

Transformative agenda for monetary and exchange rate policies

Africa's debt sustainability and appropriate policy responses



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* This technical paper was commissioned by the Finance and Private Sector Section, Macroeconomic Policy Division, Economic Commission for Africa (ECA) and was drafted by Njuguna Ndung'u, Associate Professor of economics at the University of Nairobi, a Visiting Fellow of Practice at the Blavatnik School of Government, Oxford University and former Governor of the Central Bank of Kenya. The paper was presented as a background note at the 2016 Caucus of Governors of Central Banks in Africa.



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Publications Section
Economic Commission for Africa
P.O. Box 3001
Addis Ababa, Ethiopia

Tel: +251 11 544-9900
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Executive summary

While Africa's growth story has been checkered and buffeted by exogenous and endogenous shocks, this has not discredited the Africa Rising narrative, but rather sharpened the policy focus and the ability to mitigate exogenous shocks. The response to these shocks has defined short-, medium- and long-term policies and the capacity of the economies to adjust. In most cases, short-run responses derailed the long-term policy path and robbed the economies of the capacity for future growth.

A new turn for economic management policies, shaped by the experiences of the global financial crisis, the challenges of commodity price decline, the demands for inclusive growth and sustainability issues has emerged. Topical policy issues that have also emerged include: the conduct of monetary policy, which relies on the exchange rate regime; development of an effective national payments system; commodity price volatility (managing booms and busts); the global economic slowdown; sustainability of development goals; domestic and external debt; and the wave of sovereign debt.

The clear position is that public investment in infrastructure that closes the infrastructure gap complements private investments. This is because public investment in infrastructure lowers transaction costs for firms, thereby enhancing their profitability. The increase in private investments will diversify economic activity and endogenous demand for inclusive growth. While these are all topical issues with practical policy relevance, they do not all fall within the remit of central bank governors, in their capacity as driver of policy and economic management.

Policy objectives of the paper

This technical paper raises the following question: What is the role of Central Banks in Africa's transformative agenda? The policy objectives of the paper focus on: evaluating short-term responses by African central banks

to macroeconomic volatility resulting from commodity price decline and other global shocks and aligning the responses with medium- and long-term development priorities and challenges. They should also propose some lessons, best policy practices and recommendations on how central banks can advance Africa's agenda for structural transformation.

To place the above objectives into perspective in terms of inclusive and transformative development, the paper focuses on the following five areas: policy directions for monetary and exchange rate policy in African economies; long-term debt sustainability in Africa; a bond market for long-term finance in Africa to support an infusion of infrastructure investment to close the infrastructure gap; building resilience in African economies; and a transformative financial system.

Some policy lessons

- The exchange rate regime, structure of markets, financial market development and legal frameworks determine policy directions for monetary and exchange rate policy in Africa. The exchange rate is an automatic stabilizer when policy space allows. In most African economies, however, the monetary policy transmission mechanism channels are weak; and in most cases, owing to the shallow financial markets, the burden of monetary policy transmission is via the exchange rate movements.
- The capacity for debt management and long-term debt sustainability is critical, while the efficiency of debt to finance physical infrastructure, open productive areas and diversified economies is limited. A combination of equity and public-private partnership repackaging of infrastructure projects is required. Strong institutions are also required to develop and protect the markets and enhance governance.

- The bond market, albeit yet to be discovered, should be developed. At the regional level, the bond market can be used to finance infrastructure projects and open up economies so as to facilitate trade. Infrastructure bonds targeting public infrastructure projects with competitive returns have provided a space for introducing a class of long-term bonds at the country and regional levels, targeting infrastructure firms with strong balance sheets or strong income streams to support future payoffs.
- While building resilience to manage external shocks in African economies is key to supporting economic management capacity, strong institutions are required.
- Central banks should support and develop a transformative financial system. There are viable options for efficient and effective digital financial services. The divide into a telecommunication-led or bank-led model debate is promoted by big commercial banks that have captured the regulator in most countries in Africa. In successful cases of digital financial services, the financial inclusion as a public policy has been supported by partnerships and investments on payment solutions between commercial banks and telecommunication companies supported by the central banks. It is the path to take to reach the frontiers of digital financial services pioneered by Kenya, followed by the United Republic of Tanzania.

I. Introduction

A round-table meeting of governors of central banks in Africa and governors and executive directors of multilateral and regional development banks was held on 3 April 2016 on the margins of the Conference of African Ministers of finance, planning and economic development of ECA. The theme of the round table was “Monetary and Exchange Rate Policy and Africa’s Debt Burden and Sustainability”. The meeting, which provided a platform for reflection on enhancing the effective engagement of African central bank governors with the continent’s development agenda, was geared to delivering clear outcomes and new ideas.

Over the past 16 years, African economies have been buffeted by exogenous and endogenous shocks. Their response to these shocks has not only defined short- and medium-term policy directions, but also their long-term abilities and capacities to adjust. In some instances, short-run responses may have robbed some economies of their long-term policy thrust and capacity for future defensive action and long-term growth. All in all, it is evident that economic management is taking a new turn in many African economies in the wake of an external environment that has barely recovered after the global financial crises. There has been ample debate in Africa on conducting monetary policy alongside managing exchange rate policy amidst the global economic slowdown, declining commodity prices and the need for debt sustainability. At the centre of the policy debate is the role that central banks play, first, in providing appropriate coping strategies for insulating economies against exogenous shocks and, secondly, in aligning their strategies to the African transformative policy agenda.

African economies have experienced a variety of challenges and opportunities concerning monetary and exchange rate policy, in response to exogenous and endogenous shocks. Policy

responses have been driven by the shocks themselves, and the degree of exposure and policy flexibility in economies. African central banks must successfully steer through the current twin policy minefields of a global economic slowdown and sustained commodity price slump, while keeping an eye on the looming threats of fiscal imbalance and fiscal policy dominance to monetary policy.

African central banks must also confront and overcome possible conflicts between adhering to inflation targeting regimes and intervening in foreign exchange markets, so as to optimally synchronize action and achieve desirable outcomes and provide stability in domestic prices. In some economies, the exchange rate is a major determinant of inflation and the pass-through effects on domestic prices that are sometimes more than unitary. In oil importing African economies, energy prices magnify the pass-through effect. For example, empirical work has shown that a 10 per cent depreciation leads to 20 per cent change in inflation in some African economies (Geda, 2013). Currency movements, however, have also succumbed to the growing current account deficit of the balance of payments as well as the dollar strengthening globally.

In addition, issues such as financial inclusion, the development of financial systems beyond banking, closing the (soft and hard) infrastructure gap, managing sovereign debt, addressing the shortage of finance for productive investments, ensuring intergenerational savings and facilitating regional integration by linking cross-border payment systems, are all concerns that African central banks must address as part of their countries’ developmental policy priorities. It is important that the choices that central banks make on monetary and exchange rate policies do not jeopardize the broader developmental agenda.

II. Policy menu for African central banks

A. Policy directions for monetary and exchange rate policy in Africa: challenges and opportunities

The responses of central banks to exogenous and endogenous shocks crucially depend on the need to discharge their core mandate, which is essentially to fight inflation, based on the tenet that low and predictable inflation is good for economic growth and promotes macroeconomic stability. Stability implies that prices and the exchange rate are predictable. In addition, the economy's degree of exposure and the availability of policy flexibility afforded by the type of the exchange rate regime a country has adopted are also important determinants of the approach a central bank will employ in the face of exogenous and endogenous shocks.

In the policy arena, the African central banker has to contend with the added dimension of the global economic slowdown, with its attendant prolonged period of unconventional monetary policy in developed economies. Again, the African central banker is faced primarily with the challenge of conducting monetary policy in the presence of supply shocks and declining commodity prices, and also building foreign exchange reserve buffers to protect the economy and engineer the optimal use of those foreign exchange reserve buffers to cushion volatility from perceived transitory exogenous shocks on domestic currency values and the foreign exchange market.

In most African economies, the primary objectives of the central bank can be summarized as follows:

- a) Manage inflation, either by way of an explicitly targeted rate for those countries that have undertaken inflation targeting, or implicitly, whereby a medium-term price target is announced by the ministry of finance at the start of each fiscal year;
- b) Minimize the output gap around the “potential” or trend level of gross domestic product (GDP) growth;
- c) Minimize exchange rate deviations from the level implied by medium-term fundamentals.

The question may be asked if this should be the general policy setting for a typical central bank in the African context. Needless to say, the central banker would be walking a tight rope. In the midst of negative shocks, the central banker must tolerate a slightly more depreciated currency. However, in the case of positive shocks, the tendency will be to tolerate a more appreciated nominal exchange rate. Most African economies buffeted by exogenous and domestic shocks lack the full policy credibility that comes with successful and prolonged periods of price stability. Credibility is usually short lived when exchange rate volatility dominates and domestic prices mimic exchange rate movements. In addition, supply shocks – usually food and energy prices – will drive domestic inflation together with exchange rate pass-through effects.

The African central banker will need to consider:

- a) The best approaches to take in order to avoid a potential conflict between price stability and exchange rate objectives;
- b) Under what conditions inflation targeting might prove useful or when it needs to be abandoned without costly policy reversal or erosion of policy credibility;
- c) The best policies for simultaneously managing domestic prices, the exchange rate and capital controls.

B. Major challenges in Africa today

- a) Global economic slowdown and commodity prices: managing booms and busts;
- b) Fiscal imbalance and fiscal dominance of monetary policy following commodity price bursts;
- c) Inflation driven by domestic supply conditions and exchange rate pass-through effects;
- d) Level of economic activity/economic growth cannot generate employment and fight poverty sustainably.

C. What are the plausible solutions?

Monetary policy alone cannot produce macroeconomic stability. It has its own challenges, which rely on the exchange rate policy or regime, the available instruments and the type of shocks hitting the economy. Monetary policy signals and transmission channels are weak. To achieve macroeconomic stability, African economies must first develop an inclusive financial sector and other institutions that support market development in several sectors and appropriate market structures. Also, they must develop capacity for policy analysts and institutionalize policy analysis. The familiar story is that exogenous shocks hit on domestic prices, causing supply-driven and demand-pressure inflation. Monetary policy, then, must be crucial for the core mandate of price stability and the exchange rate regime of the country. We contend with three major issues:

- a) Monetary policy in the presence of supply shocks is weak, while declining commodity prices imply that foreign exchange flows will dwindle and current account deficit will increase, signaling exchange rate depreciation;
- b) Building foreign exchange buffers to smoothen volatility in exchange rate with persistent transitory shocks. In this case, the foreign exchange reserves are an indirect instrument of monetary policy;

- c) Optimal use of foreign exchange reserve buffers to smoothen out volatility in the exchange rate for transitory shocks. With regard to permanent shocks, the exchange rate could be said to be the automatic stabilizer, which signals relative price changes. In case of non-tradable price movements, this provides the link to the real exchange rate movements, which is a signal for the competitiveness of the economy.

In general, the independence of monetary policy depends on two major caveats - the operational independence of central banks and the exchange rate policy regime.

The three major channels utilized for implementing monetary policy in African economies are: the credit channel, by influencing the creation of private sector credit through open market operations; the interest rate, by influencing the borrowing rates for the private sector and adjusting the interest (policy) rate at which commercial banks can borrow from the central bank; and the exchange rate, where the central banks intervene in the foreign exchange market in an effort to stabilize the exchange rate.

In open market operations for instance, buying and selling of government securities require a domestic bond market that can support substantial trading of securities. A vibrant bond market will also lengthen the maturity profiles of those debt instruments. If a bond market does not exist, then the central bank has to resort to adjusting its policy interest rate, hoping to influence lending by commercial banks to the private sector. Such hope is based on the assumption that commercial bank credit plays a substantial role in financing private investment. The effectiveness of monetary policy, therefore, relies on a viable domestic market for trading public securities and a commercial banking sector willing and able to lend to the private sector. With the exception of South Africa, however, no country in the sub-Saharan Africa region has these prerequisites.

The monetary policy issue, the choice of instruments, the operating environment and the supporting market infrastructure complicate the debate for a country-specific case rather than a general policy prescription. According to Weeks (2010), in over one-third of the economies in Africa, monetary policy is irrelevant because they share a common currency and have no national central banks, but rather a common central bank such as the West African Economic and Monetary Union, which has eight member countries and the Central African Economic and Monetary Community, which has seven. All 14 countries use the CFA franc. In Southern Africa, Lesotho, Namibia and Swaziland are members of the Common Monetary Area, which ties their currencies to the South African Rand. Sixteen other economies do not issue public bonds or have a domestic market for securities. Eleven other countries have domestic markets for public bonds, but these markets are extremely shallow. The main impact of the central banks raising bond interest rates will be to induce commercial banks to substitute loans with bonds. This would have two undesirable consequences. First, commercial banks will rush to these government securities that are relatively risk free, relegating the capacity and the technology for assessing new and potential borrowers to the background. Secondly, since most of these securities also form the commercial banks' bulk of liquid assets and also count for liquidity purposes, the price of the securities form the floor of risk-free assets. The net effect is disintermediation, with the credit and interest rate channels for monetary policy severely weakening.

In addition, if the yields on public securities are low, central banks have to offer a high yield to convince commercial banks to hold government bonds. Since such bonds are almost risk-free, commercial banks are much more inclined to hold them as assets than riskier loans to non-financial businesses. These bond yields, thus, form the floor of risk-free assets, while any other financial asset is evaluated at the margin from this floor. A distortion in the credit market thus emerges. This explains the reluctance in lending

by commercial banks, in addition to expectations of a weakening exchange rate or a perception of inflationary pressures (or both). In such an event, the central bank would most likely increase the interest rate on government bonds. It is therefore better to hedge than to lend. Likewise, with the domestic debt burden, contracted with short-term instruments, if the central bank pursues a single-digit inflation target at the same time (that is, conduct a tight monetary policy), the economy would be plunged into a protracted recession. This was witnessed in several African economies from 1995 to 2002 (Buffie and others, 2003).

In this setup, policy for inflation-retarding high real rates of interest ends up reinforcing the diversion of public funds into debt servicing, with the main beneficiaries being a few large and powerful domestic commercial banks, which grant less credit to private sector. In addition, this violates the debt management rule that the real interest rate on public debt should not exceed the real growth rate of the economy. As a result of such a fiscal burden, the country's rate of economic growth is unnecessarily constrained, without having achieved any mitigating benefits from lowering inflation and maintaining a competitive exchange rate. In an environment of weakening growth in key trading partner countries such as China, lower commodity prices and potentially challenging global liquidity conditions, exchange rates will remain under pressure. This, however, does not need to be a negative development. Provided external debt remains moderate, depreciated exchange rate will act as an automatic stabilizer against an external demand and/or terms of trade shock. It is, nevertheless, the responsibility of central banks to ensure that such depreciation does not result in a lasting price spike or unanchoring of inflation expectations. This, however, is a risk in Africa, where a large share of consumer goods is imported, especially at a time when food prices - a large portion of the consumer price index basket in many regional economies - are increasingly sensitive to global rather than domestic developments. Indeed, the pass-through effect is high.

III. Implications for Africa's debt burden and long-term debt sustainability

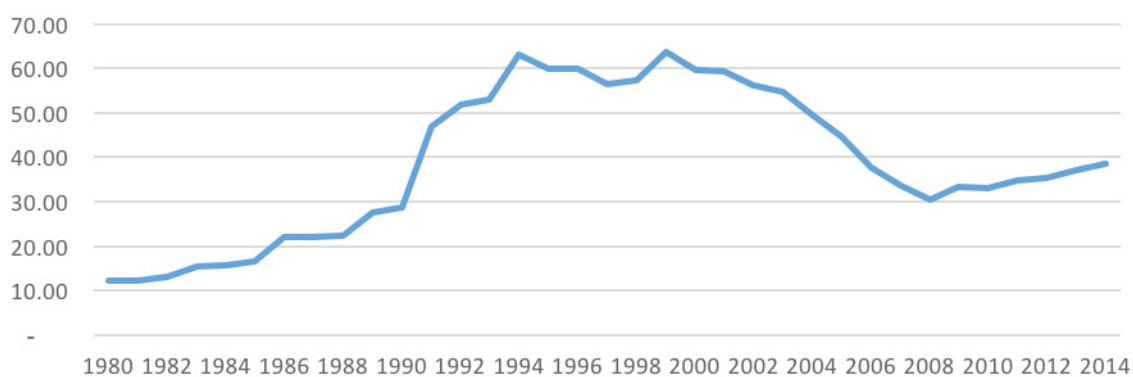
African economies, such as Angola, Nigeria and Zambia, which are highly dependent on commodity exports, have recently registered lower export revenues and low growth, fiscal imbalances, current account deficits and a rise in the ratio of public debt to GDP (see figure 1). Indeed, most African countries have exhibited an increase in that ratio since 2008, with the exception of a few, such as Côte d'Ivoire, whose ratio shrunk by nearly half, from 63 per cent to 34 per cent between 2010 and 2015 and the Democratic Republic of the Congo, where the ratio decreased from 27 per cent to 22 per cent over the same period. Part of the rise in debt levels for most countries has been necessitated by the demands for infrastructure financing. The removal of quantitative easing in most advanced economies has also seen the return of expensive finance, but also increasingly, African economies have entered the international capital markets with sovereign bond instruments, with remarkable success. Ghana, Kenya, Nigeria, Rwanda and Zambia are recent examples that have floated sovereign bonds with competitive spreads in recent years.

Both monetary and exchange rate policies should be used creatively to allow African countries

to generate the large volume of development finance required for the continent's structural transformation. These include external borrowing, quality skills development, improved agricultural productivity, infrastructure, industrialization and enhanced regional integration and investment. Additionally, accountable and transparent public finance management should be in place to ensure that external debt finance is channelled to development projects with long-term social and economic returns. Also, countries need good debt-sustainability frameworks.

It is clear from the figure above that since the Monterrey Consensus of the International Conference on Financing for Development, total public debt as a percentage of GDP has declined in Africa, particularly in the period from 2002 to 2008, because of debt relief, sustained GDP growth and economic size expansion induced by GDP rebasing. Despite a declining trend in total foreign debt, the share of net foreign debt in some countries is not negligible. Mineral-rich and oil-importing countries in particular have positive net foreign debt.

Figure 1: Africa's public debt, as a percentage of GDP



Africa's public investment, driven by the growth momentum, has fuelled a growing sovereign debt appetite. Hence, fast growing economies in Africa are moving towards market-based loans by issuing sovereign bonds in addition to getting concessional loans. Accountability, effective use of borrowed funds and fiscal discipline will help to avoid any potential debt problem. Oversubscriptions and favourable international terms of Africa's sovereign bonds have shown that the continent has gained the attention of international investors, which has in turn opened up its borrowing space. Countries run the risk of having enormous debt problems if current commodity price headwinds continue. Such trends require effective central bank oversight on government borrowing, including the use of open market operations.

African sovereign debt losses may reach 10.8 billion United States dollars, which is equivalent to 1.1 per cent of the region's GDP (Ndung'u, 2012). Sovereign debt is a riskier option for investment even if it has better terms relative to concessional loans. Changes in macroeconomic fundamentals such as terms of trade (e.g. due to commodity price collapse) can affect sovereign debt spread significantly. The existing arrangements are driven by laws in advanced and powerful economies. In this regard, a global framework on sovereign debt restructuring is essential.

In the light of the above, debt sustainability requires sound fiscal policies and debt management that emphasizes on growth. For countries with borrowing space, this includes borrowing for growth-enhancing outlays. However, the interest-growth differential is subject to shocks. While growth prospects for Africa are promising, the real interest could be rising in the future. While the International Monetary Fund had proposed the sovereign debt restructuring mechanism more than a decade ago, there is still no international agreement. There is general consensus that existing rules are too creditor-friendly. Equally, a push for an international agreement that is too borrower-friendly might not be the way forward. Any global agreement reached, therefore, should strike the right balance and show fairness to both sides.

In the long run, it is not just the volume and the terms on which countries borrow that determine debt sustainability, but what they borrow for. Unsustainable debt levels might be an outcome of poor macroeconomic management and a feature of a structural economic malfunction. Most countries in Africa have benefited from initiatives such as the Heavily Indebted Poor Countries initiative and the Multilateral Debt Relief Initiative, which were made possible by sensible policies pursued by beneficiaries. Continuing sound macroeconomic management in addition to sustained growth is thus critical for debt sustainability. Moreover, resource-poor countries do not have the advantage of tapping savings accumulated from the commodity price boom and thus rely on sovereign borrowing. Debt sustainability, therefore, is crucial for them. African Governments and their partners need to consider the following:

- a) Appropriate countercyclical fiscal and monetary policies, an optimum mix of long-term bonds issued in local and foreign currencies with the aim of reducing exposure to the risks of currency volatility and appropriate mechanisms by central banks, for managing national capital reserves to ensure appropriate import cover and debt servicing;
- b) Mechanisms for creditors to share responsibility with the sovereign debtor to resolve potential future debt crises, the establishment of a multilateral legal framework for sovereign debt restructuring that ensures the stability of the international financial architecture and delinking potential future debt relief from aid allocations by donors.

While the above provide an institutional framework of debt management to ensure sustainability, equally important is building capacity for analysing debt sustainability. How should debt sustainability be analysed? There are several theoretical models that have been formulated (see Ndung'u 2004, 2012). Most of these models require restrictive assumptions regarding the behaviour of macroeconomic variables. Some of these approaches have been used separately on

domestic debt, others on external debt, but can be generalized to include total public debt and contingent liabilities. One approach considers the public sector networth by analysing the present values of future government revenues and expenditures. This forward approach is then used to measure the public sector solvency and the required fiscal adjustment needed to service the public debt. Another approach uses an overlapping generations model with uncertainties about government deficit by assigning probability distribution to government action and public reactions. It shows that when the government enters the debt trap, a vicious circle ensues. This has been the experience of most sub-Saharan countries in the 1980s and 1990s. Yet another approach uses behavioural equations for output growth and private investment and an identity for fiscal policy consistency. This approach uses normative closure rules where a target growth rate of output is fixed, debt is kept at a fixed level and the model solved for debt and fiscal deficit indicators are consistent with this target growth rate as well as assumptions about relative prices, inflation and external shocks.

A more plausible approach in literature borrows from the standard model of internal and external balance. In this approach, fiscal policy maintains internal balance, where the objective is to maintain low (acceptable) inflation. Monetary policy maintains external balance, where the objective is to maintain an acceptable level of reserves. In this approach, debt sustainability is an integral element of macroeconomic stability. The interactions of policy variables, outcome variables and international economic conditions jointly determine whether or not a country is on a sustainable debt path. Lastly, a more simplified framework used to develop debt indicators considers whether fiscal policy would result in a stable debt to GDP ratio. This framework shows that the debt situation will become explosive when fiscal deficits are unsustainable. This framework is more plausible for some sub-Saharan African countries where accumulated fiscal deficits have led to unsustainable levels of both domestic and external debt. It may be

appropriate to give the gist of this framework briefly because it is applicable to a combination of the domestic and external debt. This framework involves formulating a plausible set of scenarios and projections of the economic environment for government budget. The most important components are: projecting the future tax and expenditure pattern; projecting the inflation and interest rates; projecting the economic growth rate; and projecting the availability of the external resources and credit-worthiness of a country.

Debt sustainability, however, has its limitations, in that projection calculations are sensitive to exogenous variables, especially external shocks that hit the economy from time to time. For example, the balance of payments position of most African economies crucially depends on the behaviour of commodity prices. The sustainability of public debt (domestic and external) addresses the issue of whether or not a government can operate under its current fiscal policy without creating a rapidly growing debt to GDP ratio. Since governments face borrowing constraints, it is expected that those which operate in dynamically efficient economies balance their budgets intertemporally by setting the current market value of debt equal to the discounted sum of expected future surpluses. A violation of the intertemporal budget balance would indicate that the fiscal policy cannot be sustained forever because the value of the debt would explode faster than the growth of the economy. This framework thus defines a sustainable fiscal policy as one that would cause discounted value of debt to go to zero at the limit that the present-value borrowing constraint would hold. This proposition is empirically testable, and critical values can be generated to signal when sustainable levels are reached or surpassed.

IV. Building resilience to manage external shocks in African economies

African policymakers often ask how African economies can build internal and external resilience to better navigate shocks. Only aftershocks have been seen to occur, however, making adjustments more difficult. What is truly required to build resilience is a set of short- and medium-term policies, all of which are consistent with longer-term economic growth and development strategies. This implies that policy interventions by the central bank must be anchored by a long-term vision.

When faced with external shocks, the typical reaction from African policymakers is to reduce the long-term development budget and protect or ring-fence recurrent expenditures. However, this robs most African economies of their capacity for growth and ability to manage future shocks. Instead, in the very short term, managing shocks requires buffers at four levels:

- The first level should comprise foreign exchange reserves that are accumulated in good times, including International Monetary Fund (IMF) balance of payments support. These foreign exchange reserves can shelter the market from wild swings in domestic currencies and support smooth adjustments in the face of current account deterioration or external price shocks.
- The second should be a buffer of strategic food reserves. In times of drought and potential famine, these food reserves help countries to maintain food security and mitigate pressures on the fiscal reserves as well as cushion wild swings in domestic food prices-inflation drivers.
- The third should be a buffer of oil reserves for oil-importing countries. During rising fuel

prices, inflationary pressures on domestic prices are amplified by the exchange rate pass-through effects and can be further exacerbated by the need to power generators for electricity.

- Lastly, countries dependent on commodity prices should create a fund for smoothing out commodity price cycles or swings. The whole literature on booms and bursts has much relevance here. Most African economies lack such a buffer, which is why commodity price changes are often accompanied by economic crises. Rushing to create a wealth fund is also inappropriate; a stabilization fund should be the intermediate step and a wealth fund at the very end.

With regard to foreign exchange buffers, it is interesting that since the global financial crisis, developing and emerging economies have been supported by the foreign exchange reserves they had accumulated. This is interesting because in theory, it is believed that once a country has a floating exchange rate and an open capital account, it does not need to accumulate foreign exchange reserves. Countries, however, do accumulate foreign exchange reserves to protect the market and also to create buffers for balance of payments constraints. Even in the case of countries with a floating exchange rate and open capital account, the accumulation of the balance of trade current account deficit would signal abrupt exchange rate depreciation, which could be disruptive and destroy the planning horizon of firms and governments. For this reason, foreign exchange reserve buffers are required to smoothen out exchange rate adjustments. How are these foreign exchange reserve buffers measured? In most countries, this is usually in the form of months of import covers. Some

countries and regions have a rule of thumb in terms of the number of months of import cover (in the East African Community, the convergence criteria define six months of import cover as the appropriate level).

The accumulation of foreign exchange reserves (forex) in African economies follows natural resource endowments but not necessarily the risks faced, at least for high accumulators. Table 1 below shows the current levels of foreign reserves accumulation and arbitrarily divides the countries into top, middle and low forex accumulators.

This table provides the latest data on foreign exchange reserves, as a snapshot of the level of country holdings. In some countries, foreign exchange reserve levels are measured in terms of months of import cover. This is more as a rule of thumb than a clear quantity measure. For

example, in East African Community countries, the convergence criteria agreed requires that countries accumulate foreign exchange reserves equivalent to six months of import cover. From this table, there is no uniformity in terms of how to quantify the appropriate forex buffers. In fact, the historical data on each country, that is, the trend of foreign exchange reserves accumulation and movement across time, depict an even more confusing picture, making it difficult to draw any meaningful conclusions. From this table, however, some of the countries endowed with natural resource wealth are also the high foreign exchange reserve accumulators. In addition, poorer and fragile countries have the lowest levels of forex accumulation and paradoxically, they need them the most. It is also coincidental that relatively resource-rich but fragile countries have low reserve accumulation.

Table 1: Foreign exchange reserves accumulation, 2015 – 2016 (US\$ billion)

Top forex accumulators		Middle forex accumulators		Low forex accumulators	
Algeria	\$155.7	Botswana	\$8.0	Equatorial Guinea	\$1.9
Libya	\$61.6	Kenya	\$7.4	Gabon	\$1.8
South Africa	\$45.1	Tunisia	\$6.7	DR Congo	\$1.4
Nigeria	\$27.9	Ghana	\$5.6	Niger	\$1.2
Morocco	\$23.5	Côte d'Ivoire	\$4.9	Rwanda	\$1.1
Angola	\$18.5	The Congo	\$4.4	Lesotho	\$1.0
Egypt	\$17.1	Mauritius	\$4.3	Mauritania	\$0.97
		Tanzania	\$4.02	Madagascar	\$0.96
		Uganda	\$3.7	Mali	\$0.86
		Ethiopia	\$3.6	Benin	\$0.81
		Zambia	\$2.7	Malawi	\$0.74
		Mozambique	\$2.5	Sierra Leone	\$0.60
		Cameroon	\$2.5	Swaziland	\$0.57
				Seychelles	\$0.54
				Togo	\$0.49
				Liberia	\$0.49

An important empirical question would be whether or not the countries with a floating exchange rate regime and open capital account should have more forex accumulation. This is because forex accumulation for them is more functional – it is an indirect instrument of monetary policy and also an essential signalling device to the private sector that the volatility in the foreign exchange market will be smoothed out and also any forex crisis will have been resolved, because the central bank has adequate forex cover. This would be interesting, especially for countries with low forex reserve levels and undiversified export markets. That, however, is beyond the scope of this paper.

Turning to medium- and long-term policy solutions to external shocks, it is important to first consider recent trends in economic performance and resilience within African countries. Over the past 15 years, throughout the period of the Millennium Development Goals, African economies have experienced stronger growth, driven by improvements in institutional capacity, an environment of policy clarity, a strong move towards political accountability, and above all, the development and implementation of long-term growth strategies or visions. Strategic country-level visions have, for the most part, emphasized public investments to close the infrastructure gap, lower transaction costs and unlock productive areas for private investments. Public investments will then encourage complementary private investments while at the same time enhance the profitability of existing and future private investments through the channel of lowering transaction costs. The focus for the future then should be to sustain these trends and ensure that public investments are protected, to enable them to lay the groundwork and capacity for future growth and economic diversification.

More importantly, changing demographic dynamics will have a significant effect on African economies in the years to come. A large African middle class is emerging, estimated in 2010 to be nearly 350 million people (larger than the population of the United States). This middle class is a class of innovators, policymakers and leaders. Indeed, managing short-run shocks

and protecting public investments for future growth will potentially become a reality once this group is drawn into the spheres of policy and economic management. In the past, most African economies have suffered from the fact that there were too few incentives to advocate for public investments oriented towards future growth, due to the delayed onset of benefits from these policies. To ensure follow-through on public investments, countries could also enter into regional arrangements where strong pressure groups will provide additional political accountability. These are the policy packages and domestic internal coordination processes that will help African economies overcome some of the simmering effects of the global financial crisis and the threat of declining growth from the slow down in emerging markets, not to mention the general downturn in global growth, compounded by the growth decline in China. Western Europe is still in recession. The unemployment problem requires structural transformation. Lastly, exogenous price shocks and weather patterns in Africa are a major risk to driving policies in the future.

African economies must therefore build resilience from a set of policy objectives, strengthen institutions that will protect and regulate markets as well as ensure strong economic governance and finally build appropriate buffers to protect the markets. In the light of these experiences, the African central banker must consider what buffers might be needed and be in place to manage shocks in the short term; these include foreign exchange reserves and stabilization funds. The remedial actions that might be necessary, in the light of medium- and long-term shocks, include making the necessary public investments to close the infrastructure gap and address changing country demographic profiles, boosting private investments with a view to accelerating industrialization and enhancing the profitability of existing and future private investments and facilitating regional integration.

V. Role of central banks in creating a transformative financial system

A transformative financial system is one that not only ensures that sufficient capital is channelled to the productive sector, but also facilitates financial inclusion or accessibility to the financial system. The primary points of entry into the financial system for the majority of the population in Africa are banking and payment services, which, in turn, facilitate the accumulation of savings and access to credit. Financial inclusion is now recognized as an important policy goal for sustainable poverty reduction, and is consistent with inclusive growth in Africa.

Financial inclusion in Africa has been shaped and supported by developments in the mobile telephony platforms for financial services. It will be important, not only to push the innovation frontier, but also see how this revolution could be consolidated to support a financial revolution in the development of financial systems in Africa. The development of financial systems and the attendant financial infrastructure through innovations in technology must be primarily driven by central banks in Africa, through their regulation of commercial banks and other deposit-taking institutions.

The African central banker should consider and take proactive action to adopt the digital financial services evolution and use banking regulations to facilitate the financial technological revolution. The efficiency and flexibility implications of financial technology revolutions and enhanced financial inclusion for monetary policy are already evident in some countries in the East African region, where financial inclusion has been shaped and supported by developments in the mobile phone-based technological platform for financial services. Within the Alliance for Financial Inclusion network, which covers Africa, Asia and Latin America, for example, support through the Digital Financial Services (DFS) Working Group

has helped shape policy, the required guidelines and the regulatory capacity. This implies that African countries need not reinvent the wheel. In a very dynamic and evolving way, the digital financial services in Kenya, the United Republic of Tanzania and other countries in the region have been able to roll out a menu of financial services and products, captured the market and raised the financial inclusion profile. It is therefore important, not only to discover where the frontier is, but also to show how this revolution can be consolidated to support a financial inclusion revolution for financial development in Africa.

This policy profile must first be driven by central banks in Africa. The central banks regulate banks and deposit-taking institutions and the accompanying financial infrastructure. The success cases have created the necessary demonstration effects and shared their policy platform as well as guidelines to regulate the emerging payments revolution. Digital financial services have been evolving and fostering innovation. They have also benefited from a receptive market. The following four generations can be used to map out and showcase Africa's mobile banking revolution and promote its replication and consolidation across all countries, in an effort to develop a transformative financial system:

- First generation - where the mobile phone technological platform was used for payments and settlements (M-Pesa type of products). This generation revolutionized a rudimentary payments system. Banks, microfinance and savings and credit cooperatives have embraced the M-Pesa-type payment products. The success is there to be seen today. For example, in Kenya, transactions with this mobile phone-based payments and settlements system stands at 4.5 per cent of annualized GDP per day.

- Second generation – where virtual savings accounts attracting interest rates have been developed, using the same mobile phone technological platform. It is a virtual banking service, where it costs nothing to transfer from the M-Pesa-type platform to a savings account. These platforms include M-Shwari in Kenya and M-Pawa in the United Republic of Tanzania. This means that the digital financial services have started to impact on the banking intermediation process, increasing the participants in the market and allowing the unbanked to be banked. With large deposits and a huge number of micro-savers, this has given commercial banks and microfinance banks the capacity to grow. Strong domestic banks have emerged as major shock-resistant platforms for channelling savings to investment.
- Third generation - where transactions and savings data are used to generate credit scores to serve as the basis to evaluate and price microcredit. These are the celebrated M-Shwari-type products, such as KCB-Pesa in Kenya and M-Pawa in the United Republic of Tanzania. The ability to change the collateral technology has been a major barrier to affordable credit and financial sector growth in many African countries.
- Fourth generation - cross-border and international remittance system based on the mobile phone financial services technological platform. Countries like Kenya and the United Republic of Tanzania have developed and shared money remittance guidelines with other countries. The immediate impact in Kenya was the transformation of the informal Hawala money transfer system into formal money remittance companies. This helped to improve the regulatory Anti-Money Laundering and Combating Financing of Terrorism system.
- These four generations of the evolution of digital financial services are what have made Kenya and the United Republic of Tanzania successful in the financial inclusion policy. The evolution of DFS is what can be used to consolidate a mobile phone-based banking and payments revolution in African economies. In some countries, the argument has been whether to adopt a telecommunications-led or bank-led model in the DFS evolution. This line of argument somewhat misses the point because the objective is to foster financial inclusion and bring the unbanked to the formal financial system. Banks all over Africa used to erect stiff barriers to market entry; and now technology has allowed them to dismantle those barriers as it is much easier to utilize the excess technological capacity the telecommunication companies have created in most African economies. This calls for partnership between willing commercial banks and telecommunication companies, and mobile network operators. In other cases, willing banks and mobile network operators have created a mobile virtual network operator. In addition, financial inclusion has improved the environment for monetary policy. Currency outside the banking sector decreased, while it increased within the banks. Velocity also declined, reflecting less cash changing hands, as a “cash-lite” system emerged and started developing into a cashless one. More importantly, however, we have an effective, efficient and even transparent national payments system. Monetary policy instruments do have an operating environment. Lastly, the poor can now save and borrow to build their capital base, thereby escaping cycles of poverty. Central banks should take the lead in Africa on financial inclusion, using the DFS and developing a transformative financial system. They should not be captured by big commercial banks protecting their market share and arguing for a bank-led model of DFS.

VI. Developing bond markets for long-term finance in Africa

Central banks are well placed to leverage the positive outcomes of sound macroeconomic management and economic growth in Africa that will drive policies for structural transformation and inclusive growth by creating the environment for developing markets for long-term finance. In most African economies that have posted robust economic performance in the past 15 years, it can be observed that strong central banks have driven financial sector vibrancy and stability and sown seeds for financial development. The African central banker needs to consider the role of the central bank in:

- a) Fostering the development of long-term capital markets and the establishment of national development banks;
- b) Ensuring that public investments can be financed without accumulating unsustainable debt levels.

Higher sustained growth in African economies, however, will rely on a heavy infusion of public investments at the national and regional levels. The next frontier is how these investments can be financed without accumulating unsustainable debt levels. The long-term finance needed to allow a roll out of long-term public investments is lacking. What viable and feasible options are available?

- a) The sovereign bonds avenue has recently become an important source of medium-term financing. This has allowed African economies to enter the international capital market, and competitive spreads, which rely on the use of the proceeds, have been witnessed;
- b) Domestic bond markets have worked but are limited, and where they are developing, have relied on government securities. This implies that they drive the domestic interest

rate structure where the price of government securities forms the floor of risk-free assets. In this case, the private sector has shied away from establishing a market for private sector debt. These bond markets, then seem to be too small, but can be regionalized;

- c) The private sector has also shied away from establishing a market for private sector long-term debt. In countries with an adequate profile of regional integration, these bond markets can be regionalized to become large markets. Indeed, a captive market is waiting to be discovered;
- d) In a successful infrastructure bonds programme in Kenya, there has been a combination of scarcity, value/price discovery and transparency in pricing. In order to address this, bond indexing and domestic bond reforms are required. Strategic directions and interventions are also necessary for building a long-term finance market with a regional outlook, to fund long-term projects and regional public goods. The Kenyan infrastructure bond initiative is a good example to start with. What would make infrastructure bonds successful? Unlike conventional bonds, infrastructure bonds target specific projects with potential for reliable income streams and great economic value. Public or private companies with bias towards infrastructure and with a healthy balance sheet should also be targets for increasing the variety of bonds. In addition, these financed projects should have the following features:
 - i. They should be national in scope. A geographical distribution of the projects around the country is important;

- ii. They should be factored into the annual budget estimates of the Government, to ensure transparency;
- iii. They may be used, at the regional level, to finance projects that cut across countries. They can also be sold at the regional or individual country securities market. The initial offer and secondary trading in Kenya has been encouraging and foreign participation quite evident. This can easily be replicated at the regional level;
- iv. Lastly, they should have the leeway to allow future income streams to be captured, to help the governments repay loans. These income streams could be a toll road, a port or a transit airport. This would help avoid public debt over-accumulation.

VII. Policy conclusions

- The policy directions for monetary and exchange rate policy in Africa relies on the exchange rate regime, the structure of markets, financial market development and legal frameworks. The exchange rate is an automatic stabilizer when policy allows. In a floating exchange rate regime, there is room for an independent monetary policy and the exchange rate is an automatic stabilizer. The transmission mechanism channels of monetary policy in African economies are weak and in most cases, due to the shallow financial markets, the burden of monetary policy transmission is via the exchange rate.
- Capacity for debt management and long-term debt sustainability is critical. Debt cannot efficiently finance physical infrastructure, open productive areas and diversify economies. A combination of equity and public-private partnership repackaging of infrastructure projects is required. There should also be strong institutions to develop and protect the markets and enhance governance, for this to work efficiently.
- Development of bond markets is critical for long-term finance in Africa, which is a market waiting to be discovered. This can work well at the regional level to finance regional infrastructure, but requires innovative methods that will also deepen the bond markets in African economies.
- Building resilience to manage external shocks in African economies is important and will support economic management capacity, although strong institutions are required.
- Central banks should support and develop a transformative financial system. There are available viable options for efficient and effective digital financial services. Telecommunications-led or bank-led model debates are promoted by big commercial banks that have captured the regulator in most countries in Africa. In successful cases of digital finance, financial inclusion as a public policy has been supported by partnerships and investments on payment solutions between commercial banks and telecommunication companies, supported by the central banks. It is the path to take to reach the digital financial services frontiers pioneered by Kenya, followed by the United Republic of Tanzania.

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