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A BALANCE SHEET ANALYSIS OF THE CFA FRANC ZONE

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Johns Hopkins Institute for Applied Economics,
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About the Series

The Studies in Applied Economics series is under the general direction of Professor Steve H. Hanke, Co-Director of the Institute for Applied Economics, Global Health and Study of Business Enterprise (hanke@jhu.edu). The authors are mainly students at The Johns Hopkins University in Baltimore. Some performed their work as summer research assistants at the Institute.

About the Authors

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Abstract

The CFA franc zone was established in 1945 and linked France's African colonies to the French franc while at the same time allowing for some degree of separation. Reflecting a cleavage that had developed during World War II, the zone consisted of a West African and a Central African component, represented today by two regional central banks, BCEAO and BEAC, respectively. Despite the technical distinction between the currencies, their parities with the French franc and later the euro have remained identical for over 70 years; thus, the currencies can be treated together. This paper reviews the history of the CFA franc zone and highlights the major shifts it has undergone. Next, it analyzes the various components of the two central banks' balance sheets, with a focus on each bank's composition of assets and liabilities and how these have evolved over time. Subsequently, it applies statistical approaches to the balance sheets to assess to what extent the CFA franc zone resembles a currency board. An accompanying spreadsheet workbook digitizes certain balance sheet data for the first time.

Acknowledgements

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Keywords: central bank, balance sheet, French Equatorial Africa, French West Africa
JEL codes: E58, N17

Purpose

The purpose of this paper is to analyze the entire history of the balance sheet of the monetary authorities of the CFA franc zone. It will track how the asset and liability composition has changed over time and to what extent the zone resembles a currency board.

Introduction

The CFA franc zone is composed of 14 African countries that are mainly former French colonies.[1] These countries in western and central Africa comprise two economic and monetary unions which each have a corresponding central bank. The first is the Union Économique et Monétaire Ouest Africaine (UEMOA), which translates as the West African Economic and Monetary Union (WAEMU). This monetary union's central bank is the Banque Centrale des États de l'Afrique de l'Ouest (BCEAO), which translates as the Central Bank of West African States. The second monetary union is the Communauté Économique et Monétaire de l'Afrique Centrale (CEMAC), which translates as the Central African Economic and Monetary Community. This union's central bank is the Banque des États de l'Afrique Centrale (BEAC), which translates as Bank of Central African States.

While "CFA" originally stood for Colonies françaises d'Afrique (French Colonies of Africa), it now stands for Communauté française d'Afrique (French Community of Africa). Each country in the CFA franc zone uses the CFA franc as its currency and all except Guinea-Bissau and Equatorial Guinea were formerly French colonies. The zone has bonded these countries to each other both economically and culturally, and all countries within the zone other than Guinea-Bissau and Equatorial Guinea continue to use French as an official language and to have strong cultural, economic, and even military ties to France.

The CFA franc zone has a few defining characteristics. First, the zone originally maintained convertibility against the French franc at a pegged rate. The peg is now against the euro. Second, the zone has free capital mobility within the zone and a common trade and financial policy with the rest of the world. Finally, the CFA franc zone has an agreement with the French Treasury that the Treasury will back up payments if ever necessary.[2]

Although each monetary union within the zone has a separate treaty with France and uses its own institutions to implement its specific policy objectives, the two unions operate under the same general framework. Theoretically the exchange rates can vary between the zones, though for the duration of the CFA franc's existence this has not been the case. The central bank of each zone has the objective of defining its union's monetary policy, conducting exchange rate policy, maintaining foreign exchange reserves of the member states, promoting payment

[1] The countries are: Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, and Senegal, formerly part of French West Africa; the Central African Republic, Chad, Republic of the Congo (Congo-Brazzaville), and Gabon, formerly part of French Equatorial Africa; Cameroon and Togo, formerly French mandates under the League of Nations and the United Nations; Equatorial Guinea, a former Spanish colony; and Guinea-Bissau, a former Portuguese colony.

[2] Gérardin (1994: 100-102).

systems, and ensuring financial stability. While the central banks can issue currency against exchange and credit transactions, they have only limited control of the production of the local currency against external fund inflows, because sterilized intervention is costly.

History

Before 1955

We will now briefly discuss the history of the CFA franc zone and its two constituent central banks across the major periods in its history. The common currency originated from the Banque d'Afrique Occidentale (BAO), which translates as the Bank of West Africa. It was established in 1901 and was the main financial institution in French West Africa and French Equatorial Africa before 1955. It was based out of Paris and it combined commercial banking and central banking functions, including issuing notes.[3] The colonies used French coins and had no local coins before World War II.

The French monetary law of October 1, 1936, among other provisions, authorized French colonial banks to treat deposits with metropolitan French banks as foreign exchange for the purposes of the reserves that they were legally required to maintain.[4] The law was a second step in separating French currency from colonial currencies — the first having been the issuance of distinctive colonial notes and in some cases coins.

During World War II, acceptance of colonialism began to diminish across the African continent and the world at large. In 1941 the United States and United Kingdom released the Atlantic Charter. This joint statement presented goals for the postwar status quo, and expressed support for self-determination. At the time, northern and western France were under German occupation, while central and southern France were governed by the collaborationist Vichy regime. A government in exile, calling itself Free France, allied itself with the United States and the United Kingdom and appealed to metropolitan France and its colonies to abandon Vichy and rally to its side. French colonies in Equatorial Africa did so at the Brazzaville Conference in October 1940. At this conference, the colonies moved away from their previous purely subordinate relationship with France toward more of a partnership. Reflecting that they were no longer aligned with metropolitan France, the colonies of French Equatorial Africa separated monetarily from those of French West Africa. They temporarily took custody of the local branches of the Banque de l'Afrique Occidentale, and a after a brief interval when the colonial governments had direct responsibility for the note issue, a Free French body, the Caisse Centrale de la France Libre (loosely translated, Central Financial Fund of Free France), took it over.

[3] BCEAO (2002: vol. 1, 294); Bian (2018).
[4] Géradin (1994: 51).

Figure 1. Chronology: Notable Events in the History of the CFA Franc Zone

June 29, 1901	Creation of the Paris-based Banque de l'Afrique Occidental (BAO), which issued notes in Africa
October 1940	French Equatorial Africa sides with Free France during World War II and separates monetarily from French West Africa
December 25, 1945	Creation of the CFA franc, at 1 CFA franc = 1.7 French francs
December 17, 1948	The parity becomes 1 CFA franc = 2 French francs
October 1, 1955	The Institut d'Émission de l'Afrique Occidentale Française et du Togo (IEAOFT) and succeeds the BAO as the note issuer in French West Africa and Togo; the Institut d'Émission de l'Afrique Équatoriale Française et du Cameroun (IEAEFC) succeeds the Caisse Centrale de la France d'Outre-Mer as the note issuer in French Equatorial Africa and Cameroon
April 4, 1959	IEAOFT is transformed into the Banque Central des Etats de l'Afrique de l'Ouest (BCEAO); IEAEFC is transformed into the Banque Centrale des États de l'Afrique Équatoriale et du Cameroun (BCEAC)
June 29, 1959	Creation of Union Douanière Equatoriale (UDE)
January 1, 1960	The new French franc, worth 100 old francs, enters circulation; CFA exchange rate becomes 50 CFA francs = 1 new French franc
March 1, 1960	Guinea withdraws from the CFA franc zone
May 12, 1962	Treaty establishing the West African Monetary Union or WAMU
June 30, 1962	Mali leaves the CFA franc zone
November 1, 1962	West African Monetary Union (WAMU) begins operations
November 27, 1963	Togo enters WAMU
December 8, 1964	Creation of Union Douanière et Economique de l'Afrique Centrale (UDEAC) to succeed UDE
November 22, 1972	Creation of the Banque des Etats de l'Afrique Central (BEAC) to succeed BCEAC; similar reforms to reduce French influence in BCEAO
April 2, 1973	Beginning of BEAC activities
May 30, 1973	Mauritania leaves the CFA franc zone
January 1, 1977	BEAC headquarters moves from Paris to Yaoundé, Cameroon
May 18, 1978	BCEAO headquarters begins move from Paris to Dakar, Senegal
January 1, 1985	Equatorial Guinea joins BEAC
February 17, 1984	Mali returns to BCEAO and the CFA franc zone
October 16, 1990	Creation of the Banking Commission of Central Africa or COBAC
January 12, 1994	Devaluation to a new parity of 100 CFA francs = 1 French franc
March 16, 1994	Treaty converting UDEAC into Communauté Economique et Monétaire de l'Afrique Centrale (CEMAC); treaty enters into force June 1999
August 4, 1994	WAMU is converted into the West African Economic and Monetary Union (WAEMU)
May 2, 1997	Guinea-Bissau joins BCEAO
January 1, 1999	France adopts euro to replace French franc; CFA franc is pegged at 1 euro = 655.957 CFA francs, unchanged in terms of the French franc
December 21, 2019	Changes announced to reduce French influence in BCEAO and WAEMU

Main sources: BCEAO website, "Dates clé"; BEAC website, "Histoire de la BEAC"; CEMAC Web site, "Histoire de la CEMAC."

Support for decolonization was strengthened by the San Francisco Conference in 1945, where the United Nations charter was written. A notable portion of this charter declared that colonial powers must act with their subjects' best interests in mind. While it would be over a decade before any of France's colonies achieved independence, the change in norms set the stage for the shift.[5]

As the Allies turned the tide in World War II, French colonies that had not already switched sides from Vichy to Free France did so. French West Africa switched in November 1942. Currencies in Free French colonies were notionally linked at pegged exchange rates to the U.S. dollar and the pound sterling. After the end of the war, the colonies faced massive inflation and price increases, largely because their broad money supply had increased at a rate four to five times faster than their gross domestic product. In France, the situation was even worse, because unlike most of the colonies, France suffered severe damage during the war. Accordingly, it made sense to consider breaking the former one-to-one relationship between the French franc and colonial francs.

The CFA franc was created on December 25, 1945. It had a parity of 1 CFA Franc to 1.7 French francs. At the time, the CFA component of the name stood for Colonies françaises d'Afrique (French Colonies of Africa). The original West African colonies using the CFA franc were Ivory Coast (Côte d'Ivoire), Dahomey (now Benin), French Sudan (now Mali), Guinea, Mauritania, Niger, Senegal, Togo, and Upper Volta (now Burkina Faso). In Central (Equatorial) Africa the initial colonies using the currency were Chad, French Cameroon (now Cameroon), French Congo (now Republic of the Congo), Gabon, and Ubangi-Shari (now Central African Republic).[6] Other French colonies not among those discussed here also revalued their currencies against the French franc at the time.

The revaluation did not end the problems of the new currency. Between 1945 and 1958 the French franc was devalued seven times against gold and the U.S. dollar before finally stabilizing in December 1958.[7] On one of these occasions, on October 17, 1948, the CFA franc was revalued from 1.7 French francs to 2 French francs. It then remained pegged to the French franc at that rate until 1994.[8] The French franc was overvalued against many foreign currencies for more than a decade after World War II, and staved off devaluations by use of exchange controls. The controls also applied to transactions between the CFA franc zone and countries other than France and its colonies. Overvaluation hurt exporters and helped importers compared to what would have happened had the French franc been at an equilibrium exchange rate.

These frequent devaluations lead the citizens of the CFA franc zone to realize that the relationship between France and its colonies was beginning to weaken and helped set the stage

[5] BCEAO (2002: vol. 1, 424-426); BEAC (2011).
[6] BCEAO website, "La base des données economiques et financières."
[7] BCEAO (2002: vol. 1, 447).
[8] Taking into account the redenomination of the French franc discussed below.

for independence. Additionally, the devaluations produced broader issues because they led the French to fear that the rising prices would allow wages to rise too quickly, which would be difficult to handle and make relations worse between the two entities.

After World War II, the Banque de l'Afrique Occidentale eventually reassumed control of its branches in French Equatorial Africa that had been cut off from the head office after French Equatorial Africa sided with Free France. However, the Caisse Centrale, now renamed the Caisse Centrale de la France d'Outre-Mer (Central Financial Fund of Overseas France), remained the note issuer in French Equatorial Africa and Cameroon, a half-step toward a currency distinct from that of French West Africa.

On October 1, 1955, the Banque de l'Afrique Occidentale lost its position as a note issuer. For some years, the French government had considered making note issue a government monopoly, so the bank was continuing to issue notes under temporary extensions. A government monetary authority, the Institut d'Émission de l'Afrique Occidental Française et du Togo (IEAOFT), took over note issue from the Banque de l'Afrique Occidentale. In French Equatorial Africa, a similar monetary authority, the Institut d'Émission de l'Afrique Equatoriale Française et du Cameroun (IEAEFC), took over note issue from the Caisse Centrale de la France d'Outre-Mer.[9]

These new monetary authorities had the right to issue banknotes within their jurisdictions. They also had the ability to grant short-term credit and to rediscount medium-term bills. Their boards of directors were appointed by the French Minister of Finance and the Minister of Overseas Territories. Some members were meant to represent the Bank of France, and others to represent each African territory.

1955-1962

On October 4, 1958, France established a new constitution aimed at ending the political instability that had been frequent under the previous (1946) constitution. When announcing it, French prime minister Charles De Gaulle spoke to the idea of a "community" between France and its overseas territories, under which there would be room for local self-determination but the members would share common institutions. De Gaulle traveled to Africa to implore the people to join the new community. Most of the colonies did, except for Guinea, which became the first French colony in sub-Saharan Africa to gain independence and the first to withdraw from the CFA franc zone.[10]

Another French reform of 1958 was a monetary reform, one of whose features was the introduction of a new French franc. The new franc, introduced on January 1, 1960, was worth 100 old francs. The CFA franc therefore changed from being worth 2 old French francs to being

[9] BCEAO (2002: vol. 1, 509-513); Bian (2018: 29-30).
[10] BCEAO (2002: vol. 2, 62).

worth 0.02 new French francs. The change was simply a redenomination, like converting from pennies to dollars, and did not change any real magnitudes.[11]

In the late 1950s it was apparent that movement toward decolonization in Africa had traction. Ghana, a British colony, became independent in 1957. Guinea became independent on October 2, 1958. To accommodate the changing political situation, on April 4, 1959, the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO) was established to succeed the IEAOFT and the Banque Centrale des États de l'Afrique Équatoriale et du Cameroun (BCEAC) was established to succeed the IEAEFC. They had the goals of ensuring the circulation of cash, ensuring convertibility of the currency issued, and regulating the creation of representative money such as bank deposits. Agreements of April 4, 1959 also linked each state in the French community to the French franc. On June 29, 1959 the colonies of French Equatorial Africa created the Union Douanière Equatoriale (Equatorial Customs Union). Cameroon joined in 1961.

The BCEAO and BCEAEC differed from their predecessors, which were French publicly owned institutions. The new institutions were considered to be multinational organizations. This change in composition was reflected by their boards of directors, which had far more African representation than the preceding institutions.[12]

By 1960, France had granted independence to most of its African colonies. Following a dispute, Guinea in that year exited the CFA franc zone and established a national central bank. Mali left in 1962 after France gave political support to a party other than the one that gained power. Mali would rejoin the CFA franc zone in 1984 but Guinea remains outside it to this day.

1962-1973

The exits of Guinea and Mali caused the entire region to fear fragmentation and pressed political leaders who wished to work toward a unified West African market to come together. This acknowledgement of the importance of unity contrasted with the strong desire for national sovereignty arising from the anticolonial movements at the time. In response, the West African Monetary Union, or WAMU, was established on May 12, 1962 to work in tandem with the BCEAO. WAMU served to protect the value of its common currency and to balance the monetary policy of the region with that of its member states. In a parallel development, the Equatorial Customs Union became the Central African Customs and Economic Union (French initials UDEAC) by an agreement of December 8, 1964.

Additionally, for WAMU many banking regulations were passed from 1965-1966. First was the minimum capital requirement. The minimum was set at 50 million CFA francs for banks and 10 million CFA francs for nonbank financial institutions. This threshold applies for all countries outside of Senegal, which has a minimum of 250 million for banks and 50 million for nonbank

[11] BCEAO website, "Dates clé."
[12] BCEAO (2002: vol. 2, 62-64).

financial institutions, and Côte d'Ivoire, which has a minimum of 300 million for banks and 60 million for other financial institutions.[13]

A liquidity ratio for commercial banks was also established during this time. The goal was to limit bank credit that was considered too risky. The ratio was set at 70 percent until September 30, 1966, 71 percent until September 30, 1967, and slowly increased from there until it hit 75 percent. The final major regulations set during this period concerned bank interest rates and the suppression of counterfeit currency.[14]

1973-1994

After the French currency reform of 1958, the French franc avoided devaluation until 1969, when it was devalued on the heels of a political crisis the previous year. The CFA franc followed the French franc in its devaluation against third currencies. In 1971, France established a dual exchange market, which divided exchange operations between a pegged-rate official market and a fluctuating-rate financial market. (It was not the first time France had had such an arrangement.) The CFA franc zone countries were forced to put these measures into their own regulations to avoid creating arbitrage opportunities for speculators. Annoyance with France's economic policies was compounded with political agitation. The CFA franc zone had become the backbone of France's African policy and did not seem to be too different from colonialism for many of the former states.

Against this backdrop, in November 1972 French president Georges Pompidou gave a speech in Lomé, Togo that mentioned the possibility of reforming the structure of the CFA franc zone. Additionally, Mauritania decided to leave the zone to reduce French influence over it. These events led to new agreements for the CFA zone central banks that same month.[15]

The goal of these reforms was to "Africanize" the central banks. The headquarters of the BCEAO was moved from Paris to Dakar in 1978 to lessen French control. The role of the African institutions was also strengthened due to increased allocations to the Council of Ministers of the WAMU. Additionally, the share of French representatives on the board of directors was decreased from one-third of the total to one-seventh. Similar changes occurred in BCEAEC, which was renamed the Banque des Etats de l'Afrique Centrale (BEAC) and which moved its headquarters from Paris to Yaoundé, Cameroon in 1977.

The period following these reforms coincided with an international economic downturn. This recession was due to overall productivity slowdown and the oil crisis of the 1970s. In the mid 1970s many countries in the CFA franc zone and in Africa more generally that were exporters of petroleum and other commodities benefited from rising real prices for commodities, but commodity prices then declined in the late 1970s as the United States implemented a tighter

[13] BCEAO (2002: vol. 2, 295).
[14] BCEAO (2002: vol. 2, 296).
[15] BCEAO (2002: vol. 2, 317-320).

monetary policy that induced a recession, made commodities less attractive as inflation hedges, and sent nominal and real interest rates on dollar debt to historically high levels. Commodity exporting countries experienced a reversal of fortune. From 1980-1993 WAMU experienced only about a 2 percent annual growth rate in real GDP. However, due to the region having a 3 percent population growth rate, the per capita annual growth rate was negative.[16]

In response to the often difficult economic situation of the period from the late 1970s to 1993, BEAC and BCEAO allowed their foreign reserves to drop substantially, as we will see below, replacing foreign assets with domestic assets, particularly claims on member governments. The central banks and the governments they served faced a choice between tightening monetary policy to preserve the exchange rate with the French franc and suffering a possibly lengthy period of disinflation and recession, or devaluing the CFA franc with, probably, less severe effects on the real economy.

1994-2019

On January 12, 1994, the CFA franc was devalued 50 percent to address the low level of foreign reserves. The new parity was 1 CFA franc = 0.01 French franc. The devaluation caused widespread discontent. To help make it stick, the member countries of the CFA franc zone undertook extensive complementary reforms intended to prevent are recurrence of the conditions that had led to the devaluation. Countries signed the Treaty of Economic and Monetary Union, which made the CFA franc zone into not just a monetary union, but also an economic union. The goals of this new economic and monetary union were to create a common market, monitor economic performance, and create region based policies. Additionally, this devaluation was coupled with 4.2 billion dollars in debt relief from France, in return for the union agreeing to stabilization and restructuring measures.[17] WAMU became the West African Economic and Monetary Union, WAEMU, while the similar Central African organization, UDEAC, became the Central African Economic and Monetary Community, known by its French intials CEMAC.

On January 1, 1999, France adopted the euro to replace the French franc. The CFA franc became pegged to the euro at 1 euro = 655.957 CFA francs, unchanged in terms of the French franc. The introduction of the euro raised the question of the CFA franc zone's relationship to the bailout powers of the euro area. A compromise was reached under which France could continue to backstop the CFA franc zone financially, but other members of the euro area and the European Central Bank would not have any financial responsibility for the CFA franc zone.[18]

In December 2019, France and WAEMU announced that changes would occur in 2020 to change the name of the CFA franc in the WAEMU zone to the econ; end France's membership on the board of BCEAO; and eliminate the requirement that WAEMU members deposit 50

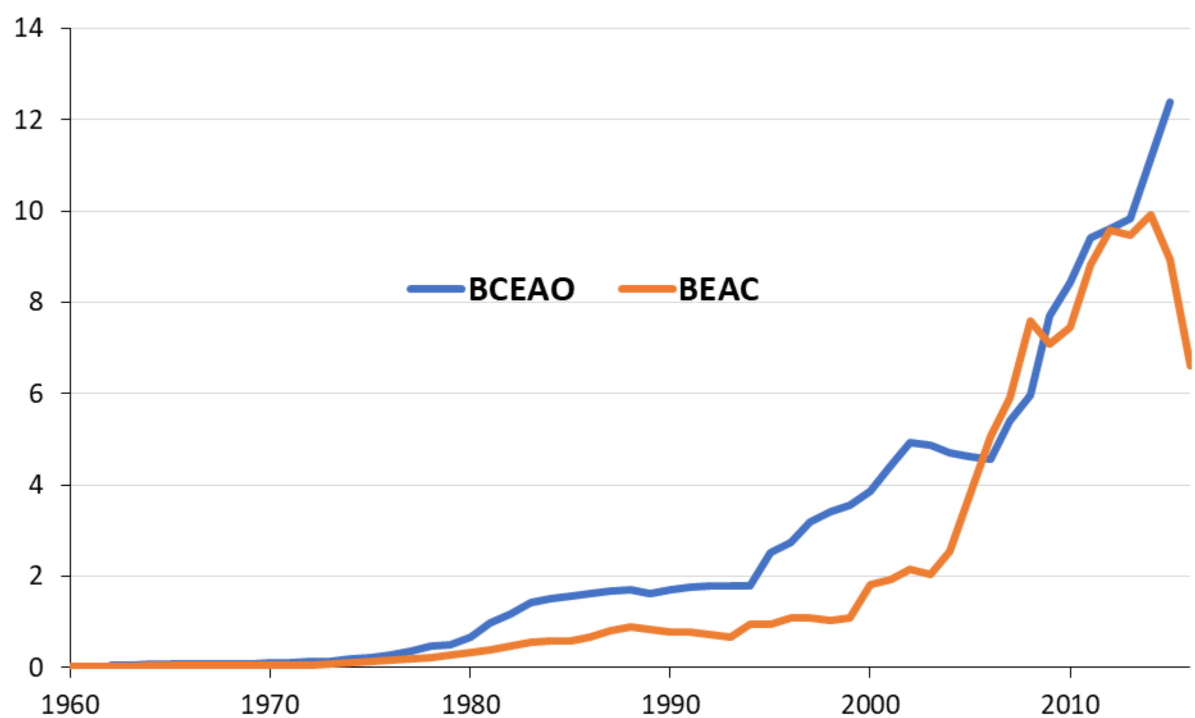
[16] BCEAO (2002: vol. 2, 579-580).
[17] Noble (1994).
[18] BCEAO website, "Dates clé."

percent of their foreign reserves at the French Treasury. These steps are preparations for a long-discussed possible regional monetary union with former British colonies in West Africa.

Balance Sheet Data

With the preceding information in mind as background, let us move on to the novel part of this paper, the analysis of balance sheets. As we have seen, the CFA franc zone has had multiple issuing institutions during its existence. Accordingly, balance sheet data originate from several sources. BCEAO has full downloadable balance sheets on its website extending back to 1962, while BEAC has balance sheets on its website from 2000 onward. Previous balance sheets for BEAC were obtained from paper copies of its annual reports available at the Library of Congress. We also obtained annual reports for the predecessor institutions, IEAOFT and IAEFC. Because we were unable to obtain full data from the annual reports of BEAC, BCEAO, and their predecessors until some months after Spencer Abrohm's original research on this paper, the data in the figures below come from the IMF's International Financial Statistics database, which attempts to standardize balance sheets of monetary authorities and many other kinds of statistics across countries.

Figure 2: Total Assets/ Liabilities (trillions of CFA francs)



Asset and Liability Composition

Figure 2 shows the nominal value of BCEAO's and BEAC's assets and liabilities. Over their existence, both central banks have seen their total assets grow substantially. BCEAO's assets grew from 61.9 billion CFA francs to 12.8 trillion CFA francs and BEAC's assets grew from 24.7 billion CFA francs to 6.6 trillion CFA francs. Note the plateau in assets in the years before the 1994 devaluation and the substantial increase in the years after. This slowdown in growth was due to the international economic downturn which hurt Africa, as commodity prices went down. Additionally, during this time there was only about a two percent increase in GDP per year, a marked decrease from the development period. However, the 1994 devaluation helped kick start a rapidly increasing growth in assets which has not yet subsided for BCEAO, but has recently for BEAC. Note that this recent contraction in the assets of BEAC, relates to the fact that some members have petroleum as a key export. World petroleum prices have been substantially lower in the last few years than in the preceding several years.

Comparing the two zones, we see that BCEAO has had more assets than BEAC for the majority of its history, though from 2006 until the recent downturn in 2014, BEAC's assets had increased to equal BCEAO's assets.

Asset Composition

Figures 3 and 4 below shows the asset composition of BCEAO and BEAC, respectively, by major asset categories. Up until 1973, both central banks' assets were almost exclusively comprised of foreign assets and claims on deposit monetary banks, with only a small share of claims being on central governments. BCEAO generally had a higher percentage of foreign assets than BEAC, which had a higher number of claims on deposit money banks.

From 1973 until 1994 for both banks, the share of foreign assets and claims on deposit money banks decreased, as claims on governments became increasingly prominent. This was due to falling commodity prices and the overall economic climate, and forced most of the assets to be claims on central governments. By 1994, claims on deposit monetary banks were under 10 percent of total assets for both banks. Conversely, claims on central governments had grown to over fifty percent of assets for both banks, though BEAC had a higher percentage. While this devaluation immediately brought BCEAO's percentage of claims on central banks down to 35 percent, BEAC's continued to grow until its peak in 1998, and would not fall below 50 percent until 2004.

Finally, in the 1990s and the 2000s, there was a huge increase in foreign assets. Evidently the central banks took advantage of the commodity boom of the mid 2000s, which boosted foreign exchange receipts in their economies, to bring foreign assets close to 100 percent of total assets. Foreign assets remain the majority of both banks' total assets, but since 2007 they have been decreasing relative to the other components.

Other assets that are less significant and fluctuate throughout the periods are claims on nonbank financial institutions and claims on other banking institutions.

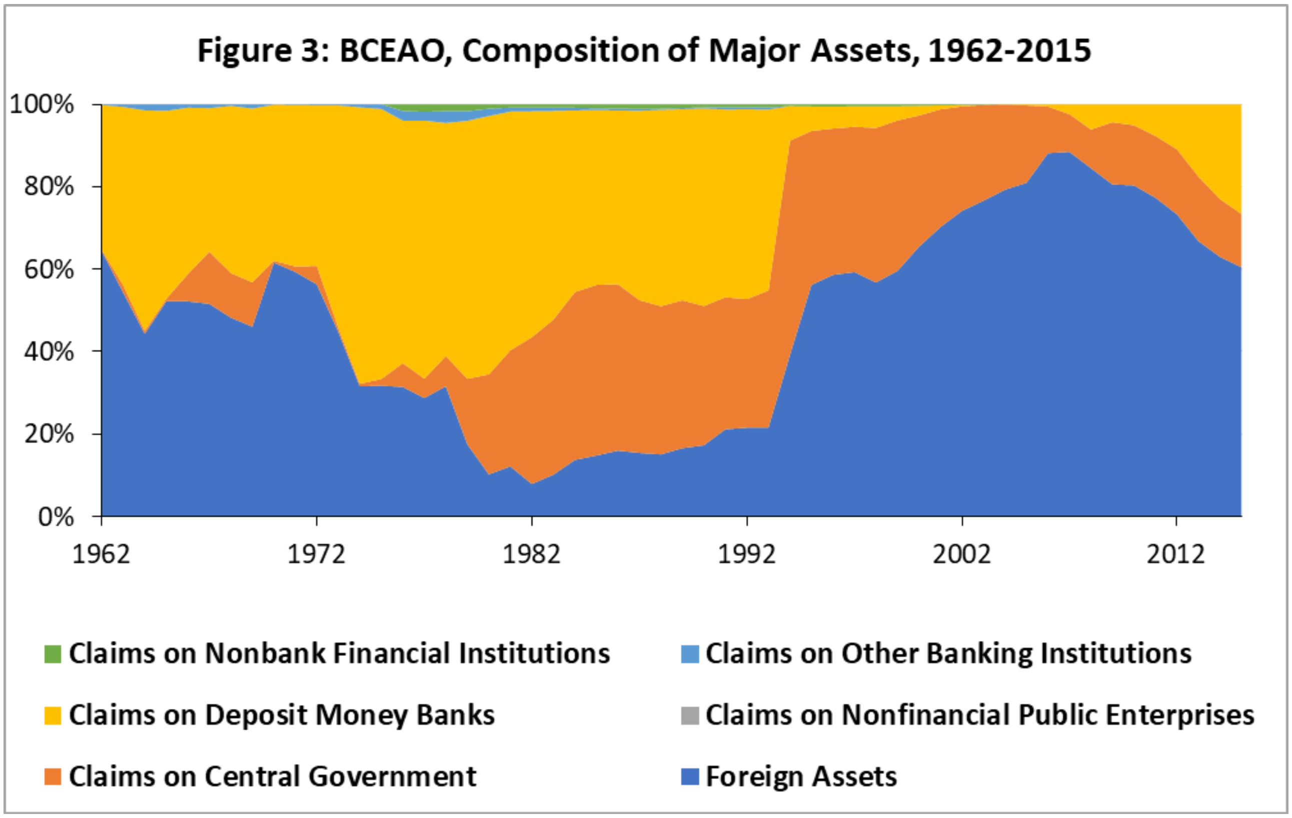


Figure 3: BCEAO, Composition of Major Assets, 1962-2015
100%
80%
60%
40%
20%
0%
1962
1972
1982
1992
2002
2012
Claims on Nonbank Financial Institutions
Claims on Other Banking Institutions
Claims on Deposit Money Banks
Claims on Nonfinancial Public Enterprises
Claims on Central Government
Foreign Assets

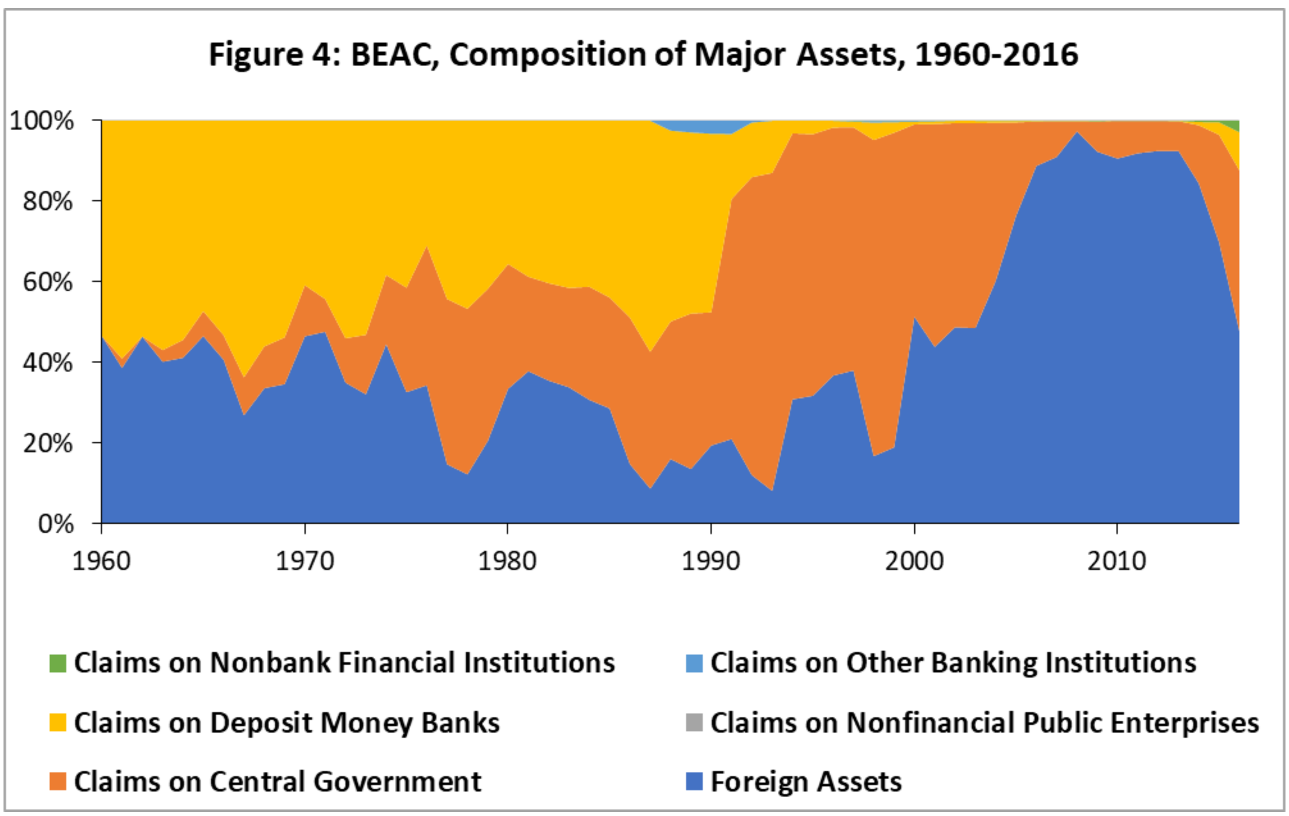


Figure 4: BEAC, Composition of Major Assets, 1960-2016
100%
80%
60%
40%
20%
0%
1960
1970
1980
1990
2000
2010
Claims on Nonbank Financial Institutions
Claims on Other Banking Institutions
Claims on Deposit Money Banks
Claims on Nonfinancial Public Enterprises
Claims on Central Government
Foreign Assets

Liability Composition

Figures 5 and 6 on the next page show the composition of major liabilities for BCEAO and BEAC, respectively. Up until 1973, both BEAC and BCEAO had most of their liabilities in reserve money and government deposits. Both banks had about 80 percent of their total liabilities as reserve money. The BEAC has more money in government deposits during this period, and BEAC fluctuates far more than BCEAO.

From 1973-1994, reserve money declined for both and foreign liabilities became a significant component of the total liabilities. BCEAO experienced a precipitous drop in reserve money in 1978, while BEAC had several large drops throughout this period.

Finally, from 1994 until the present government deposits increase for BEAC, while BCEAO features a significant increase in capital accounts. BCEAO experienced a minor increase in reserve money right at the 1994 devaluation, although this number quickly decreased before the steady increases leading up to 2004.

To What Extent Does the CFA Franc Zone Operate Like an Orthodox Currency Board?

The final section of this paper will use statistical tests to determine whether the CFA franc zone resembles a currency board, as observers have occasionally claimed. The following passage from Steve Hanke and Kurt Schuler's book *Currency Boards for Developing* Countries details the definition of a currency board.

> As reserves, a currency board holds low-risk, interest-earning securities and other assets payable in the reserve currency. A currency board holds reserves equal to 100 per cent or slightly more of its notes and coins in circulation, as set by law. The simplest type of currency board accepts no deposits and issues no securities; if a currency board does accept deposits or issue securities, they too must be backed 100 per cent or slightly more by assets payable in the reserve currency. A currency board earns profits from the difference between the return on the reserve-currency securities it holds and the expense of maintaining its notes and coins in circulation. It remits to the government (or to its owner, if not the government) profits beyond what it needs to pay its expenses and to maintain its reserves at the level set by law. A currency board does not have discretionary control of the quantity of notes, coins, and deposits it supplies. Market forces determine the quantity of notes, coins, and deposits it supplies, and hence the overall money supply in a currency board system.[19]

[19] Hanke and Schuler (2015: 2).

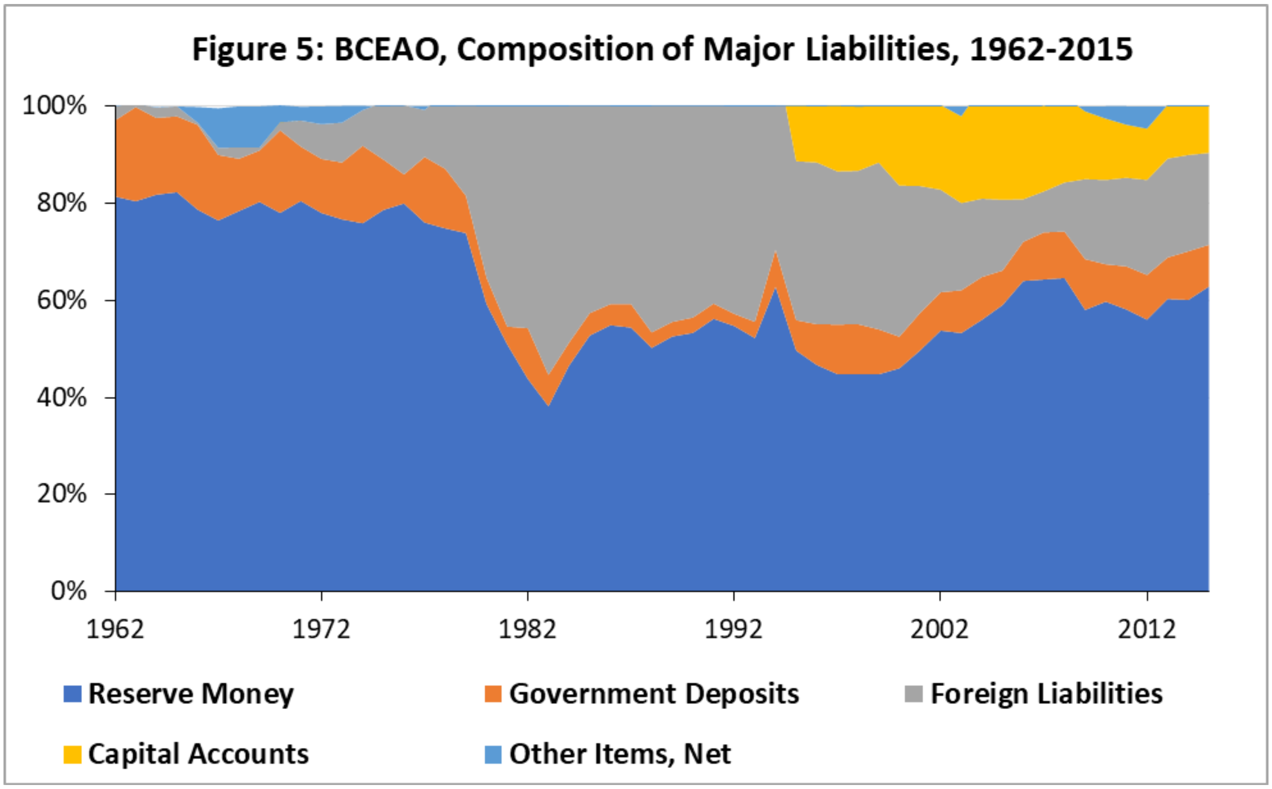


Figure 5: BCEAO, Composition of Major Liabilities, 1962-2015
100%
80%
60%
40%
20%
0%
1962
1972
1982
1992
2002
2012
Reserve Money
Government Deposits
Foreign Liabilities
Capital Accounts
Other Items, Net

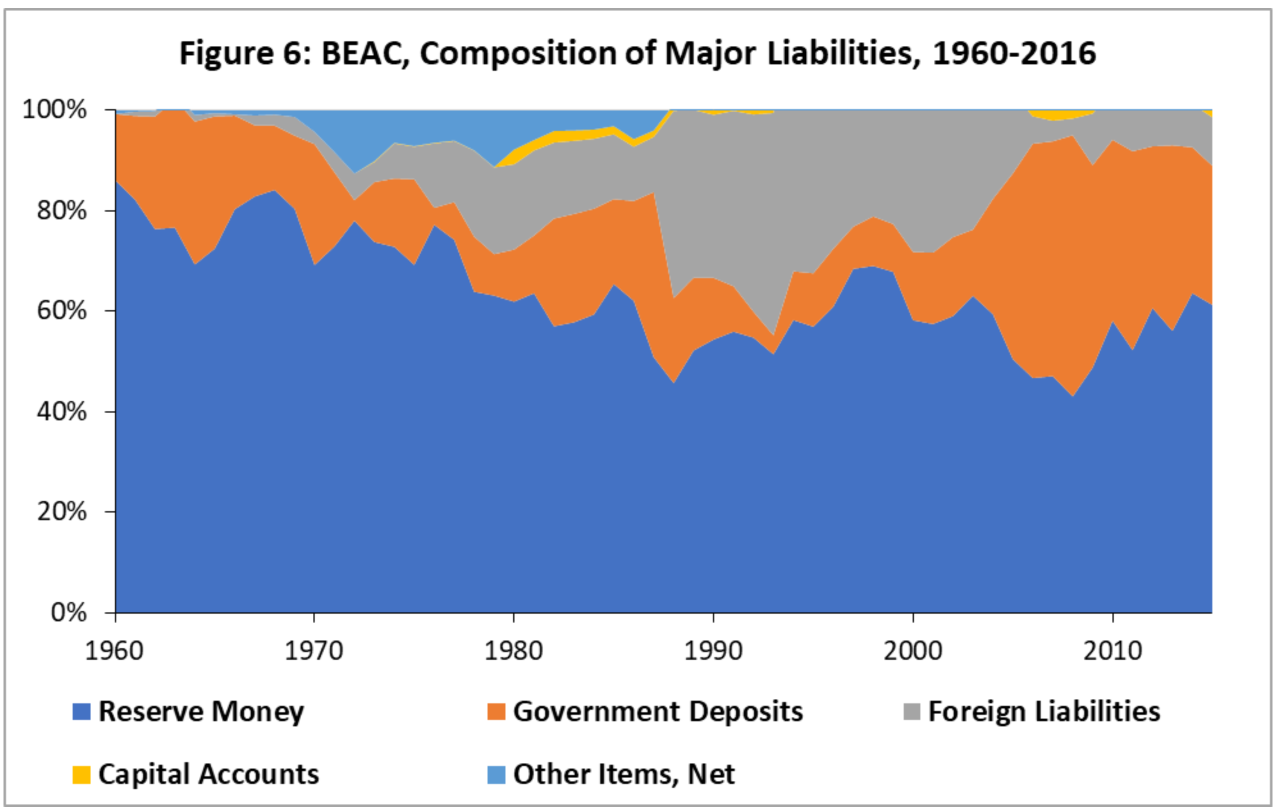


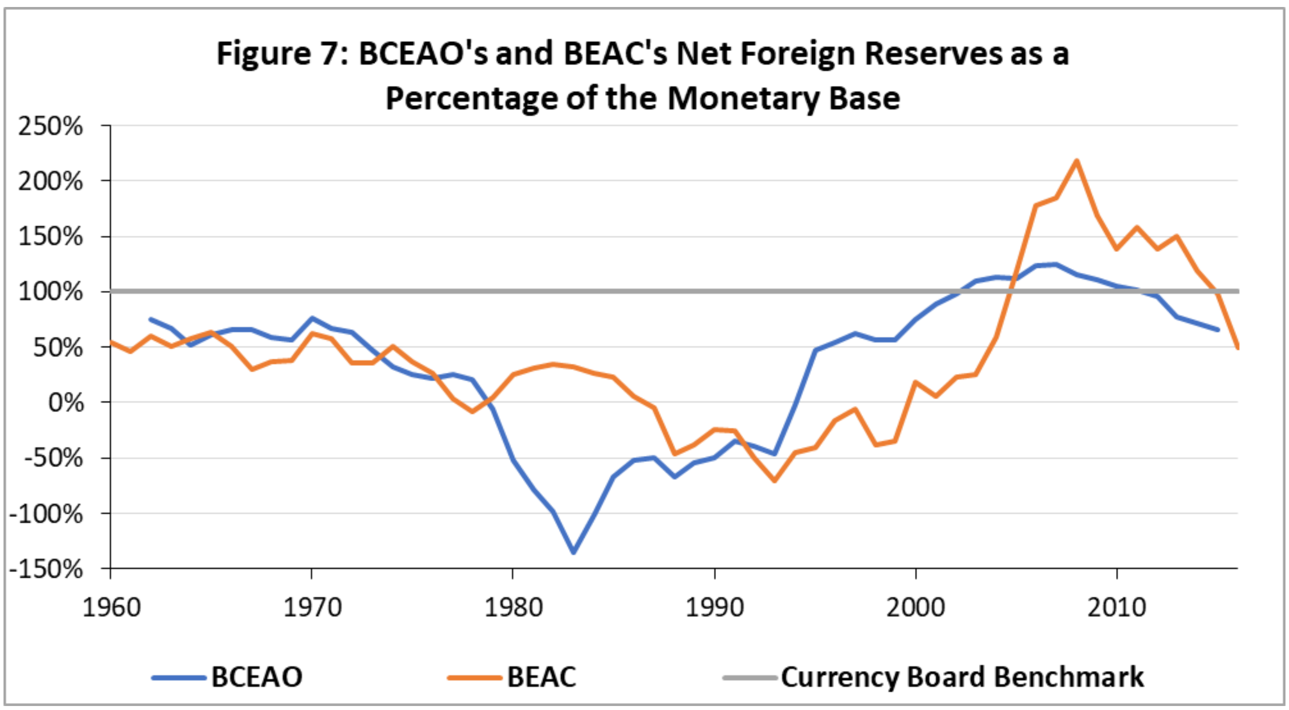
Figure 6: BEAC, Composition of Major Liabilities, 1960-2016
100%
80%
60%
40%
20%
0%
1960
1970
1980
1990
2000
2010
Reserve Money
Government Deposits
Foreign Liabilities
Capital Accounts
Other Items, Net

The three defining characteristics of an orthodox currency board are a fixed exchange rate with an anchor currency, full convertibility with that anchor currency, and 100 percent net foreign reserves (at least at the margins). An orthodox currency board will also have no domestic assets, or at least not many. Currency boards exist to stabilize a country's currency. Limiting the potential for discretionary monetary policy helps to achieve this goal.

Test Zero: Fixed Exchange Rate

Earlier it was mentioned that the CFA franc has been devalued once, in 1994. It was not a currency board then, but that still leaves open the possibility that it was until sometime before the devaluation and that it has been since. The CFA franc has depreciated much less than the currencies of its neighbors. The Democratic Republic of the Congo, Ghana, and Guinea have all had high inflations such that their exchange rates have depreciated by factors of more than 1,000 since independence against their former anchor currencies.

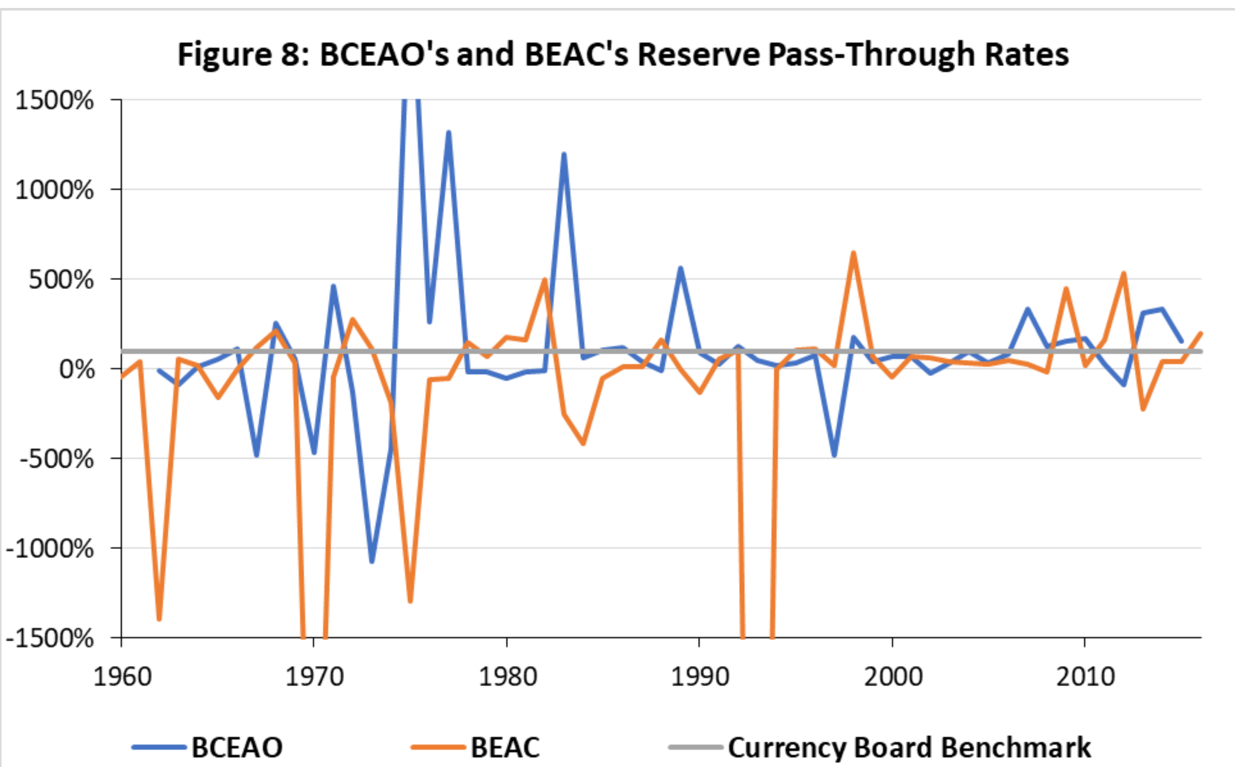
The following tests will determine the extent to which the CFA franc zone adheres to the remaining characteristics that apply to a currency board. These tests are applied to the balance sheets of BEAC and BCEAO separately. The data for the BEAC go from 1960 until 2016. For BCEAO, the data go from 1962 until 2015.



Test One: Foreign Assets and the Monetary Base

The first statistical test calculates net foreign reserves as a percentage of the monetary base. Net foreign reserves consist of gross foreign assets minus foreign liabilities. As previously stated, an orthodox currency board will back its monetary base with 100 percent or slightly more net foreign assets, and this test shows how closely the CFA zone central banks have adhered to that standard. Figure 7 shows that for most of their history, BCEAO and BEAC have had well below 100 percent of their monetary base backed by net foreign assets. In the early period of BCEAO up until the late 1960s, it had about a 50 percent ratio. Throughout the 1970s, foreign liabilities (shown in the accompanying spreadsheet workbook) increased dramatically and passed foreign assets in 1979. This caused the ratio of net foreign reserves to become negative throughout the entirety of the 1980s. In 1983 the ratio reached its low point (that is, the ratio of net foreign liabilities to the monetary base was greatest). After 1983 the ratio increased, due to a shrinking foreign reserve deficit and growing monetary base. In 1994 the ratio became positive again due to a massive increase in foreign assets, while foreign liabilities and the monetary base remained relatively stable. Recall that the CFA franc was devalued by 50 percent against the French franc in 1994, instantly doubling the CFA franc value of French franc foreign reserves. BCEAO looks something like a currency board from 2002 until 2013.

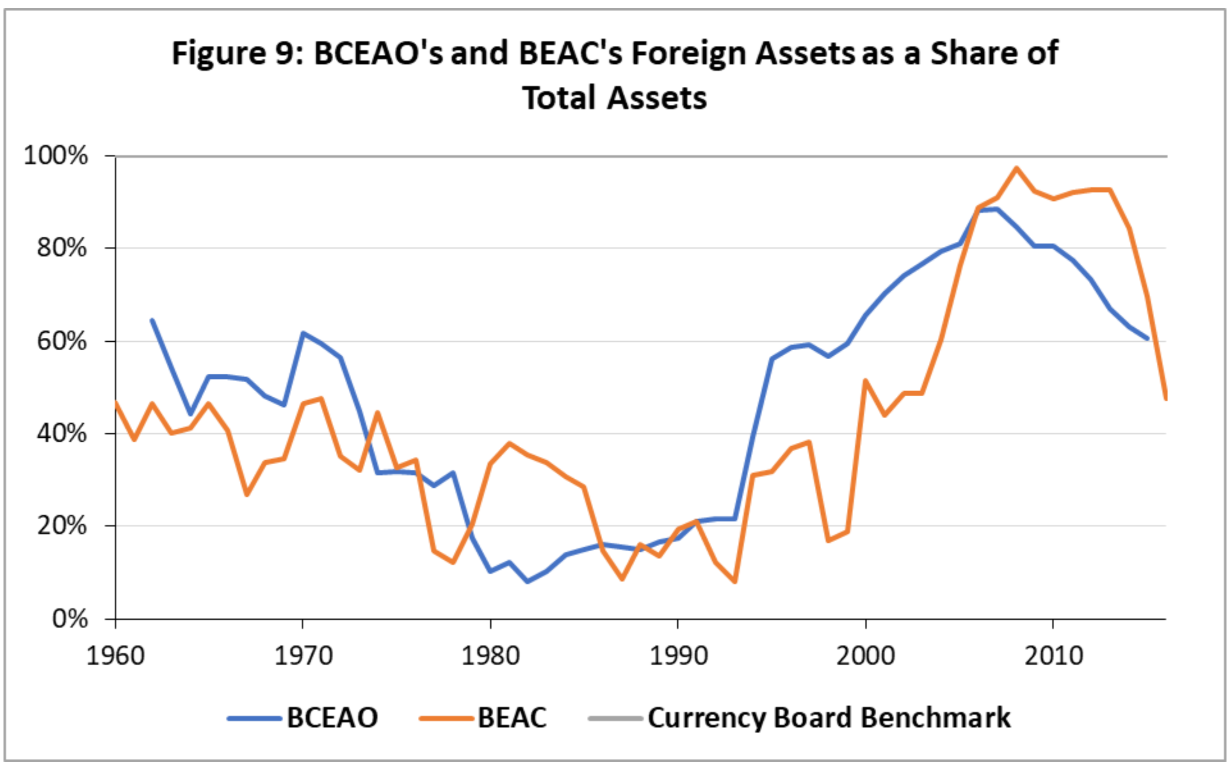
Figure 7 also depicts the corresponding calculations for BEAC. It behaved similarly to BCEAO during these periods, though the scale and the exact moment where the change occurred varied. In the early 1960s BEAC was in a similar position to BCEAO, with net foreign reserves at around 50 percent of the monetary base. However, while foreign liabilities then increased for BEAC, they increased far more slowly than for BCEAO and net foreign reserves did not become negative until 1987. Additionally, while BCEAO's net foreign reserves increased after 1982, BEAC's declined until 1993 and did not become positive until 2000. From 2005 to 2015 BEAC's reserve ratio was above 100 percent due to huge increases in foreign assets.



Test Two: Reserve Pass-Through

Another statistical test is the reserve pass-through test. It measures the change in the monetary base divided by the change in net foreign reserves. An orthodox currency board should have a rate close to 100 percent, because as the monetary base rises or falls, foreign reserves should rise or fall by a like amount, excluding interest earnings net of expenses. Accounting practices and other factors can create deviations, but even so, one should not expect huge, persistent deviations. For BCEAO, aside from a handful of years, the central bank does not meet this criterion, as shown in Figure 8. Due to the rapid changes in the monetary base and net foreign reserves, the pass-through rate fluctuates rapidly before hitting its lowest point in 1973. It then has a massive increase due to the huge increase in the monetary base. Other than jumps in 1983, 1989, and 1997, the rate stays consistent.

The BEAC likewise does not mimic a currency board, though it often does not behave like the BCEAO either due to differences in when they expand their monetary bases. For the BEAC, the large fluctuations occur at periods when the monetary base changes much faster than the net foreign reserves. Thus, even relatively small changes can lead to massive spikes in the graph, as in 1962 when a small and normal change in monetary base lead to over a 1000 percent change in the ratio, due to an even smaller change in reserves. However, the largest change for the BEAC corresponds to the devaluation in 1994, when the amount of reserves increased dramatically.



Test 3: Foreign Assets as a Percentage of Total Assets

The final test looks at what percentage foreign assets comprise of the total assets of each bank. An orthodox currency board should in principle be 100 percent foreign assets and 0 percent domestic assets, though in practice, many currency boards have held small amounts of domestic assets as a buffer for paying salaries and local expenses. For the BCEAO, the foreign asset percentage is much lower than 100. Especially after 1970, the value drops dramatically as foreign liabilities become a larger and larger component of total assets. The situation changes after 1982 and significantly after 1993 and the upward trend continues until 2008. The share of foreign assets then declines until the present. While BEAC's behavior varies from BCEAO's on a yearly basis, it exhibits the overall same trends. Neither approach the level necessary for designation as a currency board.

Conclusion

The preceding analysis reveals that neither of the CFA franc zone's central banks resembles a currency board. While, especially in the early 2000s, both banks' percentages of foreign assets and net foreign reserves as a percentage of the monetary base approached the amount necessary to be considered a currency board, this period was only temporary. The reserve pass-through rate, in particular, at times approached 30 times the amount designated for currency boards, showing rapid changes in certain areas and currency board unorthodoxy.

Additionally, the balance sheet analysis reveals some little-remarked differences between the two boards. Despite often being considered in tandem and having similar laws inherent to their structure, analyzing their balance sheets reveals that they often diverge, whether due to discretionary monetary economics or due to how they respond to global economic downturns. This discrepancy reveals that despite a similar colonial history, the two regions have been able to in part chose their own paths and diverge from their colonial past.

Data Appendix

An accompanying spreadsheet workbook contains the annual balance sheet data and calculations discussed in the paper. It includes data previously not available in digital form. The workbook shows data from these sources:

(1) The annual reports of the monetary authorities of the CFA franc zone. In recent years, the annual reports are available online and balance sheet statistics for the BCEAO are found in a separate publication called the *Audit* or *État financier.*
(2) The IMF's International Financial Statistics database.
(3) For French Equatorial Africa, the *Annuaire statistique de l'Afrique equatoriale française,* volume 1 (1936-1950).
(4) For the BCEAO, the Comité Monétaire de la Zone Franc, *Rapport annuel de la zone franc,* for 2000-2016. We include these data because they are in the same style as the BCEAO annual reports before 2000 but are more detailed than the format the BCEAO uses starting in 2000.

(5) For the BCEAO, its database (*base de données*) on its Web site. We used data labeled "MSMF 1984," which are prepared according to the standards of the 1984 version of the IMF's *Manual of Monetary and Financial Statistics* (whose French initials are MSMF).

Different sources often show different numbers for various balance sheet items because of differences in accounting practices. In particular, for the BCEAO, the annual reports of the bank itself, the franc zone annual reports, the BCEAO's database, and the IMF often each show different numbers. We have reproduced them all for the benefit of interested readers. Moreover, the franc zone annual reports often show revisions to the BCEAO balance sheet for the previous year. We have not shown all of those revisions, instead choosing the version that was closest to the BCEAO annual report or that had the fewest data holes.

Legal Appendix

This list contains some of the important laws and decrees made by the French and later African heads of state that affected the activities of the CFA franc zone central banks and monetary unions. Many of these laws can be found in the BCEAO's *History of the West African Monetary Union*. See also Legifance, the official Web site for French legislation.

France, decree of 29 June 1901 – Established the Banque de l'Afrique Occidentale (BAO).

France, act of 29 January 1929 – Granted the BAO a renewal of its exclusive issuing right.

France, law of 1 October 1936 – Authorized colonial banks to consider deposits with French banks as foreign exchange in the reserves that they were legally required to maintain.

France, decree of September 1939 – Imposed a common set of exchange controls on France and its colonies at the start of World War II, in effect creating the franc zone.

Title VIII of the French Constitution of 1946 (Articles 60-82) – Gave French West Africa and French Equatorial Africa the status of decentralized collectivities.

France, Decree No. 45-0136 of 25 December 1945 – The CFA franc was created and had a value of 1.70 metropolitan francs, as opposed to 1.00 francs previously.

France, act of 30 April 1946 – Set up FIDES (Fonds d'Investissement pour le Développement Économique et Social des Territoires d'Outre-Mer or Investment Fund for the Economic and Social Development of the Overseas Territories). Created a social and economic development plan for the territories.

France, Ministry of Finance and Economic Affairs, Avis No. 352 de l'Office des Changes of 17 October 1948 — The CFA franc was in effect revalued against French franc to offset almost all the French franc's devaluation from 214.392 to 264 French francs = US$1 on 17 October 1949. The new exchange rate was 1 CFA franc = 2 French francs.

France, Decree No. 55-103 of 20 January 1955 – Created the Institut d'Émission de l'Afrique Occidental Française et du Togo (IEAOFT, Issuing Institute of French West Africa and Togo) to replace the BAO as the primary note issuer.

France, France Decree No. 55-104 of 20 January 1955 – The Caisse Centrale de la France d'Outre-Mer was replaced by the Institut d'Émission de l'Afrique Équatoriale Française et du Cameroun (IEAEFC, Issuing Institute of French Equatorial Africa and Cameroon).

France, Decree No. 55-939 of 15 July 1955 – Established the capital of the IEAOFT at 1 billion French francs.

France, Decree No. 55-940 of 15 July 1955 – Approved the statutes of the IEAEFC.

France, Decree No. 55-941 of 15 July 1955 – Established the capital of the IEAEFC at 1 billion French francs.

France and IEAOFT, convention of 20 September 1955 – Established the relationship between the French Treasury and the new monetary authority of French West Africa and Togo.

France and Guinea, memorandum of agreement concerning modalities for the Republic of Guinea's entry into the Franc Area, January 7, 1959 - Signed following Guinea's decision to not join the new French community. This agreement laid out terms for continuing technical and cultural cooperation.

France, Ordinance No. 58-134 of 27 December 1958 – As part of a currency stabilization plan, created a new monetary unit in France, known as the new franc, which was established at 1 new franc = 100 old francs.

France, Ordinance No. 59-491 of 4 April 1959 – Transformed the IEAOFT into the foundation for the BCEAO.

France, Ordinance No. 59-492, 4 April 1959 – Transformed the IEAEFC into the Banque Centrale des États de l'Afrique Équatoriale et du Cameroun (BCEAEC).

Agreement of 29 June 1959 – Established the Union Douanière Équatoriale (UDE, Central African Customs Union).

France, Decree No. 59-1450 of 22 December 1959 – Established the date at which the new French franc would enter circulation as 1 January 1960. The exchange rate of the CFA franc became 50 CFA francs = 1 new French francs.

France and Mali, Co-operation Agreement signed on 22 June 1960 - Signed by French Prime Minister Michel Debré and President of the Government of the Federation of Mali, Modibo Keita, this agreement outlined plans for economic cooperation between France and the BCEAO with Mali.

Mali, Act No. 63-54 AN/RM and Decree no. 174 AN/RM on Thursday 28 June 1962 – Established the Bank of the Republic of Mali, under which Mali left the CFA franc zone.

Agreement of 12 May 1962 – Established the Union Monétaire Ouest Africaine (UMOA, West African Monetary Union, WAMU).

Togo, Act No. 63/16 of 21 November 1963 – Authorized Togo to join WAMU.

France and Guinea, agreement of 22 May 1963 – Articles 5 and 6 ended the financial dispute between the two countries and forced Guinea to recognize certain financial obligations to France.

Agreement of 8 December 1964 – Created the Union Douanière et Économique de l'Afrique Centrale (UDEAC, Central African Monetary and Economic Union) to succeed UDE.

Convention de coopération monétaire entre la République du Tchad, la République Unie du Cameroun, la République centrafricaine, la République populaire du Congo et la République gabonaise, Brazzaville, 22 November 1972; and the Convention de coopération monétaire entre les États membres de la Banque des États de l’Afrique Centrale et la République française, 23 November 1972 (see France, Law No. 72-1163, 23 November 1972) – Reduced French influence over BCEAO.

Convention de coopération monétaire entre la République du Tchad, la République Unie du Cameroun, la République centrafricaine, la République populaire du Congo et la République gabonaise, Brazzaville, 22 November 1972; Convention de coopération monétaire entre les États membres de la Banque des États de l’Afrique Centrale et la République française, 23 November 1972 (see France, Law No. 72-1163, 23 November 1972) – Converted BCEAC into the Banque des Etats de l’Afrique Centrale (BEAC), which had reduced French influence.

Mauritania, Act no. 73 118 of 15 May 1973 – Created the Central Bank of Mauritania, under which Mauritania left the CFA franc zone.

Agreement of 14 November 1973 – The WAMU countries established the West African Development Bank (French initials BOAD) to increase economic integration and ensure the development of all its members.

France, Law No. 74-626, 2 July 1974 – Signed in France and gave approval to the cooperation between France and the WAMU states.

Communiqué de press publié à l'occasion de l'adhésion du Mali à l'U.M.O.A., 31 October 1983 – Mali rejoined the BCEAO effective 1 June 1984.

Equatorial Guinea and Banque des États de l’Afrique Centrale, treaty of membership, 27 August 1984 – Equatorial Guinea, a former Spanish colony that had been issuing its own currency, joined the BCEAO effective 2 January 1985.

Conseil des Ministres de l’Union Monétaire Ouest Africaine, decision of 28 July 1993 announced 2 August 1993, and Banque des États de l’Afrique Centrale, decision of 2 August 1993 – BCEAO and BEAC ceased redeeming notes in circulation outside the CFA franc zone.

Déclaration commune des chefs d’État et de gouvernement des pays africains membres de la zone UMOA et BEAC, 11 January 1994 – Both CFA francs were devalued to 100 CFA francs = 1 French franc.

Treaty of 16 March 1994 – Converted UDEAC into the Communauté Économique et Monétaire de l’Afrique Centrale (CEMAC, Central African Economic and Monetary Community).

Treaty of 4 August 1994 – Converted WAMU into the Union Monétaire et Économique Ouest Africaine (UMEOA, West African Economic and Monetary Union, WAEMU).

Union Monétaire Ouest Africaine, agreement of heads of state, Ouagadougou, 10 May 1996; Guinea-Bissau, consent by legislature to agreement, November 1996 – Guinea-Bissau, a former Portuguese colony that issued its own currency, joined the BCEAO effective 2 May 1997.

Council of the European Union, Regulation (EC) No. 974/98 of 3 May 1998 – France became one of the countries that would initially use the euro upon its adoption on 1 January 1999.

Council of the European Union, decision of 23 November 1998 – Made determinations concerning the CFA franc and the Comorian franc applying to the forthcoming introduction of the euro to replace the French franc.

Conseil des Ministres de l’Union Monétaire Ouest Africaine, Communiqué de la Banque Centrale des États de l’Afrique de l’Ouest sur le taux de conversion du franc CFA par rapport à l’euro of 21 December 1998, and Conseil des Ministres de l’Union Économique de l’Afrique Centrale, decision of December 1998 – Confirmed that upon the introduction of the euro on 1 January 1999, it would become the anchor currency for the CFA franc

Council of the European Union, regulation of 31 December 1998 – Established the fixed conversion rates between the euro and its predecessor currencies, including a rate of 6.55957 French francs = 1 euro, thereby indirectly establishing the exchange rate of the CFA franc as 655.957 CFA francs = 1 euro.

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