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<sup>6</sup> Following the sixth edition of the IMF Balance of Payment Manual (IMF, 2007) the capital account refers to "(a) capital transfers receivable and payable between residents and nonresident" such as e.g. debt forgiveness and "(b) the acquisition and disposal of nonproduced, nonfinancial assets between residents and nonresidents" such as e.g. natural resources, contract leases or marketing assets. This definition differs from what is often meant in economic literature by the term capital account, referring to transactions between residents and non-residents that involve financial assets and liabilities, which in the conceptual framework of the IMF manual (starting with the fifth edition) are shown in the financial account (and not anymore in the capital account).

As being part of the CFA-franc zone<sup>7</sup>, all member countries of the WAEMU share the CFA-franc as their common currency, which is pegged to the Euro at a fixed exchange rate. The seven original members Benin, Burkina Faso, Ivory Coast, Mali, Niger, Senegal and Togo established the WAEMU by a treaty in Dakar, Senegal on 10 January 1994, shortly after the first and very harsh devaluation of CFA-franc by 50 per cent, which had remained unchanged for 46 years (1948 to 1994).<sup>8</sup> Institutionally, the WAEMU was de facto a merger of its two precursors, namely the Economic Community of West Africa (WAEC) and the West African Monetary Union (WAMU). Founded in 1961, the WAMU insured the maintenance of a common currency area shortly after the political independence of its member states and reaffirmed the monetary cooperation with France on a new legal basis (Grimm, 1999, p. 6). By integrating the WAEC, the new WAEMU expanded the WAMU to a monetary and *economic* union, thereby paving the way for a common market including a customs union and the harmonization of external tariffs; two objectives that were accomplished in January 2002 (Jeanneney, 2006, p. 46). Additionally, in the context of the nominal devaluation of the FCFA, the member states strengthened their multilateral surveillance system of monetary and fiscal policy with the purpose to avoid downward pressure on the exchange rate and unsustainable public debt in the future (Tsangarides and Boogaerde, 2005).

Before the introduction of the colonial CFA-franc in 1945, the metropolitan French franc circulated as the only legal tender in all French colonies in Africa. In francophone West Africa, base money emission was carried out by a private investment bank, the *Banque de l'Afrique de l'Ouest* (BAO) within strict limits and under the mandate of the *Banque de France*. Due to the Bretton Woods System with its fixed exchange rates, the BAO had to back up one third of every issued French franc by one third in terms of gold reserves. In 1955, France revoked the privilege of (base) money emission from the BAO and handed it over to the public *Institut d'Emission de l'Afrique Occidentale Française et du Togo* (Kalife, 2016, p. 86), which four years later, in April 1959, became the Central Bank of West African States (known under the French acronym BCEAO), that is until today the operating central bank for the WAEMU.

The colonial roots of the CFA zone are until today highly present in the bilateral monetary policy agreements between France and the WAEMU. They include two central conditions in return for the French guarantee to provide as much Euro-denominated credits as needed to ensure the fixed exchange rate. First, 50 per cent of the BCEAO's foreign reserves have to be pooled at the French treasury on particular Operation Accounts (which also includes the BCEAO's control over private foreign reserve assets in the WAEMU in case of emergency, the so called *clause de ratissage*). Second, the central banks base money needs to be backed by 20 per cent with the BCEAO foreign reserve claims. Due to growing criticism from African politicians and the civil society, the degree

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<sup>7</sup> The remaining six countries of the CFA zone are affiliated with the Central African Economic and Monetary Community (CEMAC).

<sup>8</sup> As the only non-francophone country, the former Portuguese colony Guinea-Bissau joined the Union two years later on 2 May 1997.

of reserve pooling at the French treasury had been lowered consecutively (from originally 100 per cent to 65 per cent in 2000 and 50 per cent in 2005) and, with the complete implementation of the reformed bilateral agreements, the BCEAO will gain full autonomy of its foreign reserve. In contrast, France will further keep the role as a lender of last resort for foreign reserves as the BCEAO will, at least in the short and medium term, maintain a Euro-based fixed external anchor management (IMF, 2021). Therefore, it remains to be seen whether monetary policy authorities of the reformed WAEMU and France will stick to the currency board-like rule of money base coverage, as this mechanism has implications for the refinancing conditions of commercial banks.

The last far-reaching institutional reform of the BCEAO became effective in April 2010. Prior to that reform, the central bank statutes allowed an amount of direct public finance limited to 20% of the government tax revenues of the preceding year. However, the council of ministers of the WAEMU decided at the end of 2001 to freeze this direct credit line on its level in December 2002 and adopted a consolidation programme for the susceptible reimbursement of the outstanding loans (Banque de France, 2011, p. 60). This fundamental change from central bank to private public budget financing was accompanied by an increasing role of commercial banks as creditors of public debt and the promotion of a regional debt market (see below). The 2010 reform strengthened the central banks' political independence from the supranational WAEMU by transferring the responsibility of monetary policy implementation from the Council of Ministers to the newly created Monetary Policy Committee (MPC), that in contrast to the former is an organ of the central bank. As another outcome of the implemented reform, article 4 of the BCEAO statutes enshrines that neither any organ nor any staff of the central bank can solicit or receive directives from the governments of the member states or any other Community institution of the WAEMU. In September 2010, the MPC fixed the inflation target almost analog to the ECB at 2% with a margin of +/- 1% and in December 2010 limited the amount of treasury bills held by the central bank to 35% of the corresponding state's revenues of the second year preceding and fixed the ceiling for every commercial bank's refinancing to 35% of its assets (BCEAO, 2018, p. 24). As a reaction to the COVID-19 pandemic and without being subject to these regulations, the WAEMU countries issued in April and Mai 2020 a special 3-month treasury bill labeled *Bons COVID-19*<sup>9</sup>. This bill was fully financeable by the BCEAO at a fixed interest rate of 2.5%, which on the day of emission was equal to the central banks' minimum bid rate for regular open market operations.

## **Nigeria**

Nigeria's exchange rate regime followed the well-known path of fixed exchange rates in the 1960ies, to a US-dollar-peg throughout the 1970ies, which got abandoned for the sake of a managed floating exchange system in 1986 following a SAP (Sanusi, 2004, p.

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<sup>9</sup> With that COVID-19 bond the states of the WAEMU raised a total amount of 1.172 billion F-CFA (about 1.950 million US dollars). Ivory Coast issued by far the biggest part with 535 billion F-CFA and Equatorial Guinea, with 15.5 billion F-CFA, the smallest.

1f.). Due the high reliance on oil revenues, the value of the Naira is starkly influenced by the oil price and therefore volatile (Sanusi, 2004, p. 5). As a consequence, different institutional settings were established to manage the FX supply in Nigeria: the Autonomous Foreign Exchange Market (AFEM) in 1995 was replaced by the Inter-Bank Foreign Exchange Market (IFEM) in 1999. As response the a severe downward trend of the Naira rooted in FX-shortage, excess liquidity due high government spending, high debt levels and speculation, a Dutch Auction System (DAS) was then introduced in 2002 (Sanusi, 2004, p. 6). The DAS proved successful in bringing down high volatility levels and remaining in the bandwidth prescribed by the rules set by the West African Monetary Zone, which Nigeria is part of (Sanusi, 2004, p. 9). In response to the oil price shock in 2016, the CBN introduced a system of multiple exchange rates: the official rate set by the central bank and pegged to the US-Dollar, and the market-determined rate *Nigerian Autonomous Foreign Exchange Rate Fixing* (NAFEX) used by investors and exporters (Oluoch, 2021).

In 2020, due the oil price slumps, the Naira once more came under severe pressure with spreads between the official and parallel exchange rate being as high as 30% (BNP Paribas, 2020). The persistent current account deficit accumulated to a balance-of-payments deficit of \$14 billion in 2020 alone and a massive depletion of its foreign reserves (Oluoch, 2021). As a consequence, Nigeria sought emergency loans from the Bretton-Woods-Institutions, which demanded an alignment of the official with the NAFEX rate (Oluoch, 2021). To comply with this condition, monetary authorities devalued the official rate accompanied by FX-restrictions and – a measure which has contributed to a massive high in inflation (Oluoch, 2021).

## **Ghana**

Similar to the Nigeria, Ghana abandoned its fixed exchange rate regime after the collapse of the Bretton-Woods-system, however immediately adopted a managed floating exchange rate regime in 1986 coming under the name of Financial Sector Adjustment Programme (FINSAP; Alagidede and Ibrahim, 2017). The Ghanaian exchange rate regime is floating with interventions by the Bank of Ghana (BoG) (Addison, 2019). Since the adoption of a flexible exchange rate regime, the Ghanaian cedi depreciated against major currencies (which translated into higher inflation rates) and higher exchange rate volatility – with the exception of 2002-07 (Alagidede and Ibrahim, 2017, p. 170).

## **4. Comparison of liquidity premium indicators between the CFA-franc, cedi and naira**

Following the theoretical concept as presented in section two, a currency's liquidity premium is determined by its ability to store value and to act as medium to settle international liabilities. Both functions are inter-linked and fundamentally underlie international debtor-creditor relations and portfolio decisions of global wealth owners. Assuming free international capital movements, differences regarding the currencies'

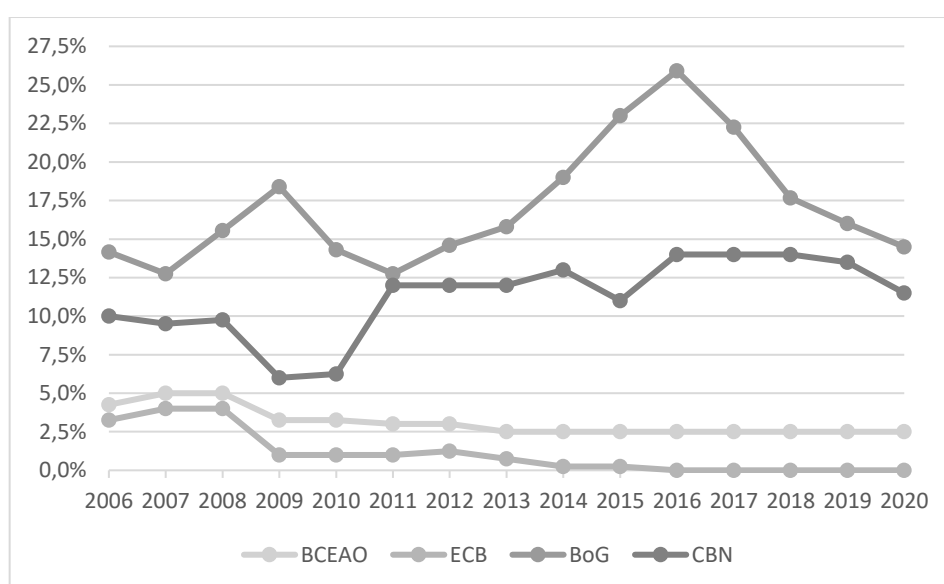
non-pecuniary liquidity premium are primarily compensated by pecuniary yields, by interest rate differentials in particular. Therefore, we use the central banks' base rate, the interest rate level on treasury bills and bonds markets, and the interbank rate as variables to approximate differences in currencies liquidity premia.

### ***Monetary policy rates***

Taking the central bank policy rate as a comparative indicator for currency specific liquidity premia implies some conceptual limitations, as (international) investors' decisions are driven by actual asset yields rather than monetary policy rates and the interest rate pass-through from the money to the bond market tends to be weaker in low-income countries due to their relatively shallow financial markets. However, developing economies are particularly susceptible to the global financial cycle because of a higher exposure to abrupt capital outflows. In this context, Rey (2018) rejects the classical monetary policy trilemma in favour of a dilemma arguing that low- and middle-income economies that do not impose capital controls have no monetary autonomy even irrespective of the applied exchange rate regime. At least regarding the long run, the study of Obstfeld (2015) confirms Rey's position. Within the post-Keynesian framework of an international currency hierarchy, the countries situated in the lower tiers of the hierarchy need to offset policy changes made by the countries at the top of the hierarchy to restore the equilibrium policy rate differential. Therefore, the comparison of monetary policy rates offers important insights about differences regarding the level of the corresponding currencies' liquidity premia.

This is in part reflected in the policy rates under consideration. Regarding monetary autonomy of the BCEAO in the years 1980 to 2007, Dufrénot (2011) shows empirically that since the last harsh nominal devaluation of the CFA-franc vis-à-vis the euro in 1994, its interest rate decisions follow the evolution of the ECB policy rate, maintaining a relatively stable nominal interest rate spread. In the period from 2006 to 2019, marked by a general policy shift towards low interest rates in the US and Europe, the spread between the BCEAO's and the ECB's main refinancing rate ranged from 1 percentage point in 2006, 2007 and 2008 to 2.5 since 2016. Even though the Central Bank of Nigeria (CBN) and the BoG have lowered their monetary policy rates since 2016, the level of the key interest rates in these countries is remarkably higher than in the WAEMU, resulting in a spread of 8 per cent (Nigeria) and 12 (Ghana) respectively compared to the BCEAO rate at the end of the observed period (see Fig. 1). Under the current exchange rate arrangements in Nigeria, Ghana and the WAEMU, we interpret the structurally higher monetary policy rates implemented by the Nigerian and Ghanaian central banks as a first indication of a relatively low liquidity premium of the naira and the cedi.

**Fig. 1** Policy rates of the BCEAO, CBN, BoG and ECB



Data: BCEAO, CBN, BoG, ECB

### ***Public and private debt***

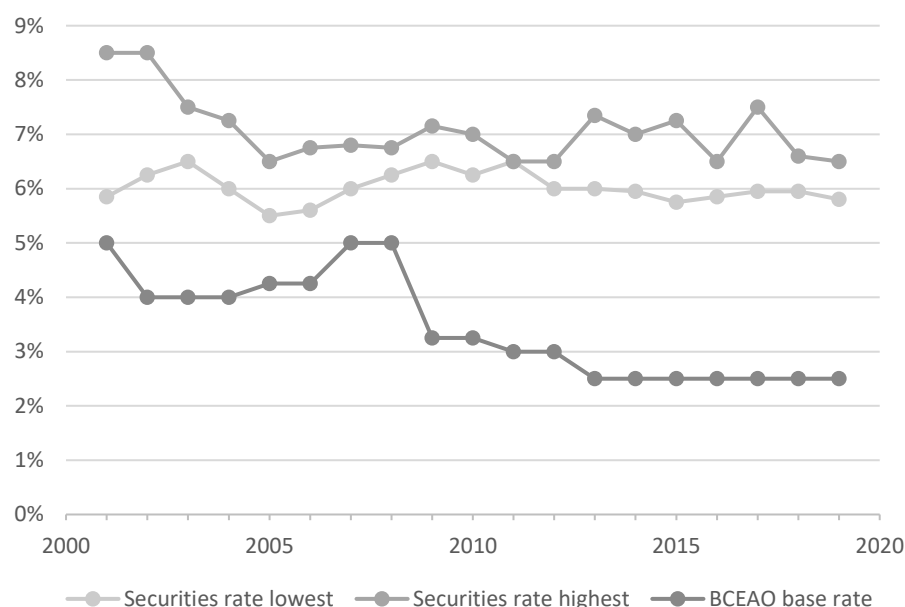
As in most low-income countries, financial markets in the WAEMU are shallow, however, experience evolvments towards deepening. Expression of this is the establishment of the *Bourse Régionale des Valeurs Mobilières* (BRVM) in 1999 in Dakar, which is a common regional market for the emission and trading of financial stocks and public as well as private securities. Besides there exist, since 1996, a second regional market, the *Marché des Titres Publics*, dedicated exclusively to the states' direct issuance of treasury bills (*bons du trésor*, with a maturity of up to two years) and bonds (*obligations du trésor*, with a maturity above 2 years). As another expression of the policy-led financial deepening, the creation of the public *Agence UEMOA-Titres* (AUT) in March 2013 has further promoted and facilitated these two types of sovereign debt emissions, which are, in principle, neither placed nor traded at the BRVM. Private debt securities are exclusively issued at the BRVM but represent only a small fraction of long-term obligations (0.6 per cent in 2019) and overall debt emissions (0.2 per cent) at the BRVM in 2019 (CREPMF, 2020). In contrast, fostered by the central bank's abandonment of direct public financing, the outstanding amount of public debt emissions rose significantly from 5.6 per cent in 2010 to 13.6 per cent in 2019 in relation to GDP (BCEAO, 2011, 2020).

As Figure 2 shows, from 2001 to 2019, primary market interest rates on CFA-denominated long-term obligations issued at the BRVM<sup>10</sup> stayed on a relatively constant level, despite considerable changes of the BCEAO's key interest rate that in turn evolved in line with the ECB's interest rate policy. This is insofar surprising as the traditional interest rate channel of monetary policy is theoretically based on the assumption that a

<sup>10</sup> Till 2016 securities maturity three to five years, from 2017 onwards, six to ten years due to partially non existing emissions within the respective term spread.

change of the short-term interest rate positively affects the long-term interest rates, because of investors' arbitrage between long and short term debt maturities (Ireland, 2010). This deviation from traditional interest rate theory was particularly visible when the BCEAO's sharp interest rate cut in response to the ECB's switch to an expansionary monetary policy as a reaction to the global financial crisis did not structurally affect the interest rate level of long-term obligations.

**Fig. 2** Copon rates of CFA bonds at BRVM and BCEAO policy rate



Data: Annual reports of the Conseil Régional de l'Épargne Publique et des Marchés Financiers, available at <http://www.crepmf.org/Wwwcrepmf/Publications/RapportsAnnuels.aspx>

Regarding the composition of the Western CFA states' marketable public debt, treasury bonds largely dominate over treasury bills and Eurobonds. The latter source of external public funding was first used by Senegal in 2009<sup>11</sup>, followed by Ivory Coast two years later and only recently by Benin in 2019.<sup>12</sup> Though multilateral and bilateral loans denominated in foreign currency still represent the largest source of external funding in the WAEMU, their share is on a decline (see Fig. 3). This development is in line with claims of a shift towards the globally increased importance of international capital markets (a process described as international financialisation; Bortz and Kaltenbrunner, 2018). In the WAEMU, as in other African countries, debt emission in foreign currency represents a relatively new source of (public) finance with the Seychelles as the first country to enter international Eurobond markets. In the light of the union states' rising

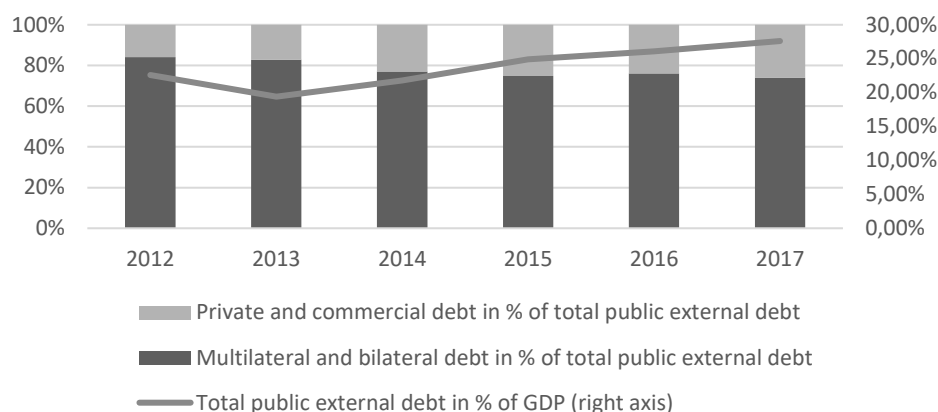
<sup>11</sup> In sub-Saharan Africa, the Seychelles was the first country, other than South Africa, to issue a sovereign Eurobond on the international markets in 2006, marking the start of a recent regional trend in external public funding.

<sup>12</sup> From 2009 to 2019, Ivory Coast, Senegal, and Benin issued 16 tranches of public bonds denominated in euros (seven times) or US dollars (eight times) raising a total amount of 8.6 billion USD and around 6.53 billion EUR. The weighted average of the Eurobonds' initial maturities was around 17 years, while 10 years and 12 years obligations have been issued most frequently with four and three tranches, respectively.



tendency towards Eurobond financing motivated by favourable international conditions, the objective to overcome the Original Sin (Eichengreen, Hausmann and Panizza, 2003) via local currency debt markets seems to drift into the background.

**Fig. 3** Composition of external public debt in the WAEMU



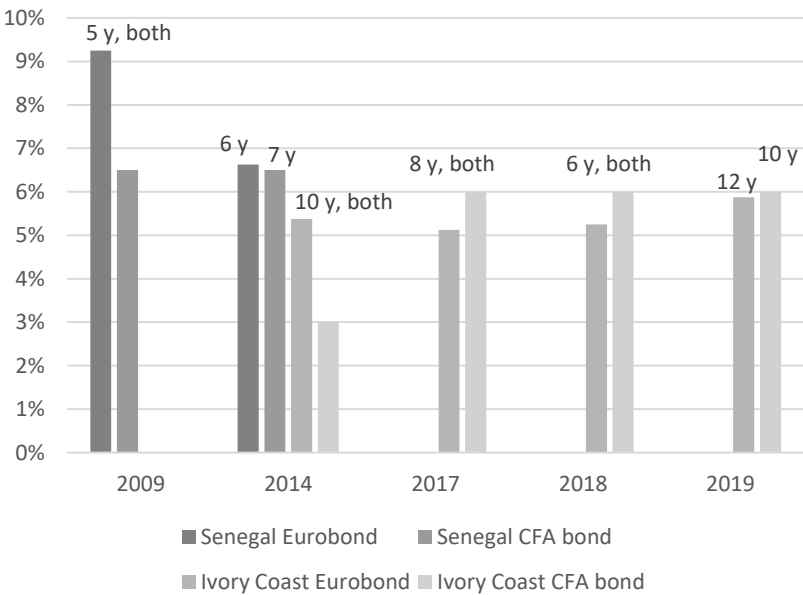
Data: Own calculation based on World Bank African Development Indicators, available at <https://databank.worldbank.org/source/africa-development-indicators>

### ***Interest rate spreads between sovereign Eurobonds and local currency bonds***

The grown importance of Eurobond issuances for West African economies is particularly relevant for the analysis of investors' perception of the liquidity premium of those countries' currencies. To be more concrete, the nominal coupon interest rate spread between Eurobonds denominated in euro or US dollar and bonds denominated in local currency can be used to approximate the currencies' liquidity premium. To ensure comparability, we focus on the years in which the same countries issued both Eurobonds and CFA-denominated bonds with the same or a similar maturity. Looking at the data represented in Figure 4, it appears that there is no strong correlation between the currency denomination and the coupon rate of the issued debt obligation. At first sight, this observation is not in line with the assumption that, as consequence of their lower liquidity premium, financial investments in peripheral currencies offer higher interest rates relative to investments made in currencies in the upper end of the international currency hierarchy. However, from 2017 onwards, with interest rate differentials ranging from 0.12 to 0.87 percentage points, CFA obligations exhibit higher coupon rates compared to Eurobonds issued by the same country. As the Ivorian Eurobond emissions in 2018 and 2019 have a shorter tenor than their CFA counterparts, of two and three years, respectively, the interest rate spread in these years is rather underrated, assuming an upward interest rate curve for sovereign securities in the WAEUM (Diouf and Boutin-Dufresne, 2016, p. 110). What is more, unlike public debt issued in local currency, Eurobonds originating in the Ivory Coast, Senegal and Benin are regularly and heavily oversubscribed: the Ivorian one billion euros emission in November 2020 and the Senegalese 2,2 billion US dollars issuance in March 2018 around five times, while the coverage rate of overall treasury bills and bonds in the WAEMU denominated in CFA-franc averaged 109% in 2018 (AUT, 2020, p. 5). The

excess demand for government bonds denominated in euro or US dollar indicates that there would have been some scope for lower coupon rates and, in consequence, a higher interest rate differential between Eurobonds and CFA securities.

**Fig. 4** Coupon rates on sovereign Eurobonds and local currency treasury bonds in Senegal and Ivory Coast, tenor as indicated

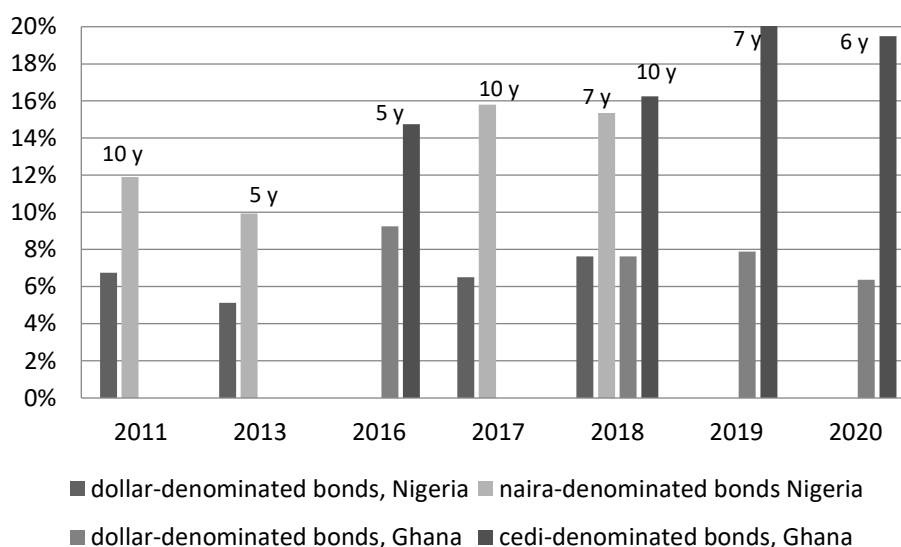


Data: Annual reports of the BCEAO available at [https://www.bceao.int/fr/publications?field\\_theme\\_publication\\_target\\_id=78](https://www.bceao.int/fr/publications?field_theme_publication_target_id=78).

Taking the leading role of the US-Dollar and the euro in international finance and trade into consideration, the observed interest rate spread between bonds denominated in these two key currencies on the one hand and local CFA currency obligations on the other, both issued by the same WAEMU countries, appears relatively small. This observation needs to be explained by the particularities of the CFA exchange rate regime, that reduce uncertainty connected to financial assets denominated in CFA-francs. Most importantly, the CFA-franc is not traded on international markets and capital exports are subject to particularly strict regulations, which eliminate the risk of abrupt downward pressure on the exchange rate. Besides, the WAEMU states benefit from some sort of protection against balance of payments problems as France assumes, in last instance, the role of a lender of last resort by providing a formally unlimited credit line. These (bilateral) monetary arrangements, which are the anchor of monetary stability in the CFA-franc zone, make (public) CFA-denominated long-term obligations a portfolio investment at low risks despite the subordinated role of the CFA-franc within the international currency hierarchy. As a result, the nominal interest rate level of CFA bonds is lower than that on local currency obligations issued by the regional non-CFA countries Nigeria and Ghana, and, in turn, the interest rate spread between Eurobonds and bonds issued in local currency is smaller compared to these countries.

In Nigeria and Ghana, the link between the currency denomination and the interest rate level of sovereign bond issuances is much stronger compared to the WAEMU, indicating

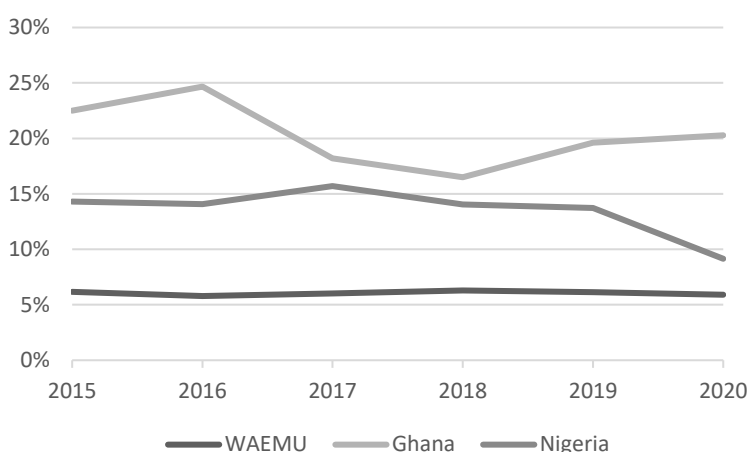
**Fig. 5** Coupon rates on sovereign Eurobonds and local currency treasury bonds in Ghana and Nigeria, tenor as pairwise indicated



Data: Annual reports of the CBN and BoG, available at  
<https://www.bog.gov.gh/publications/annual-report;>  
<https://www.cbn.gov.ng/Documents/cbnannualreports.asp>

lower liquidity premium levels of the cedi and naira in comparison to the CFA-franc. As illustrated in Figure 5, the interest rate spread between sovereign Ghanaian Eurobonds on the one hand and cedi-denominated treasury bonds with the same tenor on the other hand ranges from 5.5 in 2016 to 13.13 percentage points in 2020. In the context of Nigeria, the spread between local and foreign currency government bonds was 5.15 percentage points in 2011 and 9.3 in 2018. The tendency towards a rising interest rate spread over the years of observation reflects the growing appetite of international investors for Eurobonds and the states' challenge to borrow funds in local currency. In contrast to the BCEAO, that has to cover 20 percent of the monetary base with foreign reserves, the central banks of Nigeria and Ghana have a higher degree of formal monetary sovereignty on the one hand but cannot rely on bilateral agreements to defend or stabilise their exchange rates in the face of foreign reserves shortages on the other hand. Both factors might contribute to expectations of the naira and the cedi to be more vulnerable to nominal devaluations – be it as a result of monetary policy decisions to increase competitiveness or as the result of FX-shortages. This higher uncertainty about the development of the external value of these two currencies can be read as the most important factor for the relatively high interest rates on local currency bonds in Ghana and Nigeria compared to CFA bonds in the WAEMU. The extent of this financial burden becomes apparent when considering local currency treasury bonds with a five years tenor emitted between 2014 and 2020 (see Fig. 6): While the interest rates paid by the Nigerian government were between 3.25 (2020) to 9.67 (2017) percentage points higher than the average rates in the WAEMU, Ghanaian treasury bonds were sold at interest rates that exceeded CFA-denominated bonds by 10.21 (2018) to 18.88 (2016) percentage points.

**Fig. 6** Coupon rates of 5 years T-Bonds denominated in local currency; weighted average

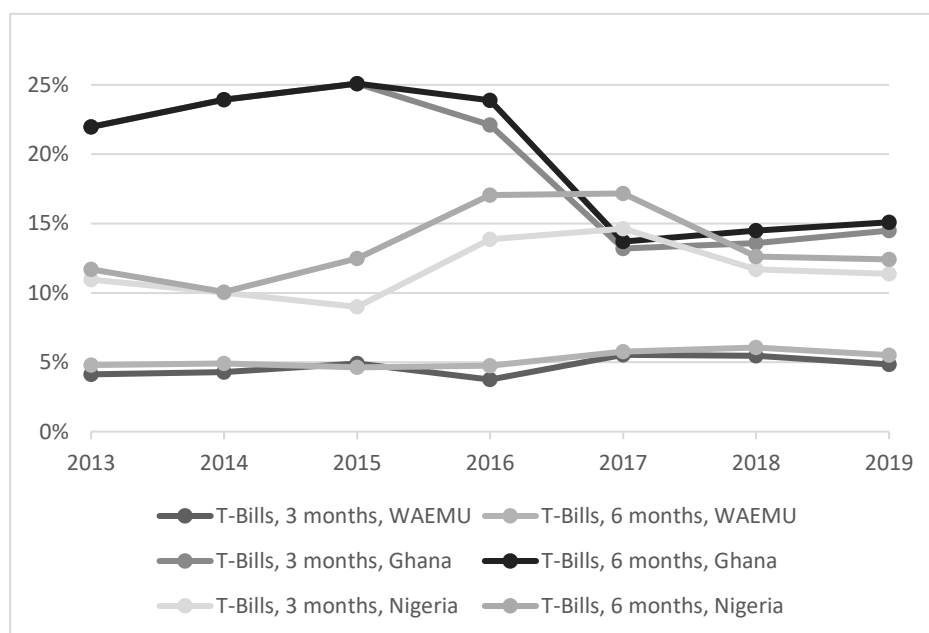


Data: Own calculation based on data from AUT, BoG, CBN, available at:  
<https://www.umoatitres.org/fr/emissions/>; <https://www.cbn.gov.ng/rates/GovtSecurities.asp>;  
<https://www.bog.gov.gh/treasury-and-the-markets/treasury-bill-rates/>

### ***T-Bill market***

Turning to the three- and six-months termed treasury bills issuances on the primary market (see Fig. 7), we find that the interest rate level is structurally higher in Ghana and Nigeria than in the WAEMU. Besides, the evolvement of the interest rate differentials between the three West African currency areas shows a similar pattern to the one observed on the market for public bond issuances.

**Fig. 7** Interest rates on 3- and 6-months treasury bills issued by WAEMU countries

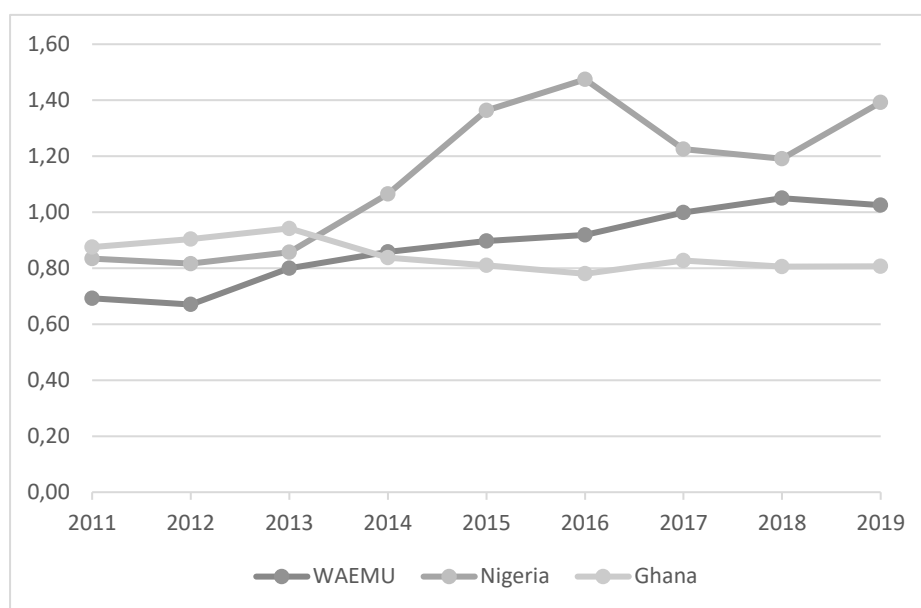


Data: BCEAO, CBN and BoG, available at  
[https://www.bceao.int/fr/publications?field\\_theme\\_publication\\_target\\_id=78](https://www.bceao.int/fr/publications?field_theme_publication_target_id=78);  
<https://www.cbn.gov.ng/rates/GovtSecurities.asp>; <https://www.bog.gov.gh/treasury-and-the-markets/treasury-bill-rates>

### ***External financial fragility***

As elaborated in section 2, the EFFI is a suitable indicator to approximate the confidence investors are likely to have in a currency's stability with regard to a country's asset and liability stock derived from its international investment position on the one hand, and, on the other, its financial needs as reflected in its balance-of-payments situation.

**Fig. 8** External Financial Fragility Index of WAEMU and Nigeria



Data: Own calculation based on BCEAO, CBN, BoG; available at [https://www.bceao.int/fr/publications?field\\_theme\\_publication\\_target\\_id=78;](https://www.bceao.int/fr/publications?field_theme_publication_target_id=78;) [http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx;](http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx) <https://www.bog.gov.gh/economic-data/balance-of-payment/>

The evolution of the EFFI in the WAEMU, Nigeria and Ghana from 2011 to 2019 shows that the former two currency areas are concerned with a constantly rising degree of external financial fragility (see Fig. 8). The main cause for this development lies in a disproportionally strong increase of gross portfolio liabilities that structurally drives the overall trend. The ratio between the stock of gross foreign reserves of the previous year and the stock of portfolio liabilities in the WAEMU and Nigeria declined from 4.39 to 0.88 and from 1.39 to 0.41 respectively. After reaching its highest value in 2014, direct investments are, since then, shrinking in Nigeria, while they are stagnating in the WAEMU over the whole period, except for the sharp increase in 2019. These observations can be interpreted as the investor's rising preferences to hold more liquid assets. Besides, even though the WAEMU's current account records increasing deficits, resulting in higher real financial needs, its EFFI is below the Nigerian one at every year of observation. In contrast, the more balanced current account in Nigeria cannot prevent the illustrated increase in external financial fragility. In Ghana, the EFFI decreased slightly while staying on a relatively constant level over the whole observation period. Compared with the WAEMU and Nigeria, differences in the development of the EFFI are mainly due to a much smaller stock of portfolio liabilities, that is, the potential financial

needs, whereas the debit side of the current account permanently exceeds the credit side. Our descriptive presentation of the external financial fragility in the WAEMU, Nigeria and Ghana shows that, in contrast to the analysis of the interest rate level, there is no clear split between francophone CFA countries on the one hand, and the anglophone non-CFA countries Nigeria and Ghana on the other.

## **5. Conclusion**

Against the backdrop of the eco-project, the paper conducted a timely analysis of the WAEMU's CFA-franc, the Nigerian naira and Ghanaian cedi. We used the post-Keynesian concept of a currency's liquidity premium to make conjectures about whether the eco-project would improve the participating countries monetary policy autonomy. Comparing government bonds denominated both in local and foreign currency with the same tenor, we find that investors demand structurally higher yields on bonds originating in Ghana and Nigeria than in the CFA-franc zone. One could interpret this as the CFA-franc conveying over a higher degree of liquidity premium because it has to have lower yields rates to compensate for liquidity-differences to financial assets denominated in the US dollar. However, another explanation is that expectations about the future developments of the cedi's and naira's exchange rate by investors are more pessimistic in comparison to that of the CFA-franc. This is rooted in two major factors: Firstly, under the current arrangement, France acts as exchange rate stabiliser by pushing for restrictive monetary policies and guaranteeing foreign exchange reserve provision. Secondly, the estimation of external financial fragility in the CFA-franc zone and Nigeria are exposed to has shown that the naira implies a greater risk of sudden devaluation due to a higher exposure to mobile liabilities vis-à-vis its asset endowments.

Based on the analysis, we draw important conclusions regarding the scope for monetary policy within the framework of a common ECOWAS currency union: Beyond considerations of real economic convergence among the member countries, the ECOWAS central bank will have to deal with an inferior position of the eco within the international currency hierarchy. In particular, the degree of monetary autonomy will depend essentially on the liquidity premium that international wealth owner attribute to eco-denominated securities, in other words on its position within the international currency hierarchy. In this context, rising external financial fragility in WAEMU and Nigeria constitutes an additional challenge to the goal of establishing trust in the eco's external value. Therefore, we conclude that the eco project in West Africa will need to manage the tightrope act between a further monetary emancipation from France (and its conditioned exchange rate guarantee) on the one hand, and, new multilateral arrangements that protect against sharp devaluation pressure connected to volatile international capital movements on the other hand. The latter might include, but should not be limited to swap lines with the ECB and the FED or coordinated capital flow management measures.

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