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ARTICLE

BI-DIRECTIONALITY IN FX RESERVES AND DOMESTIC EXCHANGE RATES IN THE CEMAC REGION

Henri Kouam Tamto

Abstract

Foreign Exchange (FX) Reserves reduce the risk of a currency crisis. However, their composition does not reflect changes in trade and financial flows in the CEMAC region. Changes in the value of the domestic exchange rate cause FX reserves to rise or fall. This paper investigates the relationship between FX reserves and the Franc CFA (CFAF). It finds that during an upturn driven by increases in the prices of commodities, FX reserves tend to rise, while the prudential characteristics of reserves are more prevalent during a downturn. Changing the composition of reserves to reflect trade dynamics (invoicing channel) and financial flows will lessen the risk of a currency crisis and improve macroeconomic stability.

INTRODUCTION

Foreign exchange (FX) reserves insure against shocks and complement monetary policy to achieve mandated goals of price and financial stability. Meanwhile, holding reserves comes at a cost to the central bank as they tend to be invested in highly liquid, low yield safe assets i.e. U.S treasury. Against this backdrop, FX reserves are indispensable in staving a currency crisis (Assoumou-Ella, 2019) and improving financial stability. Indeed, they can be termed prudential as they ensure there are sufficient liquid assets in the financial system to avert a currency-induced banking crisis. Additionally, FX reserves can also be seen as an insurance against claims on commercial banks, whereby foreign currency is accessible for said banks to cover short term liabilities. This is especially driven by the interconnectedness of the global economy in both trade and financial flows (Hannan, 2017). Commodity exporting countries such as Cameroon, Chad, Central African Republic, Gabon and Republic of Congo and Equatorial Guinea are susceptible to sudden changes in the price of commodities, the majority of which are priced in dollars.

These economies – comprising the CEMAC region – share a currency and banking union. The central bank – BEAC – sets monetary policy to achieve price stability and

improve financial stability. Such an outcome is ill-fated without reserves, which not only serve as an anchor for trade and FX payments, they also serve as an anchor for the Franc CFA during periods of economic uncertainty.

BENEFITS OF RESERVES

The prudential characteristics of foreign exchange reserves are designed to ensure sufficient liquidity in the financial system and serve as a backstop for FX transactions. The salience of the value of the currency rests on export competitiveness, gleaned from exogenous or endogenously driven depreciations. Additionally, currencies determine the pass-through of monetary policy or macroeconomic developments on inflation outcomes. This paper investigates developments in the FX reserves in the CEMAC region, noting variations in the euro and Renminbi portion of reserves. It employs changes in trade flows from the major trading partners and investigates the impact of changes in reserve holdings on credit growth and foreign exchange. The paper investigates developments in foreign exchange reserves, implications for currency and bond markets, with recommendations that will support financial stability.

The U.S dollar is the global reserve currency (Dabrowski, 2020; Kovacevic, 2014), driven by its dominance in global trade and financial flows as well as its haven properties. According to the IMF, the monetary authorities' reserves can be defined as claims on non-residents in the form of foreign banknotes, bank deposits, treasury bills, short and long-term government securities, and other claims usable in the event of balance of payments needs"

As the lender of last resort, the currency is used by most economies to smooth cyclical changes in the levels of demand for foreign currency. Meanwhile, it continues to be the most traded foreign exchange currency and its haven properties are countercyclical, rising during periods of stress and falling during periods of macroeconomic stability. Furthermore, a majority of global trade is cleared in dollars, which has a noticeable impact on the impact of domestic currencies, current account, and fiscal balances. Furthermore, dollar financing needs also raise financial stability risks during periods of macroeconomic stress, causing central banks to insure their financial systems against risk by holding huge reserves of dollars to ensure sufficient liquidity in the financial system. Even as the global economy has become integrated with CEMAC trade flows appearing to tilt towards Europe and Asia, the continued dominance of the dollar in global trade has been sufficiently investigating in the literature (Costigan et al., 2017)) but its impact on developing economies, specifically those comprising the CEMAC zone is little known. To that regard, this paper investigates the implications of reserves on domestic exchange rates, credit growth, and inflation outcomes.

This paper argues for diversification of reserve holdings to lessen the adverse effects of the dollar on financial stability, mitigate the spill overs from event-driven dollar

appreciations, and commodity-led declines in domestic exchange rates. Prior to pursuing FX diversification policies, this paper seeks to emphasize the drivers of global capital flows and spill overs from macroeconomic developments. It contributes to the FX reserve literature by providing a detailed empirical framework accounting at once for changes in the value of the currency and invoicing in both Euro and dollars. It distinctively finds bi-directionality in FX outcomes and the precautionary effects of FX holdings in developing market economies. The study is separated as follows, chapter two details the development of foreign exchange reserves vis-a-vis commodity prices and trade in the CEMAC region, followed by a methodology in Chapter three. Chapter four comprises the data analysis and results section. The study concludes with Chapter five and policy recommendations.

THE RISE OF THE DOLLAR AS A RESERVE CURRENCY

The Bretton woods caused the dollar to become the leading international reserve currency, displacing the British Pound as the most important reserve currency at the beginning of the 20th Century. During this period, the German mark and French franc played marginal secondary roles, while the dollar was even more limited. As the size of the U.S economy eclipsed the United Kingdom in 1872, the central bank was, however, not established until 1913. The dollar has since as the dominant currency in reserve holdings across the world due to its role in trade (invoicing), financial and capital flows as well as a credible store of value. Meanwhile, BEAC, the central bank of the CEMAC region, has held dollars to prevent currency crisis, with the former peaking in 1998 after the oil embargo in the 1970's (Figure 1). The role of the dollar slowly waxed and waned as sterling and the Japanese Yen became increasingly used as reserve currencies.

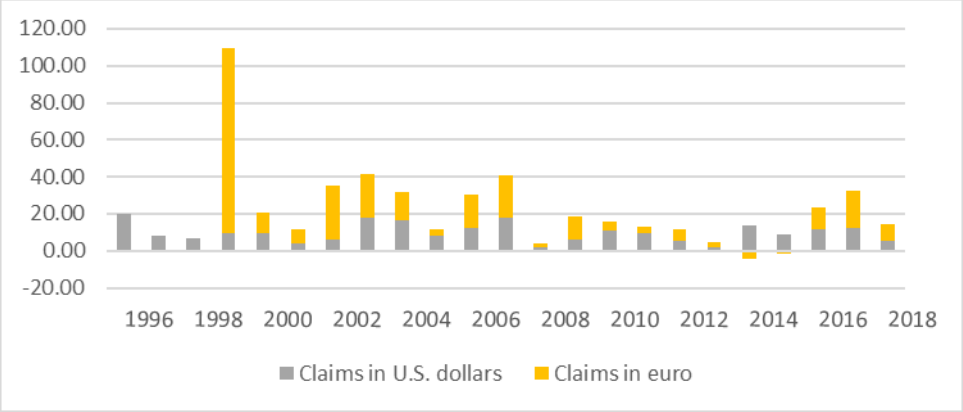

FIG 1. U.S. DOLLAR DOMINATE RESERVE HOLDINGS, BUT MAINTAINED A DOWNTREND SINCE 2006

Source: IMF.

Furthermore, the majority of trade in the CEMAC region happens with Europe and South East Asia. The majority of imports in Cameroon originate from China (17.2%), France (9.8%), Spain (4.2%), and Germany (3.80%). Similarly, the majority of imports in other CEMAC member economies are derived from France, Sub-Saharan Africa, Europe, and Central Asia (World Integrated Trade solution, 2020). The role of Chinese imports has grown significantly over the last decade with CEMAC member countries, but reserves are unilaterally designed to reflect the dollar dominance in global trade.

The challenges associated with a dollar-centric reserve policy are inescapable to commodity-driven developing economies, the trend continues to persist. It is now expected that the dollar's position as the dominant currency is unlikely to change, but the dollarization of financial systems suggests a much more pronounced currency and banking crisis. Such an outcome is unlikely to occur if central banks begin diversifying their reserves; whilst this is probable, it can only be driven by the private sector comprising of banks, financial institutions, and exporters. Nevertheless, FX reserves are judged to be "prudential", which suggests a need for a cautious communications strategy designed to incentivize the diversification of imports and trade-related invoicing. This will increase the share of trade partners in reserve holdings, reduce the adverse impact of dollar-driven depreciation on domestic exchange rates whilst achieving the mandated target of symmetric inflation.

Meanwhile, oil prices inevitably have an impact on the value of domestic currencies and the level of reserves in the CEMAC region. When oil prices rise, the CFAF appreciates, causing upward pressures in the level of reserves. Meanwhile, the reserve happens during periods of macroeconomic stress, as capital flows out of the economy, and demand for dollar rises significantly. As illustrated in Figure 2, the decline in oil prices caused a resounding fall in the level of total reserves, which increased the risk of a currency crisis. The recovery in FX reserves is symptomatic of the recovery in global growth driven by accommodative monetary policy in advanced economies.

It is, however, important to note that the changes in the level of reserves were driven by noticeable appreciations in the domestic exchange rate. The CEMAC zone is particularly exposed to dollar-driven depreciations as the former benefits from a higher growth differential with other developed economies, whilst its haven properties confer its characteristics that cause an appreciation during the period of macroeconomic stress.

This is illustrated by the perceived appreciation during risk-off periods in 2007 – 2008 and following an increase in infection rates from COVID-19. These properties are driven by the dollar's dominance in global trade as well as the bond bias that has come to underpin global financial flows. Furthermore, this trend is exacerbated by

cross-border lending that is susceptible to financial distress in countries with a small domestic investor base. Further, Shim. I. and Shin. K. (2018) find this to be the case in a group of emerging market economies and argue for diversification of funding sources to induce borrowing from local subsidiaries.

Whilst the impact of changes in levels of cross-border lending to CEMAC member countries are heterogeneous, changes in credit flows also have a resounding impact on the domestic exchange rate. In the CEMAC region, larger economies with a variety of well-capitalized banks such as Cameroon are prone to two sets of outflows. The outflows in the capital account tend are structural, driven by ownership structures of domestic companies, who pay regular dividends. Meanwhile, the repatriation of non-dividend payments to home countries also has an impact on the domestic exchange rate. FX reserves are, therefore, necessary to ensure the financial system is sufficiently liquid to cover imports and demand for foreign currencies. This is indispensable to stave off a financial crisis and ensure the banking sector can perform its functions of credit, deposits, and liquidity. Said functions are indispensable to developing market economies in the CEMAC region, where FX reserves are indispensable to ensuring sufficient liquidity for the public and private sector.

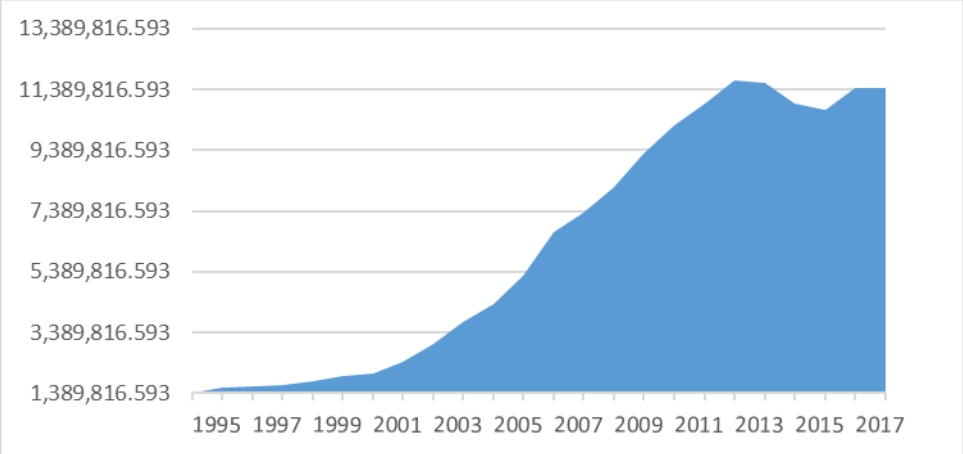

FIG 2. INCREASES IN THE LEVELS OF RESERVES ARE SYMPTOMATIC OF CHANGES IN THE VALUE OF THE CURRENCY AND INCREASES IN CENTRAL BANK PURCHASES OF FOREIGN CURRENCIES

Source: IMF.

This paper posits an empirical framework for FX reserves that infer from dominant currencies such as the U.S. dollar, Euro, and other reserve currencies such as the Japanese Yen, British Pound, and Chinese Renminbi. Reserves according to Schanz (2019) central banks hold reserves for precautionary motives such as import cover, financial stability, and external competitiveness.

$$R_{\$,t+1} + R_{eur,t+1} + R_{\theta,t+1} = ic_{t+1} + stl_{t+1} \quad (1)$$

Where $ic_{t+1} = gdsv_{xp} + inv_{\$,t+1}$

Admittedly, Europe and Central Asia are the CEMAC region's largest trading partners, despite a majority of trade currently invoiced in dollars. The analysis is, therefore, limited to reserve holdings in the Euro and the Dollar. In other to lessen the double counting for dollar effects, the study employs import cover ic_{t+1} to account for dollar trade and invoicing of non-dollar trade in a global sample of countries.

$$R_{\$,t+1} + R_{eur,t+1} + R_{\theta,t+1} = gdsv_{xp} + inv_{\$,t+1} + stl_{t+1} \quad (2)$$

$$\left(\frac{usd}{xaf}\right)_{t+1} = \Delta REER_{\$,t+1}$$

Where the exchange rate equals the REER, a depreciation suggests a dollar appreciation in the short to medium term. As such, the value of the CFAF at a given time't' is contingent on the level of imports, dollar invoice obligations, and dollar-denominated debt. It strikes me so vividly that the level of reserves during said period is driven by the value of the domestic exchange rate. In other words, a weaker currency amplifies the dollar outflows and lessens the attenuating effect from FX reserves. It is arguable that reserves, nonetheless, provide a hedge; but the contention of this paper is the extent of support seen by the domestic currency during periods of macroeconomic stress is driven by factors independent of reserves such as debt sustainability, export-dependency, capital outflows, and interest rate differentials (Milesi-Ferretti & Tille, 2011; Medeya, 2017; Vargas et al., 2019). In other words the precautionary motives are consistent with reserve holdings are amplified by FX drivers. Similarly, the levels of reserves and their ability to act as a buffer during periods of macroeconomic stress are contingent on the origin and nature of macroeconomic risk.

$$(REER_{\$,t+1} - 1) + R_{eur,t+1} + R_{\theta,t+1} = gdsv_{xp} + inv_{\$,t+1} \quad (3)$$

$$(R_{\$} - 1)_{t+1}: \left(\frac{usd}{xaf}\right)_{t+1} * (gdsv_{xp} + inv_{\$,t+1})$$

Where import cover and liquidity needs are driven by the value of the dollar at given time'$t+1$'. Where liquidity needs from the private sector at given time't' = 1, it logically follows that a depreciation in the real effective exchange rate causes an increase in dollar-denominated liabilities and outflows.

$$(R_{\$} - 1)_{t+1} \neq gdsv_{xp} + inv_{\$,t+1} \left(\frac{stl}{ltl}\right)^{\pi} \quad (4)$$

$$R_{\$,t+1} = 1 + \left(gdsv_{xp} + inv_{\$,t+1}\left(\frac{stl}{ltl}\right)^{\pi}\right) \quad (5)$$

It should be noted that changes in trade flows have a greater-than marginal impact on reserves, as a greater portion of trade is invoiced in dollars, although the share of trade invoiced in Euro rose to 48% in 2018. (Euro Stat, 2018).

$$R_{eur,t+1} = \left(gdsv_{xp} + inv_{eur,t+1}\left(\frac{stl}{ltl}\right)^{\pi}\right) \quad (6)$$

$$(R_{eur} - 1)_{t+1} = 1 + \left(gdsv_{xp} + inv_{eur,t+1}\left(\frac{stl}{ltl}\right)^{\pi}\right) \quad (7)$$

Meanwhile, the ratios of short and long-term liabilities also determine the level of demand for any given reserve currency. Financial sector stress caused by COVID-19 increased demand for dollar funding in for U.S. dollars, driven by capital flow reversals, a retrenchment in risk sentiment and flight to safety (Ndedi, 2020; Normurodova, 2020; Ozili & Arun, 2020). The dollarization of financial systems in emerging and developing market economies amplifies dollar-driven credit needs. This caused the Federal Reserve to occasion dollar funding for central banks with an account at the FED.

This crisis-centric response was utilised during the 2008 GFC and serves as a backstop for global central banks that experience duress during periods of financial or macroeconomic instability. Meanwhile, Euro reserve holdings rather than reflect trade, has come to reflect invoicing and short term liabilities. The reversal in capital flows following the Fed tightening cycle increased Euro funding in developing economies, which increases the need for Euro reserves. As illustrated in Figure, the level of Euro reserves have traded choppily but, nonetheless, remain second in total FX reserves.

$$gdsv_{eur} \leq gdsv_{\$} + inv$$

$$R_{eur} - 1 = 1 + (gdsv_{eur} + inv_{eur}) \quad (8)$$

$$\left(\frac{usd}{xaf}\right)_{t+1} \geq REER_{\$,t+1}$$

$$\begin{pmatrix} R_{eur} + 1 > R_{eur,t+1} \\ R_{eur} + 1 < R_{eur,t+1} \end{pmatrix} \text{Where } \pi_{c1} - \pi_{c2} > 1 \quad (9)$$

$$(R_{\$} + R_{eur} + R_{\theta})_{t+1} = \left(gdsv_{(\$+eur+\theta)} + inv + stl\right)_{t+1} \quad (10)$$

$$(R_{\$} + R_{eur} + R_{\theta})_{t+1} = gdsv_{xp} + gdsv_{xp} + gdsv_{xp} + inv + \left(\frac{stl}{ltl}\right)^{\pi\pm1} \quad (11)$$

$$R_{\$} > (R_{eur} + R_{\theta})_{t+1} = inv_{\$} > (gdsv_{\$} + gdsv_{eur} + gdsv_{\theta})_{t+1} \quad (12)$$

It is important to make a distinction between increases in reserves that are driven by appreciations in the domestic exchange rate (9) and changes in the volume of reserves driven by an increase in the central banks' non-reserve liabilities. The central bank purchases reserves as a prudential measure, designed to lessen the probability of a currency crisis. This usually culminates increases in their non-reserve liabilities as FX reserves are held in liquid assets such as U.S treasuries to ensure the financial system is sufficiently liquid. Meanwhile, the currency driven by changes in the domestic exchange rate also cause an increase or decrease in the levels of reserves. When commodity prices rise, the currency appreciates and the level of FX reserves inadvertently increase in line with the currency. The reserve tends to happens when the currency depreciates and the level of reserves fall as the central must hold sufficiently large reserves to ensure that the financial system has sufficient liquid dollar assets for financial institutions to make payments. FX reserves can, therefore, be seen as a prudential tool designed to avert a currency or banking crisis as they serve as an anchor for the financial system during period of stress. The role of the dollar is overemphasised due to its role as the lender of last reserve, trade invoicing and medium of payment/store of value.

EXCHANGE RATES AND CURRENCY BOND MARKETS

Admittedly, borrowing via domestic currency bonds markets have not insulated developing economies, more so CEMAC member countries, from exogenous financial stocks such as COVID-19 or contagion from banking sector stress in advanced and developing market economies. Developing economies such as those in the CEMAC zone are particularly exposed to changes in the prices of commodities, changes in global financial conditions, and spill overs from advanced and developing economies. As such, local currency bond spreads spike amid sharp currency depreciation and capital outflows; prompting the need for dollar reserves to support payments or claims on short term liabilities. For example, the "push shock" in global risk aversion during the 2008 financial crisis gave an incentive for investors to unwind their positions. (Fratzscher, 2012; Lo Duca, 2012; Milesi-Ferretti & Tille, 2011). These capital flow reversals caused domestic currencies to depreciate significantly and placed renewed pressure on FX reserves as economic agents experience sudden increases in demand for liquidity.

Capital flow reversals during a period of macroeconomic stress reduce the effectiveness of central bank policy as increases in the policy do little to assuage capital outflows. Nevertheless, the nature of a shock has an impact on the extent of capital outflows from developing economies; when commodity prices rise, capital flows into domestic economies, placing downward pressure on inflation outcomes. Meanwhile, there is a marked divergence in trade flows, dominated by Europe and Asia, and the composition of reserves.

It is arguable that this reflects financial and capital flows that appear to be dollar-centric, even as there is currently very little data to verify such assertions.

This is, especially, the case in the CEMAC region that has experienced a sudden increase in Chinese debt, which is currently not reflected in FX reserves holding. Due to the divergence in trade flows and the composition of reserves, it is important to investigate the implications of the latter on domestic exchange rates in the CEMAC region.

The literature is devoid of investigations into the impact of reserves of domestic foreign exchange, due to the perception of reserves an anchor for Macroeconomic stability (Belke & Volz, 2018). Whilst such arguments emphasize the "prudential characteristics" of reserves, the transmissions from reserve holding to the real economy operate via several channels. The FX channel is indispensable to economic growth and inflation outcomes that rely, amongst others, on the currency, oil prices, and domestic demand to name a few. Whilst it is arguable that FX reserves are designed to ensure the financial system is sufficiently liquid, hence lessening the incidence of a currency crisis.

Meanwhile, Kenkuo and Tchuisseu (2020) find that public debt would depress economic growth when the public debt ratio is greater than 82.3%. The adverse effects on the growth rate will equally be observed if the stock of external debt relative to GDP is greater than 41%. FX reserves are an anchor for macroeconomic stability during periods of macroeconomic uncertainty as they determine the ability of a country to service debt and other claims in foreign currencies.

During periods of macroeconomic stress, the demand for foreign currency increases, but the extent of said increase is also contingent on the level of the currency. The mismatch between short and long-term liabilities is, nonetheless, contingent on the value of the currency during periods of macroeconomic uncertainty. For example, when commodity prices fall, the prices, capital inevitably flows out of the economy, but the value of foreign holding for investors equally falls. This, the IMF posits, slows the extent of capital flows reversals from developing economies.

All this illustrates the need to hold significant reserves to act as a backstop for the economy during periods of stress. In other words, the stability of the exchange rate hinges on the ability of economic actors to service debt in foreign currencies. The currency is, however, also driven by other factors such as the price of commodities (Figure 3).

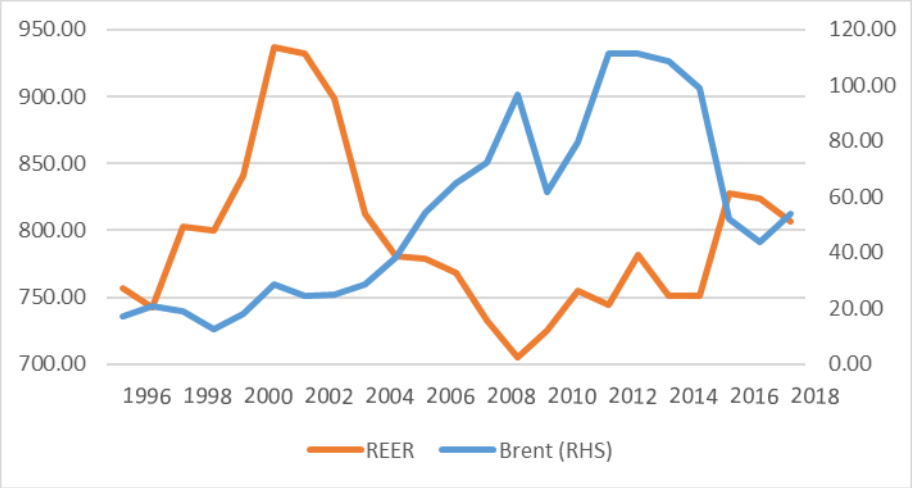

FIG 3. THERE IS AN INVERSE RELATIONSHIP BETWEEN THE EXCHANGE RATE AND OIL PRICES
Source: IMF, World Bank.

When oil prices rise, the currency tends to appreciate, as a majority of CEMAC member countries are commodity exporters. As such, increases in global commodity prices cause a currency to appreciate, which in turn increases the value of reserves?

As such, while the currency can have an impact on the overall value of reserves during commodity price upturns, the reserve happens during downturns. Reserves become increasingly important when oil prices fall as trade and short term liabilities serviced in foreign currencies must, nonetheless, be serviced. While FX reserves are seen as anchors for the domestic economy, they operate via the FX channel which determines the cost of servicing debt and the implications of higher debt levels on domestic economies.

Meanwhile, the lack of diversity in reserves reflects domestic demand as changes in the value of reserves. Global liquidity and economic policy uncertainty vis-à-vis country-specific factors such as U.S. yields tend to be the most significant drivers of capital flows. Preliminary investigations suggest a negative impact on dollar FX reserves on domestic currencies, while claims in the Euro Area have a positive effect on the currency. The latter reflects the CEMAC region's trade with the Euro Area and increases in capital flows from the region.

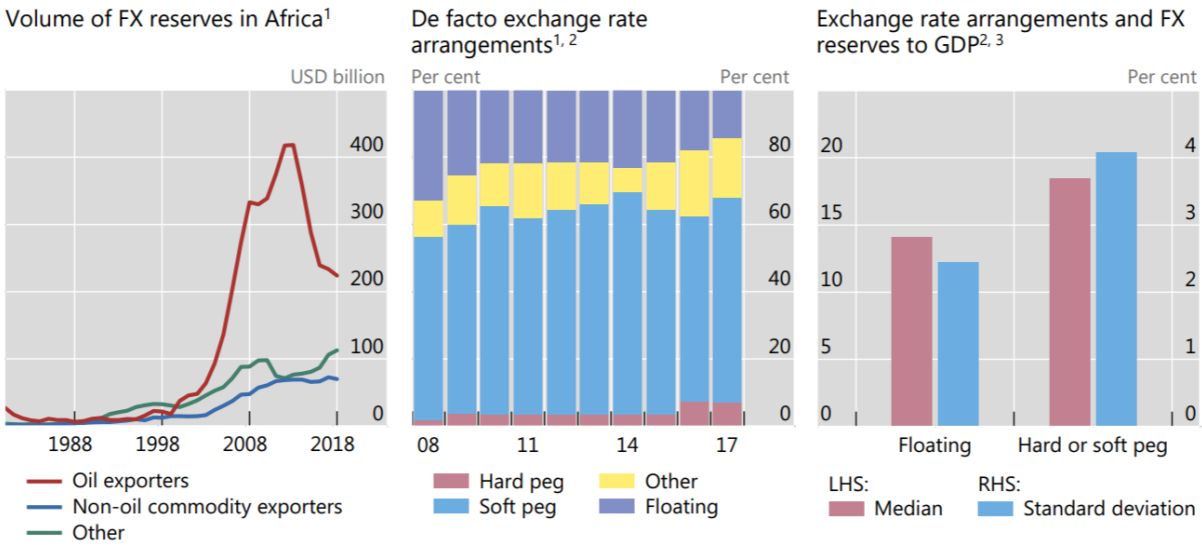

FIG 4. EXCHANGE RATE STABILIZATION IS AN IMPORTANT POLICY TOOL FOR AFRICAN ECONOMIES
Source: IMF, World Bank.

The exchange rate is a key determinant of other objectives such as monetary and financial stability, and changes in the level of FX reserves are symptomatic of FX interventions conducted in pursuit of other goals. As such, the levels of FX reserves determine macroeconomic performance and act as a shock absorber, which has an impact on economic growth outcomes, inflation, and influences the value of the domestic exchange rate. The above illustrates the bi-directionality latent in FX reserves and domestic exchange rates. The latter determines the pass-through from changes in the price levels to inflation outcomes and has an impact on the overall levels of reserves.

The value of reserves equally has an impact on the domestic exchange rate via its ability to serve as a buffer between exogenous or endogenous shocks and the domestic economy. As illustrated in Figure 5, low-income countries such as the CEMAC zone, prioritize import cover as they tend to run current account deficits. This is driven by economic structures dominated by commodity exports with little diversified exports to attenuate the shocks from global economic and financial activity. It is, challenging to measure reserve holdings as a precautionary motive, but evidence via import cover suggests a viable metric for the above.

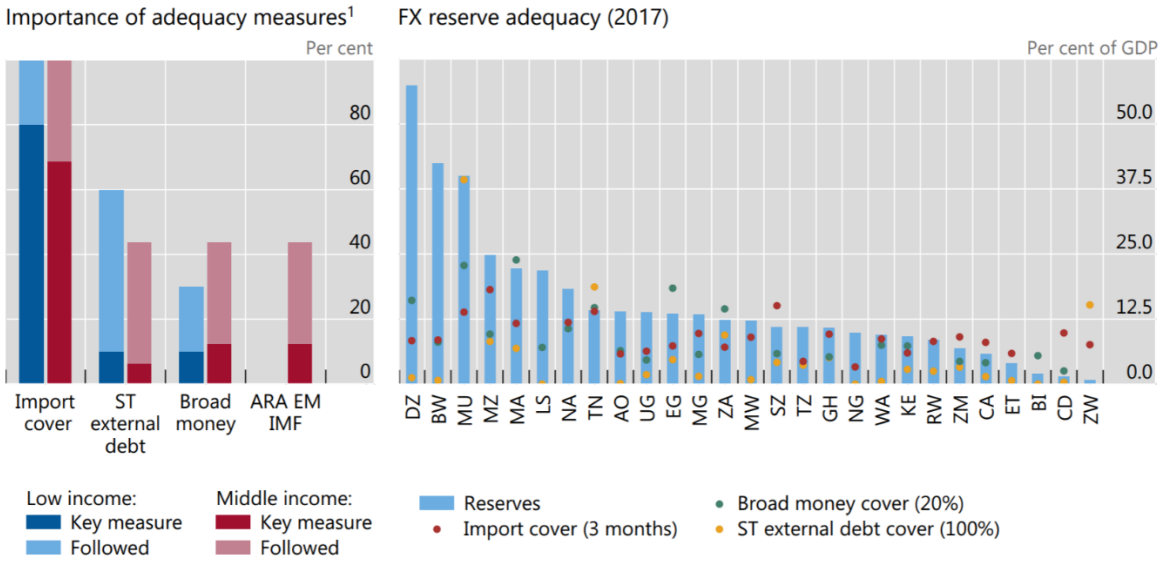

FIG 5. IMPORT ADEQUACY IS ESSENTIAL TO FINANCIAL STABILITY IN CEMAC COUNTRIES
Source: IMF, World Bank, BIS (2019b).
Note: Country Code: AO = Angola; BI = Burundi; BW = Botswana; CA = Bank of Central African States; CD = Democratic Republic of Congo; DZ = Algeria; EG = Egypt; GH = Ghana; KE = Kenya; LS = Lesotho; MA = Morocco; MG = Madagascar; MU = Mauritius; MW = Malawi; MZ = Mozambique; NA = Namibia; NG = Nigeria; RW = Rwanda; SZ = Eswatini; TN = Tunisia; TZ = Tanzania; UG = Uganda; WA = Central Bank of West African States; ZA = South Africa; ZM = Zambia; ZW = Zimbabwe.

Price stability is a key objective for most central banks in developing economies as a majority of said economies are dollarized due to the pricing of consumer goods in foreign currencies, invoiced in dollars. This has an impact on the domestic exchange rate (Schanz, 2019) and tends to increase the transmissions to inflation. Meanwhile, CEMAC member countries also hold FX reserves as an important part of self-insurance for short term debt, to support broad money and long term saving (Figure 5).

Due to the extent of pass-through from domestic exchange rates to inflation, countries such as those in the CEMAC tend to emphasize price stability as a salient reason for holding FX reserves. Admittedly, export competitiveness and financial stability are equally important in driving the FX reserve holdings (Graph 2; Figure 5).

Meanwhile, countries such as Algeria and Mauritius tend to favor broad money cover over import cover, given such economies have significantly larger banking sectors, with more diversified economies than those of the CEMAC region. For said commodity exporters, the central bank (BEAC) prioritizes import cover, broad money, and external debt cover respectively. It can, therefore, be argued that economies targeting broad money and import cover do so in an attempt to insulate inflation outcomes, reduce the risk of a currency crisis, and cover the external debt. Given the pass-through from the domestic exchange rate to inflation is greater for commodity exporters who are susceptible to uncertain commodity prices and capital

outflows. Meanwhile, broad money allows central banks in Algeria, Mauritius, Malawi, Egypt and South Africa to readily control money supply in the attainment of their mandated goals.

For commodity exporters, smoothing the impact of uncertain commodity prices and exports on fiscal revenues is equally an objective. The majority of export revenues in the CEMAC region derive from oil exports, as such falling commodity prices have an effect on both fiscal balances and the domestic exchange rate. Such was the case in 2014, where falling oil revenues and markedly lower oil prices caused the currency to fall by over 9% between 2014 and 2016. This culminated notable fall in oil prices, where Brent crude fell by 89% and a further 10% in 2015 and 2016. This significant correlation between oil prices and the domestic exchange rate has implications for inflation, hence the need to hold foreign reserves. Whilst some countries seek to smooth the impact of fluctuations of commodity prices, another goal of reserve holdings is alleviating FX market liquidity in normal times.

According to the BIS, the median share of FX turnover to GDP is 3%, far lower than 18% in non-African emerging markets (Figure 4). Rather than emphasize this metric, developing economies should seek to diversify reserve holdings and increase the value of foreign assets to at once bolster external revenues and lessen the impact of commodity-driven depreciation or sudden appreciations in the dollar exchange rate. This is especially the case as FX markets are overwhelmed by short term fluctuations in capital flows and trade-related payments. Meanwhile, IMF resources create an additional buffer, which countries like Kenya used in 201- despite not using this subsequently. This is useful even for CEMAC member countries with a soft peg to the Euro.

DEVALUATIONS ARE DRIVEN BY DOLLAR-CENTRIC RESERVES AND A WEAKER MACROECONOMIC BACKDROP

The 2008 financial crisis placed significant stress on external balances and FX reserves. Meanwhile, Cogneau and Collange (1998) find devaluations to be significantly negative for Cameroon and Ivory Coast. The increases in debt servicing cost, higher deficits and lower economic growth rates reduce the effectiveness of structural adjustment programs. In the context of devaluations, economic growth is contingent on external demand, which tends to be worryingly low following periods of macroeconomic stress.

The lacklustre recovery following the great financial crisis is a case in point. FX devaluation also reduces the value of FX reserves and place significant pressure on the domestic economy via greater demand for foreign currency. As such, they lessen their transmissions from monetary policy and cause sudden increases in inflation

outcomes. This is a credible rationale for policymakers to diversify reserve holding, ensure imports are cleared in non-dollar currencies whilst diversifying the economy to absorb said shock with profound domestic macroeconomic implications.

Rather than overemphasize the levels of reserves as a prudential tool that confers economic stability to CEMAC economies, there is an evident economic case to pursue FX reserve diversification. Such a process hinges on the private sector and market forces, but the use of reserves as a prudential tool suggests the need for targeted communication strategies to increase the value of Euros, Yen, and Renminbi, reflecting changes in trade dynamics.

Policy recommendations for financial stability and efficient reserve management

FX reserves are an important policy tool for financial stability and serve as an anchor for the economy during periods of macroeconomic stress. Incentives should be created for economic actors to invoice trade in non-U.S. trade in currencies other than the dollars. This comprises, but is not limited to, importers, exporters, and financial institutions. In doing so, demand for other currencies such as the EURO (CEMAC's largest partner) and China (second-biggest trading partner) will reduce financial stability risks. The value of the dollar is driven by growth and interest rate differential as well as economic policy uncertainty.

Meanwhile, CEMAC member countries are driven by commodity prices and global industrial activity. Secondly, it is important to view FX reserves as a prudential tool designed to reduce financial stability risks. As such, policymakers should understand the composition of capital inflows, to better design an FX strategy that will insulate CEMAC economies during oil price slumps and reduce the incidence of a liquidity-driven banking sector crisis. Furthermore, the new FX regulation should be enforced in a manner that prioritizes dividend payments that inevitably place downward pressure on the domestic exchange rate. An effective reserve management strategy should prioritize increases in FX reserve holding during dividend pay-outs to, at once, account for changes in the level of reserves and developments in the economy.

Such an outcome will ensure improve the transmissions of monetary policy and support the attainment of the inflation target. This is especially salient as the exchange rate facilitates the transmissions from prices in the real economy to inflation outcomes. Admittedly, market forces, rather than institution will determine changes in the level of reserve holdings; nevertheless, it is important to underscore the need to diversify reserves and incentivise a transition towards invoicing trade in currencies other than the dollar.

CONCLUSION

FX reserves are seen as an anchor to macroeconomic stability and can be termed "prudential" as they are designed to lessen liquidity and banking crises.

Nevertheless, there are noticeable changes in trade dynamics in the CEMAC Zone, with Europe and Central Asia emerging as the largest trading partner for countries in the region. Even so, the composition of reserves has not changed to reflect due to the invoicing bias of the U.S. dollar. This increases the cost of holding reserves, places downward pressure on the currency, and increases the risk of currency-induced crisis linked to the dollarization of the CEMAC financial system.

FX reserves support invoicing as well as foreign FX claims on domestic economic actors. While the value of the currency is determined by macroeconomic factors such as oil prices and economic growth, changes in the value of the currency influence the level of reserves. The exchange rate is an important channel for central banks and determines the effect of changes in policy rates on growth and inflation outcomes. Nevertheless, preliminary findings suggest that FX holing of U.S. dollars hurts the domestic exchange rate, hence the need to diversify FX holdings to reflect trade dynamics.

The literature has tended to emphasize the stabilizing nature of reserves, with very little done to understand the transmissions of reserves to the real economy and macroeconomic stability. During periods of stress, CEMAC countries experience huge capital outflows, which causes the currency to depreciate. This depreciation creates a negative feedback loop that reinforces capital flow reversals, causes inflation to rise, and increases debt servicing costs. A weaker currency reduces the value of reserves while a stronger currency is associated with increases in the level of reserves. As such, the currency appears to have a stronger effect on reserves during an upturn, while FX reserves appear to have a greater effect on the domestic economy and foreign exchange during a downturn.

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