

Ncube, Mthuli; Brixiová, Zuzana

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Public debt sustainability in Africa: Building resilience and challenges ahead

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Building Resilience and Challenges Ahead**

Mthuli Ncube
Zuzana Brixiová

May 2015

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Mthuli Ncube

University of Oxford

Zuzana Brixiová

*African Development Bank,
University of Cape Town and IZA*

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

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ABSTRACT

Public Debt Sustainability in Africa: Building Resilience and Challenges Ahead¹

The increased access of African countries to international capital markets has put public debt sustainability once again high on the continent's policy agenda. Utilizing the 'stabilizing primary balance' approach, we find that the primary balances exceeded those required to keep public debt at the 2007 level in about half of the countries studied. In several cases with high debt burdens, the balances were above those needed to reduce public debt-to-GDP to sustainable thresholds. In most countries the main driver of sustainability has been the interest rate – growth differential (IRGD), underscoring the importance of supporting growth and utilizing the borrowing space for growth-enhancing outlays. Fiscal policies will need to play a greater role in maintaining debt sustainability in the future, especially since the IRGDs are likely to narrow over the longer term. The recent developments such as the fall of the commodity prices and uneven global growth underscore the need for sound macroeconomic and risk management.

JEL Classification: H6, E6, O23

Keywords: public debt, sovereign bonds, interest-growth differential, primary balance, Africa

Corresponding author:

Zuzana Brixiová
African Development Bank Group
Immeuble CCIA
Avenue Jean-Paul II
01 BP 1387
Abidjan 01
Côte d'Ivoire
E-mail: z.brixiova@afdb.org

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I. Introduction

Shortly after being impacted by the global financial crisis in 2009, Africa staged a robust recovery. Currently (mid-2015), it is one of the fastest growing world regions.² The continent's performance is projected to stay strong in the rest of 2015 and in 2016, the uneven global recovery notwithstanding (IMF, 2015). Several studies have now pointed out Africa's potential to become a global growth pole over the longer term (AfDB et al., 2010; ECA, 2012). The vast infrastructure and human capital gaps constrain Africa's development. Balancing the need to scale up growth-enhancing public outlays and debt sustainability is then a key policy challenge ahead (AfDB, 2010; Mu, 2012).

With Africa's high growth, reduced risk premia, improved macroeconomic policies, and strengthened debt management capacity, sustainable levels of public debt may need to be reconsidered, especially in the frontier markets.³ During the past decade, debt sustainability improved and Africa's debt-to-GDP today is lower than in decades, even though it has been rising in some countries (e.g., Cabo Verde, Ghana). The global financial crisis has left some countries with fiscal challenges and deteriorating debt sustainability. This paper analyzes the public debt legacy of the crisis in Africa, utilizing the debt-stabilizing primary balance framework as in, Buitert (1985), Blanchard (1990), Blanchard et al. (1990) and more recently Escolano (2010) and Contessi (2012). It also highlights the recent risks stemming from the exchange rate depreciation and volatility, the fall of commodity prices and lower global trend growth, among other factors. The uniform approach allows for comparisons of fiscal policies across countries and over time and identifying main factors of the debt dynamics.

We find that during 2007 – 2012 the primary balances exceeded those required to keep debt-to-GDP at the 2007 level in about half of the countries. In several cases with higher debt burdens, the balances were also above those needed to reduce debt-to-GDP to sustainable thresholds. In many countries with sustainable debt path, the outcome was driven by a favorable interest rate – growth differential (IRGD) rather than fiscal stance. Fiscal policies will need to play a more prominent role in maintaining public debt sustainability in the future, especially when the real interest rates rise with the tightening of the monetary policy in advanced economies.

The paper is organized as follows. After this Introduction, Section II summarizes the latest fiscal and external indicators. Section III presents varied fiscal outcomes among African sub-groups and countries as well as their impact on fiscal space four years after the global financial crisis. Section IV concludes with challenges ahead and policy options.

II. Fiscal legacy of the global financial crisis in Africa

African countries – which entered the global financial crisis with overall low debt levels, adequate foreign exchange reserves, and moderate inflation – experienced the crisis shock mostly through

² According to the IMF WEO (2015) projections, for 2015, 4 out of 10 most rapidly growing countries globally will be in Africa. These countries are: Democratic Republic of Congo, Ethiopia, Cote d'Ivoire and Chad. Despite Africa's impressive growth take-off, many countries on the continent, including the most advanced ones, are yet to reach inclusive development path (Ncube et al., 2013; AfDB 2011).

³ Frontier markets are countries that issued international sovereign bonds or have sovereign credit rating (Annex I).

cuts in external demand and liquidity shortages. Where policy buffers allowed, the governments adopted counter-cyclical responses to the crisis, usually in the form of increased capital outlays and/or monetary easing (Kasekende et al., 2010).⁴

This Section examines differences in fiscal outcomes in Africa between 2008 and 2012, both at the aggregate and country level. Both ‘stock’ (debt) and ‘flow’ (balance) types of outcomes are considered. This distinction is needed since, as shown below, deteriorating fiscal balances do not necessarily raise debt, while improved balances can be associated with higher indebtedness.

Africa’s fiscal deficit comparable to other groups

Overall, the global financial crisis has left African countries with weakened fiscal (and current account) balances. Several years after the crisis, fiscal balances remain lower than before the crisis in about 2/3rd of the countries. While the magnitude of the continent’s fiscal deterioration is similar to that in other developing and emerging market countries, its drivers differ. Unlike in richer countries where the increased deficits were caused mostly by stimulus policies, in Africa external shocks also played an important role (Figure 1).

Fiscal balances and public debt ratios on the continent have exhibited notable heterogeneity and variations even during such short time period as the aftermath of the global financial crisis (Figure 1). In general though, countries with stronger fiscal positions at the outset of the crisis implemented more decisive counter-cyclical measures and experienced larger deterioration of their fiscal balances (Figure 2). Specifically:

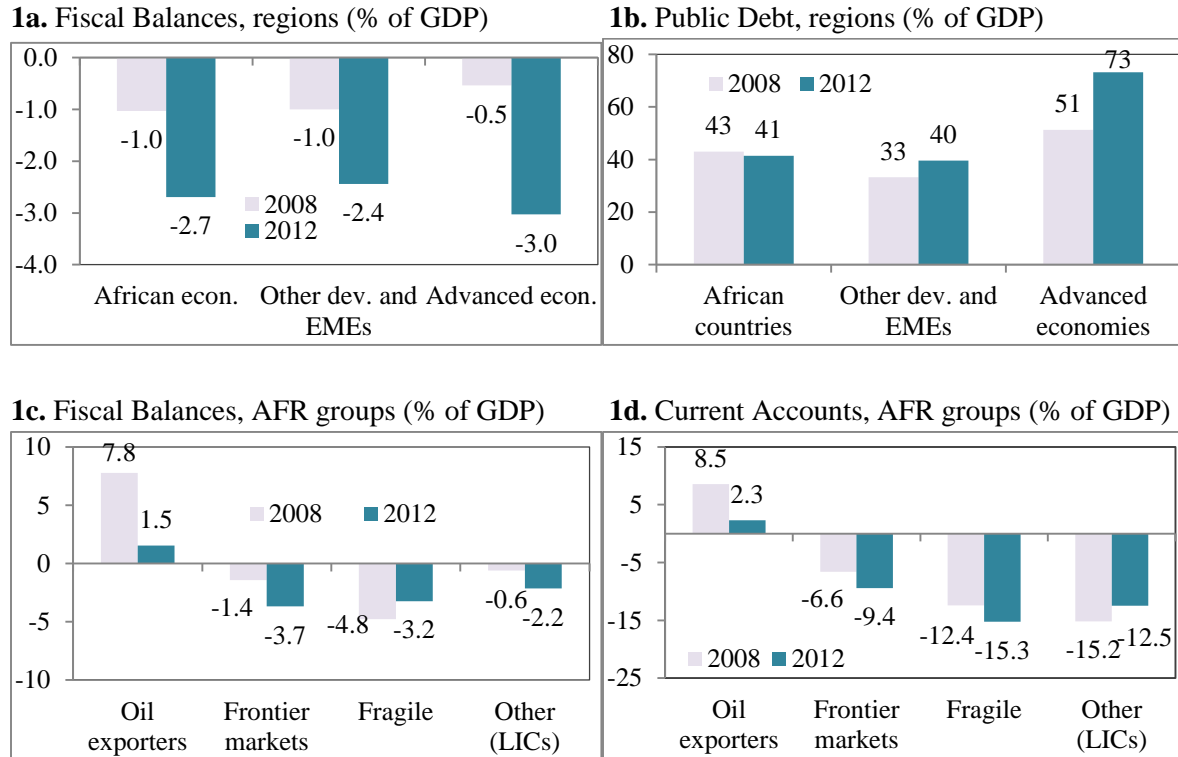
- After recording sizeable fiscal surpluses in the run up to the crisis, *oil exporters* saw their fiscal balances fall markedly in 2009. Nevertheless most countries at least partly recovered with favorable oil prices and the group posted a small surplus in 2012. Despite this rebound, oil exporters need to tackle the underlying structural weaknesses and reduce dependence on volatile commodity revenues;
- *Frontier markets* experienced the largest deterioration of fiscal balances and public debt built up, as a result of the counter-cyclical measures adopted in 2009 and beyond. Many of these countries have maintained expansionary policies.⁵ Their access to financing has allowed for maintaining budget deficits and financing them through sovereign bond issues, as Namibia and Zambia did externally and Kenya locally.
- Most of the *other countries*, especially some of the *fragile states*, could not adopt counter-cyclical measures during the crisis, due to both limited fiscal policy buffers and access to borrowing. Their fiscal balances have thus weakened less than those of the frontier markets.

⁴ Africa’s experience contrasts that of the developed countries where the global financial crisis of 2008 – 2009 led to a major private sector de-leveraging and public debt accumulation. In Europe, this has manifested itself as sovereign debt problem. Also, Africa’s reliance on expenditures in the crisis response differed from developed countries, where the stimulus polices included tax cuts, which are typically less effective in stimulating growth response.

⁵ Egypt, for example, continues to post deficits (in terms of GDP) near or in double digits, reflecting high subsidies and public sector wages.

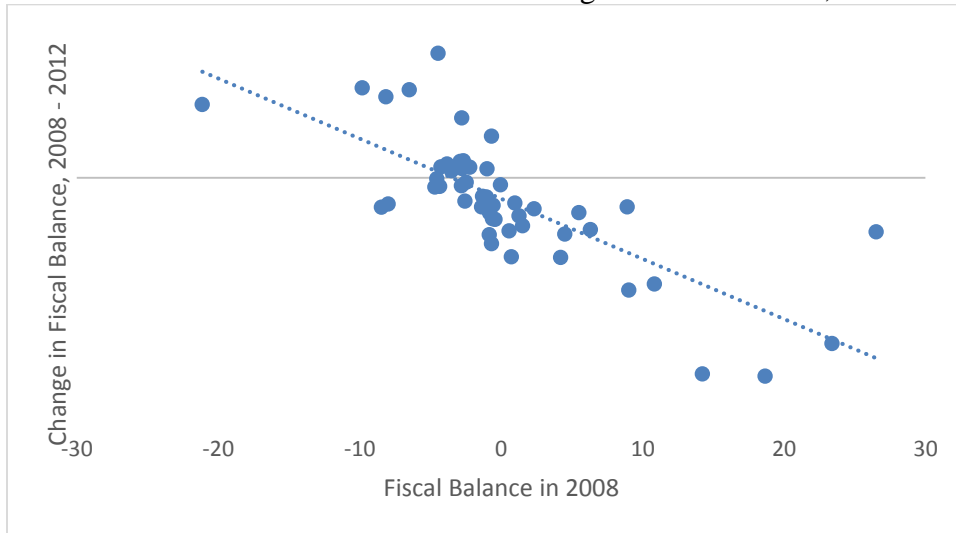
These countries have also posted current account deficits in double digits, raising concerns about vulnerability to external shocks.

Figure 1. Fiscal and Current Account Balances, 2008 and 2012



Source: Authors' calculations based on the AfDB AEO and IMF WEO databases (May 2013). **Note:** Results are medians for the world regions and averages for AFR groups.

Figure 2. Africa's fiscal balances: 2008 levels and changes in 2008 – 2012, % of GDP

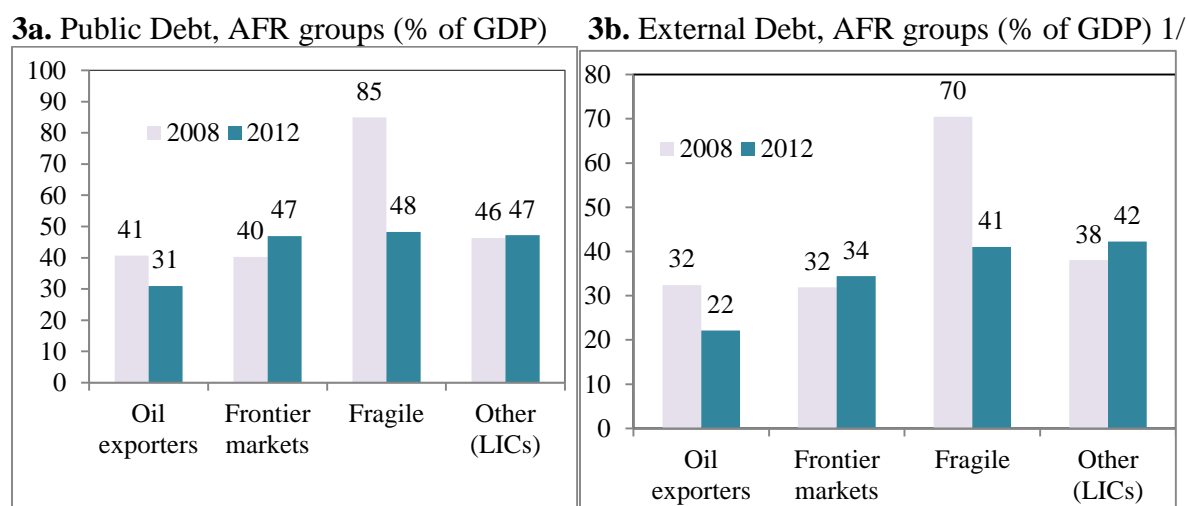


Source: Authors' calculations based on the AfDB database. **Note:** Correlation coefficient is -0.756 at 1% significance level. Data for 2012 are preliminary estimates.

Decline in the overall debt level

Africa's public debt-to-GDP ratio declined during 2008 – 2012 (Figure 1b), as widened primary fiscal deficits (i.e. deficits net of interest payments) were offset by factors such as low or negative real interest rates, high growth, and in some low income countries also debt relief.⁶ Differences again emerged across groups and countries. In contrast to the other African groups, public debt levels have increased in the frontier markets. The increase reflected mostly expansionary policies during the crisis years and beyond and in some cases also sovereign bond issuances on international markets. Total external debt (public and private) across subgroups has followed similar patterns as public debt (Figure 3). Even though most of the external debt is public, the corporate debt has been growing. However, the debt ratio has increased further in the frontier markets, which issued international sovereign bonds at unprecedented rates in 2013 and 2014

Figure 3. Africa's subgroups: public and external debts follow similar patterns, 2008 and 2012



Source: Authors' calculations based on the AfDB and IMF databases.

Grouping countries by income shows that the total public debt increased in middle income (ADB) countries and declined in low income (ADF) countries. Two observations stand out. First, albeit rising, the overall debt level in middle-income countries is still markedly lower than that in ADF countries.⁷ Second, the current Africa's debt is the lowest in decades, with the fastest decline posted by the most indebted countries thanks to debt relief and accompanying policies that made the relief possible. As the composition of public debt has shifted from external to domestic (and from official to unofficial) creditors since 2000 while external reserves rose, countries vulnerability to external shocks has subsided.

While the relatively low overall public debt levels and declining trend are positive signs, they do not leave room for policymakers' complacency. First, vast differences among countries prevail,

⁶ In several countries (e.g., Ghana, Egypt) exchange rate depreciation amplified the total debt burden through the re-valuation of the foreign debt.

⁷ However, middle income countries typically hold a larger share of short term debt, making them more vulnerable to interest rate and rollover risk, as the case of Swaziland illustrates.

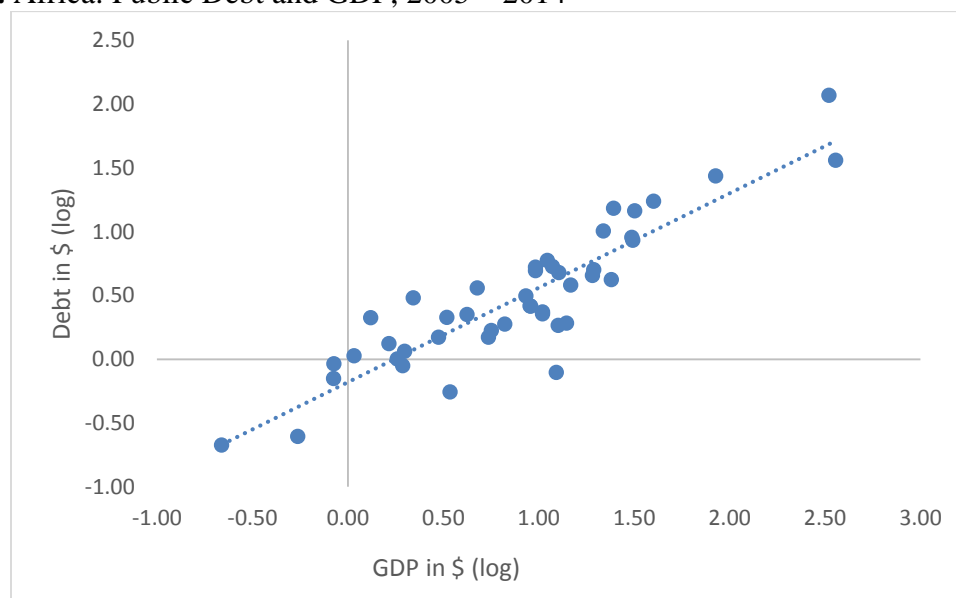
with the highest debt level (over 100% of GDP) in 2012 held in Eritrea (126 % of GDP) and Sudan (112 % of GDP); debt exceeded 80% of GDP in several other countries (e.g., Cabo Verde, Mauritania, Sao Tome Principe, Seychelles).⁸ Second, there is no predetermined debt threshold that would indicate that fiscal (solvency) crisis is about to occur. While it is clear that higher public debt makes a country more vulnerable to a crisis (other factors being equal), it is not possible to determine the specific tipping point. Third, widening fiscal deficits indicate shorter-term fiscal vulnerabilities (including to liquidity crisis) and reduced fiscal space.

Characteristics of Africa’s public debt

This section summarizes key characteristics and patterns of continent’s public debt during 2003 – 2012. First, a strong positive relationship between nominal public debt and GDP highlights that African countries, as those in other regions (Ferrarini and Ramaydani, 2012), that have had a greater capacity to contract debt (measured by GDP) have done so. Since the period covered includes ‘pre-MDRI’ years, oil exporters and frontier markets did not have higher public debt-to-GDP ratios than other countries.⁹ Rather several fragile and less developed countries had the highest average public debt burdens during the past 10 years (Figure 4).¹⁰

The debt-to-GDP ratio is only one indicator of the country’s capacity to contract loans and repay them. Debt-to-revenue ratio is another one, which reflects more directly resources available to the governments. There are also indications that African countries with higher debt-to-GDP ratios tend to have lower revenue-to-GDP ratios (and thus lower debt repayment capacity) and vice versa.

Figure 4a. Africa: Public Debt and GDP, 2005 – 2014



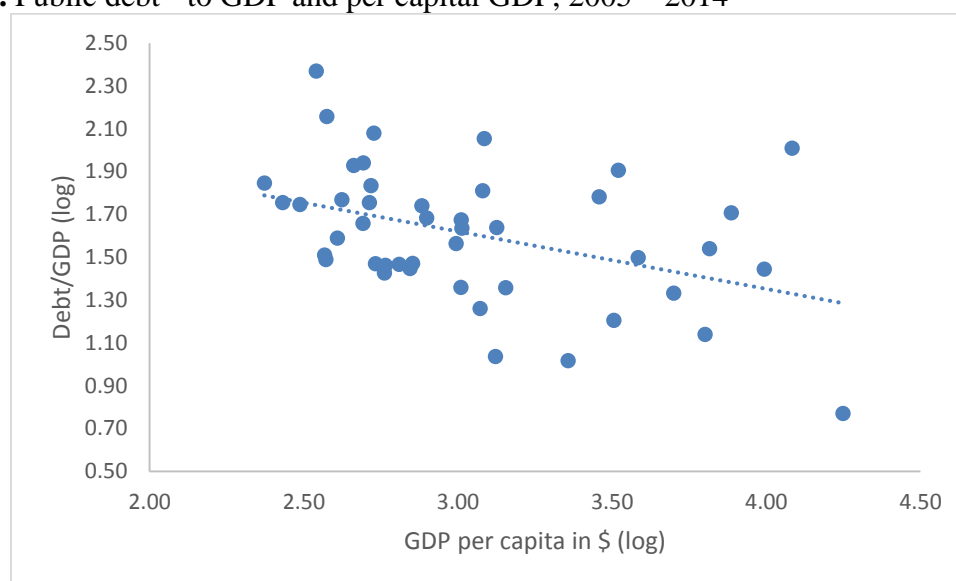
Source: Authors’ calculations based on the AfDB database. **Note:** Correlation coefficient is 0.899 at 1% significance level. Data reflect 2005 – 2014 averages (in US\$) in log scale.

⁸ Some countries (e.g., Ghana, Swaziland) had lower debt levels but accumulated sizeable arrears.

⁹ MDRI denotes multi-lateral debt relief initiative, which took place in mid-2000s.

¹⁰ Unlike the paper by Reinhart and Rogoff (2010), results of which were questioned by Egert (2012), Herndon et al. (2013) and others, we leave the issue of the linearity of relation between debt and growth to further research.

Figure 4b. Public debt - to GDP and per capita GDP, 2005 – 2014



Source: Authors' calculations based on the AfDB database. **Note:** Correlation coefficient -0.4134 at 5% significance level. Data reflect 2005 – 2014 averages in log scale.

Fiscal outcomes in individual countries

In Figure 5, the lower right quadrant captures countries experiencing both rising debt and weakening fiscal balance. Among non-ADF countries (MICs) these countries included oil exporters (Gabon, Algeria) and frontier markets (Cabo Verde), while small countries such Sao Tome Principe and again oil exporters (e.g., Sudan, Equatorial Guinea) were in this quadrant among the ADF countries. Table 1, Annex II, gives similar information by analytical groupings, together with external shocks in the form of changes in external debt and current account deficit.

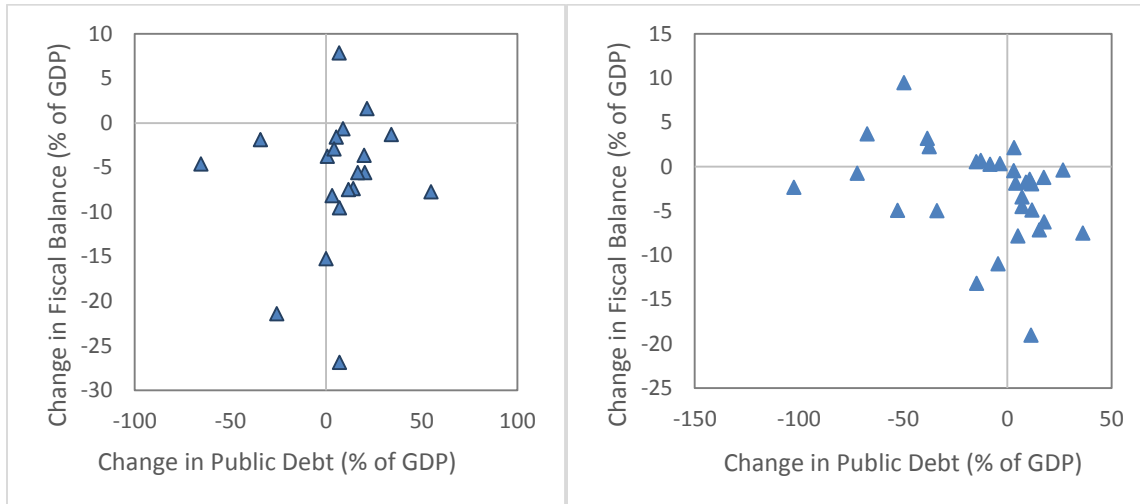
Fiscal stance and policy flexibility in Africa's sub-groups can be summarized as follows:

- *Oil exporters* remain fiscally most sound group in Africa in terms of levels (static sense). Even though their fiscal space was substantially cut, it remains the strongest in absolute terms; in part because of reserves.
- In *fragile states*, public debt decreased markedly due to HIPC/MDRI and macroeconomic policies that accompanied this debt relief. However policy buffers in these countries are limited because of high current account deficits and low reserves. Moreover, dependence of this group on external aid remains high;
- With rising fiscal deficits and debt – in part because of issuance of external sovereign bonds -- fiscal sustainability has been gaining attention as a policy priority in *frontier markets*. Several countries from this group have recently had their sovereign credit ratings downgraded. On a positive side, Nigeria received upgrade in the early 2013.

Figure 5 Flow Fiscal Outcomes in Africa, by income groups, 2008 – 2014

Figure 5a. Middle Income Countries

Figure 5b. Low Income Countries



Source: Authors' calculations based on AfDB AEO and IMF WEO databases. **Note:** Stock shocks correspond to changes in public sector debt and flow shocks correspond to changes in fiscal balances.

III. How Sustainable is Africa's Public Debt Path?

This section summarizes the standard sovereign debt-to-GDP sustainability analysis based on contributions of the primary balance and the real interest-growth differential, as in Contessi (2012) and Escolano (2010). The changes in public debt-to-GDP over time are decomposed into:

$$d_t - d_{t-1} = \frac{r_t}{1 + g_t} d_{t-1} - \frac{g_t}{1 + g_t} d_{t-1} - p_t \quad (1)$$

where d_t is the stock of public debt (as % of GDP) at time t ; r_t is the real interest rate; g_t is the real GDP growth (in %); and p_t is the primary fiscal balance (in % of GDP).¹¹

The two main approaches to the debt sustainability are: (i) the approach of the IMF and the World Bank, which looks at debt path projections and how they relate to thresholds; and (ii) the debt-stabilizing primary balance approach, which looks for the primary balances to achieve a chosen debt path, given the assumptions about the evolution of the real interest rate r and growth g (Wyplosz, 2005; Chalk and Hemming, 2000). In what follows, we utilize the debt-stabilizing primary balance approach, which is simple, transparent and has minimal data requirements (real interest rate and growth). The basic form of the approach computes the primary balances that would keep the debt-to-GDP ratio at its current level. From (1), this can be described as follows:

¹¹ The initial stock of debt, d_0 , is set and Ponzi schemes are excluded. Equation (1) also abstracts from impacts of exchange rate and 'below the line' adjustments. Huang and Xie (2008) extend the classical, partial equilibrium approach to stabilizing primary debt balance to a general equilibrium analysis.

$$p_t^* = \frac{r_t - g_t}{1 + g_t} d_{t-1}^* \quad (2)$$

where p_t^* is the stabilizing primary balance and d_t^* is the stable debt-to-GDP ratio. The difference between the stabilizing and the actual primary balance is referred to as ‘primary balance gap’. A positive gap would mean that in the absence of fiscal adjustment, the debt-to-GDP ratio would rise over time.

From (1) it also follows that when the real interest rate is above the growth rate of GDP, the debt-to-GDP ratio will rise unless the primary balance outweighs the impact of this differential. Decomposing $r_t/(1 + g_t)$ into $(i_t - \pi_t)/(1 + \gamma_t)$, where γ_t denotes the growth of nominal GDP, illustrates that inflation impacts the debt-to-GDP ratio through lowering the real interest rate.

Omitting the time subscript t and given an initial debt-to-GDP ratio (d_0) and a ratio to be achieved in N periods (d_N^*), the constant primary balance (p^*) to achieve this becomes:¹²

$$p^* = \frac{\lambda}{(1 + \lambda)^{-N} - 1} ((1 + \lambda)^{-N} d_N^* - d_0) \quad (3)$$

where $\lambda = (r - g)/(1 + g)$.

Debt dynamics, real interest rate-growth differential and debt-stabilizing balance

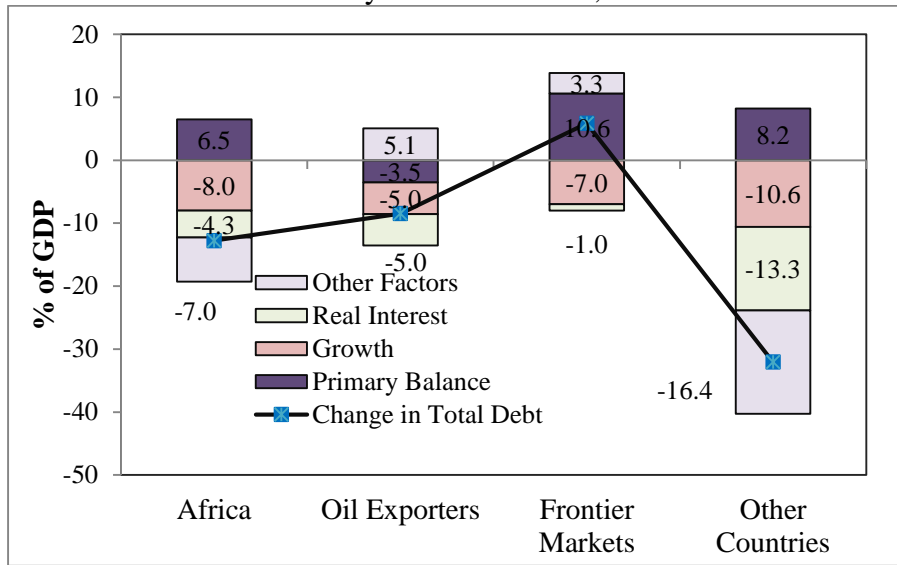
Drawing on (1), we now look into what factors – growth, real interest rates, primary balance or other factors (including debt relief) – drove public debt changes in Africa and its groups. On the continent as a whole and in all groups, high growth and negative real interests contributed to decline in debt burden. While growth played an important role across Africa, the negative interest rates helped lower debt especially in low income (including fragile) countries, reflecting the concessional terms of their loans. In contrast, in frontier markets where governments often borrow on market terms – either on domestic markets as in Kenya or on international bond markets as in Ghana, Namibia, etc. – the contribution of real interest to cutting the debt burden has been lower. Except for oil exporters, fiscal policies led to debt accumulation in all Africa’s subgroups. Finally, low income countries saw their debt levels fall due to debt relief (Figure 6).

Drawing on (1), we now ask what fiscal policies – in terms of primary fiscal balances (as % of GDP) – would had stabilized the debt ratios at their 2007 levels in the frontier markets and middle income oil exporters during 2008 – 2012.¹³ For countries where the initial (2007) level of debt exceeded 40% of GDP, we also examine what type of fiscal policies (primary balances) would have resulted in debt reduction to this benchmark.

¹² For derivation, see Escolano (2010).

¹³ Sovereign bonds of these countries have recently received heightened attention of foreign investors.

Figure 6. Drivers of Government Debt Dynamics in Africa, 2007 – 2012



Source: Authors' calculations based on the AfDB AEO and IMF WEO databases (May 2013). **Note:** 'Other factors' include debt relief, exchange rate changes and ad-hoc debt reclassification, among others.

Results are summarized in Figure 7. Figure 7a shows the required primary balance that would stabilize the debt ratio in frontier markets (and middle-income oil exporters) at their 2007 level. Figure 7b shows the balance needed for reducing debt level to 40% of GDP by 2012, provided that the 2007 debt was above this threshold.

Figure 7. Primary Balance Gap, average for 2008 – 2012 (% of GDP)

Figure 7a. Debt-Stabilizing Primary Balance (at the 2007 Level)

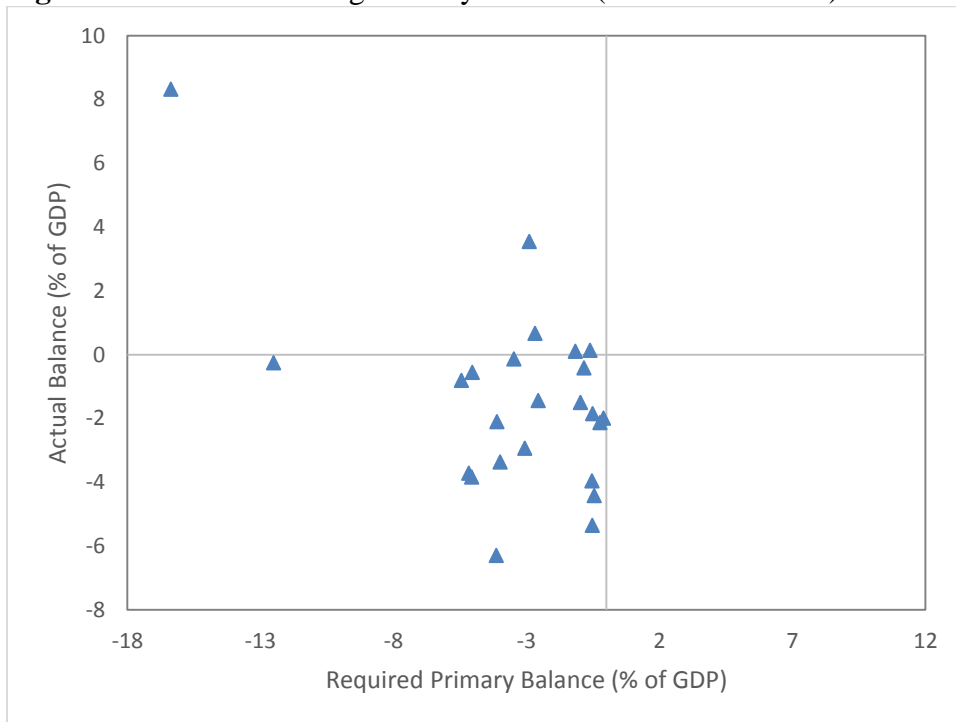
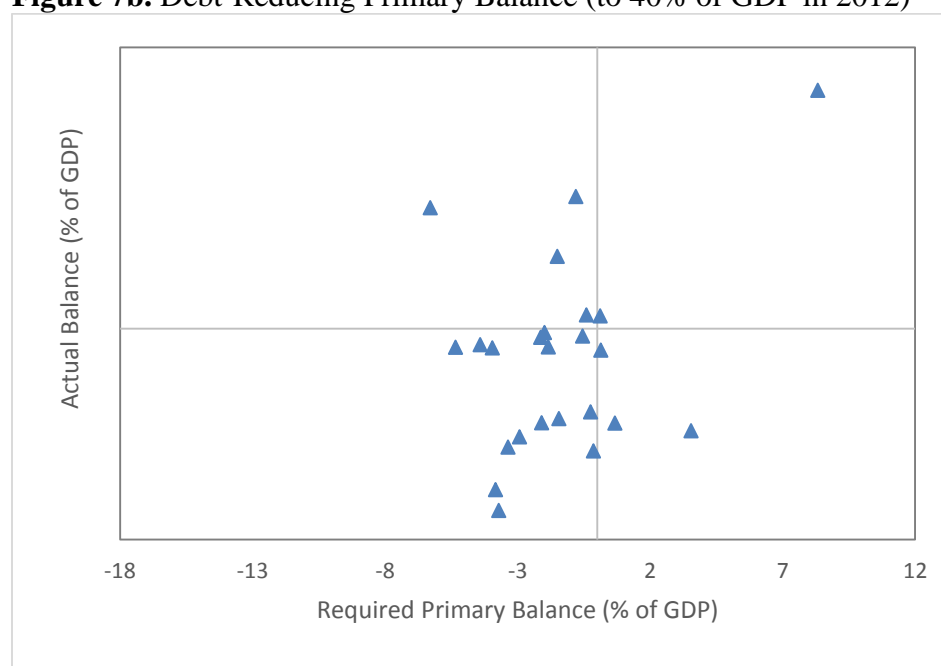


Figure 7b. Debt-Reducing Primary Balance (to 40% of GDP in 2012)



Source: Authors' calculations based on the AfDB AEO and IMF WEO databases.

As shown in the left panel of Figure 7, in more than half of the countries studied the primary balance was above the one required to keep the public debt-to-GDP ratio at its 2007 level. Taking this perspective would then suggest that fiscal stance of majority of the countries in this group is sustainable. If countries' growth and real effective interest rates would remain at their 2007 – 2012 average levels, the debt-to-GDP ratios of all countries above the 45 degree line would decline. While some of these countries did not exercise fiscal prudence and in fact ran sizeable fiscal deficits, their debt paths were mostly driven by the negative the real interest rate – growth differential (Ghana, Mozambique).

In contrast, in countries where the actual primary balance is below the required one for keeping debt stable (e.g., Botswana, Cabo Verde, Senegal, Swaziland) the IRGD differential was outweighed by fiscal policy, leading to an increase in public debt-to-GDP ratio.

In some of the countries above the 45 degree in the left panel, the 2007 public debt-to-GDP ratio was above 40%, pointing to a need for fiscal adjustment.¹⁴ Right panel of Figure 7 lists the required primary balance that would had reduced public debt-to-GDP ratio to 40% by 2012. Some of the countries that had the 2007 level of debt above 40% were required to undertake more substantive fiscal adjustment than they actually did.¹⁵ At the same time, in about half of the frontier markets and oil exporters featured in Figure 7 the fiscal stance was sustainable. Hence if in the next five

¹⁴ In the context of fiscal consolidation debates, 40% public debt-to-GDP ratio is often recommended as limit that developing and emerging market countries should not exceed on a long-term basis. IMF (2013) provides more nuanced debt thresholds based on countries' level of development and capacity to repay debt.

¹⁵ As this exercise did not take into account the exchange rate depreciation and ad hoc changes to the debt stock, it may have underestimated the size of the fiscal adjustment needed to stabilize or reduce the public debt.

years growth and real interest remained at 2007 – 2012 levels, debt ratios in all economies above the 45 degree line in the right panel would be at or below 40 percent of GDP.¹⁶

Table 1. Calculation of Real Interest-Growth Differentials, 2008 – 2012 (%)

	Real GDP growth	Nominal eff. interest rate	Change in GDP deflator	Real effective interest rate	Interest Rate-Growth Differential
Benin	3.8	1.9	3.9	-2.1	-5.8
Burkina Faso	6.2	2.1	5.2	-3.1	-9.3
Burundi	4.4	2.3	14.9	-12.6	-17.0
Cabo Verde	2.4	2	2.4	-0.4	-2.7
Central African Rep.	2.8	2.1	3.4	-1.4	-4.2
Chad	6	2.1	3.9	-1.8	-7.8
Côte d'Ivoire	2.7	2.8	3.2	-0.4	-3.1
DRC	6	5.8	17.7	-12	-18.0
Egypt	4.2	9.4	11.5	-2.1	-6.3
Guinea	2.9	2.8	14.8	-12	-14.9
Guinea-Bissau	2.7	0.3	2.3	-2	-4.7
Kenya	3.8	5.4	9.4	-4	-7.8
Lesotho	5.1	2.1	6	-3.9	-9.0
Liberia	6.7	0.7	6.2	-5.5	-12.2
Mali	3.6	3.1	5.5	-2.4	-6.0
Mauritania	3.5	2.1	6.7	-4.6	-8.1
Morocco	4.3	4.8	1.7	3.1	-1.2
Namibia	3.9	7.3	7.6	-0.3	-4.1
Nigeria	7	10.2	7.5	2.6	-4.4
Rep. of Congo	5.8	0.9	6.9	-6	-11.8
Rwanda	8.2	2.5	7.7	-5.2	-13.3
Senegal	3.2	3.7	2.6	1.1	-2.1
Seychelles	2.7	6.1	15.3	-9.2	-11.9
Sierra Leone	7	4.5	12.9	-8.4	-15.4
South Africa	2.3	10.3	6.9	3.4	1.1
The Gambia	3.9	5.3	3.9	1.4	-2.5
Togo	4.1	1.9	6.3	-4.4	-8.5
Tunisia	2.4	4.5	4.8	-0.3	-2.7
Uganda	5.9	5.6	11.4	-5.8	-11.7

Source: Authors' calculations based on the IMF and AfDB databases (May 2014). **Note:** Nominal interest rate is interest paid at t on the debt stock outstanding at the end of $t - 1$. Real interest rate accounts for inflation.

Table 1 lists the calculated real effective interest rate -growth differential (IRGD) for the period during and after the crisis. It shows that in all countries for which data was available, the IRGD was negative and exceeded -10% in about one third of the countries. For the few countries with positive real interest rate (e.g., Senegal, Morocco), growth eroded the debt-ratio enough to more

¹⁶ This includes possibility declining debt-to-GDP ratio in the face of running primary deficits, provided that real interest and growth differential offset the factor.

than offset the interest impact. However, in few cases, the narrow IRGD was not able to counter the impact of sizeable primary deficits (above).

Case studies

Ghana: Rising debt amid rapid growth

Currently, Ghana is among the fastest growing economies in Africa and globally. At 6.5 percent a year during 2004 – 08, the country was exceeding Africa’s average and its own past record. The improved performance reflected good policies and strengthened institutions. While the economy still expanded by 4 percent during the crisis, its performance rested mostly on high prices of gold and cocoa. Driven in part by oil production, average growth of 9.8 percent a year in 2010 - 2012 has put Ghana among the fastest growing world economies.

The fiscal deficits since mid-2000s have contributed to the increase of public debt to more than 50 percent of GDP in 2013. With budgetary outlays following political cycles (e.g. rising during or before election years), the deficit reached 8.5 percent of GDP in 2008 (year of general elections), leaving no room for countercyclical measures when the crisis hit a year later. Instead, in 2009 the government resorted to pro-cyclical budgetary cuts and accumulated arrears to private contractors. Similarly, during the next general elections in 2012, the deficit rose to 11.5 percent of GDP (up from 4.1 percent in 2011) on the back of a ballooning wage bill, energy subsidies, and rising interest payments with cedi under pressure.

Table 2. Ghana: Primary balance gaps, 2008 – 2012

	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
	primary balance (% of GDP)					debt (% of GDP)				
Actual	-6.2	-3.0	-4.1	-1.4	-8.4	30.2	36.1	37.4	39.3	49.2
Debt at 2007 level	-6.6	2.9	-2.1	1.4	1.1	30.6	30.6	30.6	30.6	30.6
Debt at 40% opt 1	-6.2	-3.0	-4.1	-1.4	0.8	30.2	36.1	37.4	39.3	40.0
Debt at 40% opt 2	-8.6	0.9	-4.6	-1.2	-0.4	32.6	34.6	36.4	38.1	40.0

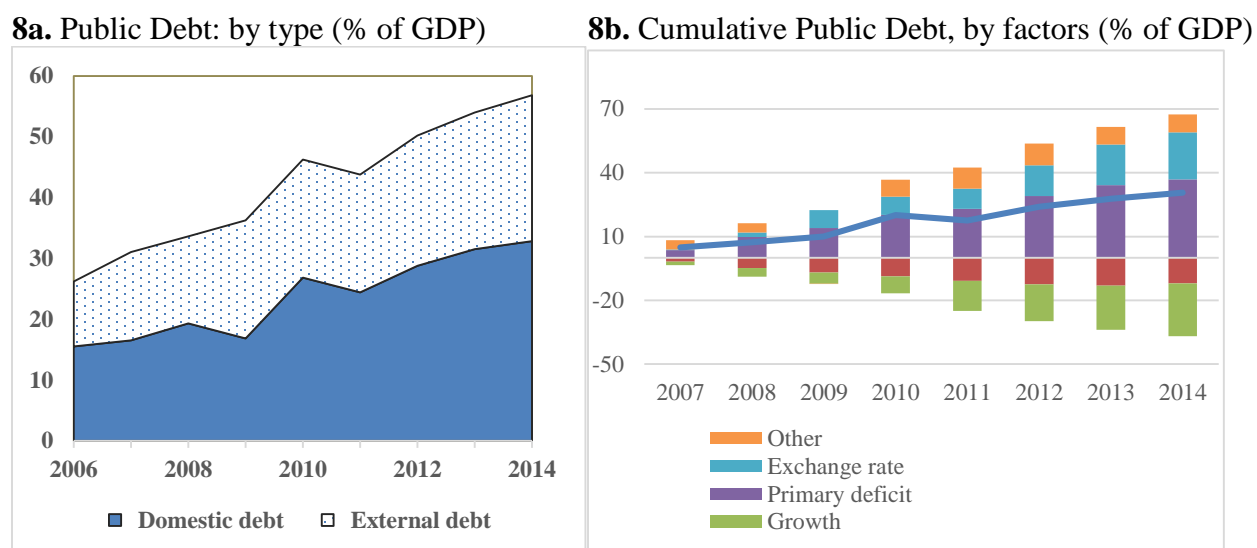
Source: Authors’ calculations based on AfDB and IMF databases.

After receiving debt relief (MDRI) in 2006, Ghana’s public debt expanded despite a favorable interest rate – growth differential. Specifically, at 45 percent of GDP in 2012, the debt level was similar to that before the MDRI. Besides fiscal policy, the weakening of cedi has played a role in recent debt accumulation (Figure 8). Table 2 illustrates the primary balance gaps, namely differences between the actual primary balance and the ones associated with stabilizing debt at 2007 level (30 percent of GDP) or such that would gradually reach the 40 percent benchmark.

Looking forward, the government plans to continue financing part of the fiscal deficits through sovereign bonds. In 2007 Ghana was one of the first countries in Sub-Saharan Africa to issue sovereign Eurobond (\$750 million). The country has already mentioned its intentions to refinance the bond in 2014 and possibly raise additional funds. This seems manageable, with the total external debt amounting to about 20 percent and short term debt only to about 3 percent of GDP. Nevertheless, absent spending restraints, the additional debt could accumulate quickly and country’s creditworthiness and ratings weaken, raising borrowing cost. The tight monetary policy

would also raise interest. These trends underscore the importance of strengthening fiscal institutions and public financial management, using the borrowed funds judiciously for growth-enhancing outlays, and making growth more robust through diversification.

Figure 8. Ghana: Dynamics of Public Debt, 2006 – 2014(e)



Source: Authors’ calculations based on AfDB and IMF databases. **Note:** Figures for 2014 are projected reflecting the adopted budget.

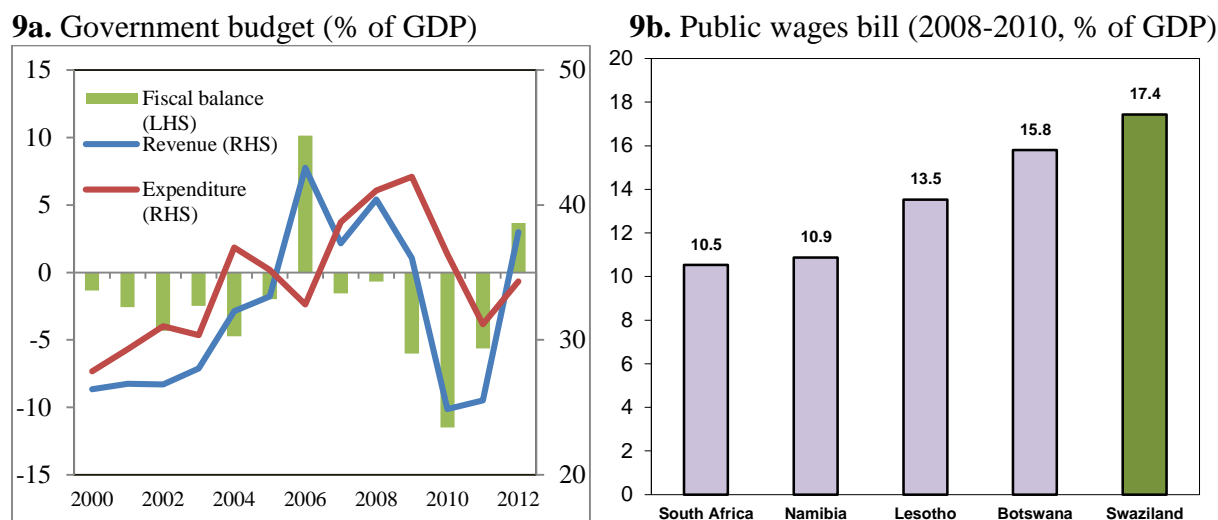
Swaziland: From liquidity shortages to sustainability challenges?

At 1.9 percent annual average rate, Swaziland was among the least growing countries in Africa during 2001-12. Prior to the global financial crisis, the country experienced a fiscal revenue boom driven by SACU receipts. However, the windfall revenues financed public wages rather than investments to increase productive capacity. When the SACU revenues collapsed in the aftermath of the crisis, the budget deficit widened to 11.5 percent of GDP in 2010 (Figure 9).

With ballooning deficit and limited access to borrowing, the country needed fiscal adjustment. The government negotiated program with the IMF in the early 2011, but was not able to meet its targets. The wage bill thus remained among the highest in Africa. The budget support from MDBs, including the African Development Bank, was put on hold. Confidence of domestic investors waned, reducing further the available deficit financing. By mid-2011, the government faced a liquidity crisis, leading to delays or cuts in expenditures, rising domestic debt, and arrears. The deficit was falling faster than expected, with negative implications for growth.

Besides impacting service delivery, the fiscal crisis also spilled over into other sectors. Sizeable government arrears to private sector contractors slashed further growth prospects and led to rising non-performing loans of the banking sector. In turn, the banks took a cautious approach to lending, and the real private sector credit growth has been very low. The official foreign exchange reserves, which were used to finance the government deficit, fell to mere 1.9 months of imports in early March 2012, raising concerns about sustainability of the Lilangeni-Rand peg.

Figure 9. Swaziland: Recent Developments in Key Fiscal Indicators



Sources: African Development, Bank, IMF and Government of Swaziland.

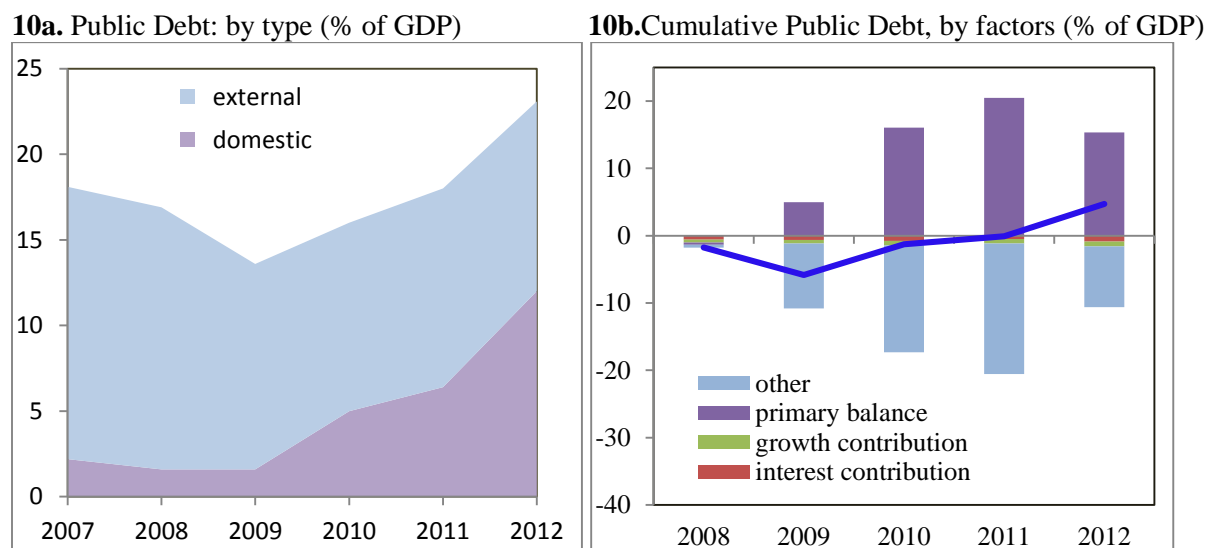
The markedly improved SACU revenues have removed the urgency of fiscal adjustment. Nevertheless, the structural weaknesses that led to the fiscal crisis should be addressed. The priority areas of reforms, outlined in the Updated Fiscal Adjustment Roadmap 2012 that the government prepared with the help of the AfDB and UNDP, include:

- On the resource side, the country needs to reduce dependency on volatile SACU revenues and mobilize domestic sources, deepen domestic financial markets, and develop innovative sources of finance.
- On the expenditure side, rebalancing outlays to investment (which accounts for less than 10% of GDP) would help accelerate growth over the longer term. Preferably, the budgeting would be done on a multi-year basis, with medium term expenditure framework and possibly also an expenditure rule in place.
- The country needs to manage volatile SACU revenues better, and in particular save enough during the boom years to allow for counter-cyclical expenditures in downturns.

While public debt remains low, it has grown rapidly in recent years -- from 13 percent of GDP in 2009 to 23 percent in 2012. In the absence of external budgetary support, domestic borrowing that funded deficits drove debt and also crowded out private investors (Figure 10a).

Besides the role of primary deficits, Figure 10b shows the importance that ‘other’ items played in the debt dynamics. While part of this item can be accounted for by exchange rate movements, privatization or other asset transactions, large share of ‘others’ is unexplained. This, together with accumulation of arrears, points to the need to strengthen data collection and improve transparency. Moreover, the fast debt accumulation— still constrained by the limited government borrowing space— showed that should the external funding become available, policymakers’ may need to quickly turn their attention from liquidity to sustainability issues.

Figure 10. Swaziland: Dynamics of Public Debt in Recent Years



Source: Authors' calculations based on IMF and AfDB databases.

International sovereign bonds and debt sustainability¹⁷

To fund their development needs, a number of Sub-Saharan African countries have accessed sovereign international bonds markets for the first time. While the issuance was subdued, between \$1.5 – 2.5 billion during 2010 – 2012, it amounted to more than \$5 billion and almost \$7 billion in 2013 and 2014, respectively (Tyson, 2015a). The reduced debt-to-GDP ratios, high growth and improved political environments in Africa combined with low interest rates and weakened economic conditions in advanced economies have heightened interest of foreign investors in opportunities on the continent. This has been reflected in oversubscriptions of Africa's sovereign bonds issued on international capital markets as well as low rates on these bonds. For example, the interest rate on Zambia's first Eurobond (\$750 million) issued in September 2012 was only 5.375; the amount demanded by investors was \$11.9 billion. Similarly, Rwanda's Eurobond (\$400 million) issued in April 2013 was well oversubscribed (demand was \$3.5 billion).¹⁸

Due to this high demand, several Sub-Saharan Africa sovereign bonds have been traded below an average yield for sovereign bonds with the same rating. At the same time, the lower yield spreads, especially in countries with weaker fiscal policies, have raised some questions about adequate risk pricing.

With the changing global environment in 2014 and the early 2015 (e.g., depreciating exchange rates in some countries, the fall in the commodity prices, uneven global growth), risks associated with international sovereign bonds have risen. They need to be managed and mitigated, including through exchange rate hedging and management of volatile capital flows (Tyson, 2015b).

¹⁷ By 2014, 21 African countries had credit ratings issued by international agencies (Adams, 2015).

¹⁸ Overall, twelve countries in Sub-Saharan Africa have issued international sovereign bonds since mid-2000s. The low yield spreads in the aftermath of the crisis also indicate that Africa's sovereign bonds are not correlated with those of advanced economies and can provide source of diversification.

So far, Africa's issuance of Eurobonds has changed mostly composition of the public debt, not its volume (IMF, 2013). Still volumes of borrowing and use of the borrowed funds need to be carefully monitored, especially given the importance that the real interest rate-growth differential plays in the continent's debt sustainability. With rise of interest rates in advanced economies, cost of borrowing associated with Africa's international sovereign bonds may also increase in the future as risk pricing becomes more nuanced. For some countries, this may create refinancing challenges. From the point of view of longer term debt sustainability, however, this may be also a positive development as the use of borrowed funds is likely to be more carefully scrutinized.

IV. Conclusions and Policy Discussion

Today (mid-2015), Africa's public debt-to-GDP is still lower than in decades and the overall fiscal policies are sustainable. The debt level is also comparable to other developing countries and well below that of advanced economies. The debt-to-GDP ratio decline was to a large extent due to favorable (and in many countries negative) real interest rate and growth differential. In contrast, fiscal policy contributed to decline of debt only in oil exporting economies. At the same time, as oversubscriptions and favorable terms of Africa's sovereign bonds have shown, the continent has gained attention of international investors, which has open up its borrowing space. Relatedly, debt-to-GDP ratio has been rising in some countries, and so have been the risks associated with international sovereign bonds (e.g., exchange rate risk, debt sustainability risk, interest rate risk).

One of the conclusion of our analysis is that in addition to sound fiscal policies, debt management strategies need to emphasize growth. For countries with borrowing space this includes borrowing for growth-enhancing outlays. However, the interest-growth differential is subject to shocks: while Africa's growth prospects are promising, the real interest could be rising in the future. Moreover, with slowing growth in emerging markets and tighter global financial conditions, some downside risks to growth remain. The access to international capital markets has created a window of opportunity for African countries to embark on inclusive growth also through sustainable borrowing, provided the funds are well utilized for growth-enhancing outlays.

More broadly, in the framework utilized in this paper, policymakers can reduce public debt-to-GDP ratio by: (i) accelerating growth; (ii) improving primary balances through revenue mobilization and optimizing of outlays; (iii) reducing the real interest (also by raising inflation) and (iv) defaulting. Since inflation and defaulting undermine other goals that the government is likely to pursue (rising living standards of the population, improved access to capital markets), we discuss growth and fiscal policies.

The interest rate – growth differential being the main drivers of the overall moderate public debt dynamics in recent years suggests that African countries may like to aim at high growth as a key element of their debt sustainability strategy.¹⁹ Even though Africa's growth recovery from the crisis' shock has been fast, to become a global growth pole in the next 2 - 3 decades, growth in the most of the continent's countries needs to accelerate beyond the pre-crisis rates.

¹⁹ Policymakers could reduce public debt-to-GDP ratio by: (i) accelerating growth; (ii) improving primary balances by raising taxation and/or cutting spending; (iii) reducing the real interest (also by raising inflation) and (iv) defaulting. Since inflation and defaulting undermine other goals that the government is likely to pursue (rising living standards of the population, improved access to capital markets), we discuss growth and fiscal policies.

African policymakers need to adopt sound fiscal policies and complementary monetary policies, while pursuing growth-enhancing investment, including through borrowing. Caution should be exercised when approaching commercial debt markets though given the rising borrowing cost and possibility of shifting sentiments of investors. With low revenue-to-GDP ratios, many low income countries can reduce their debt through domestic revenue mobilization. They would also benefit from greater efficiency of public expenditures and medium term perspective in budgeting. Reducing inefficient spending (e.g., over-sized wage bills in Southern Africa, energy subsidies in North Africa) would create space for pro-growth outlays (support to SMEs, infrastructure, ICT) and discretion against shocks. Furthermore:

- Countries with high public debt and/or large fiscal deficits – Sudan among oil exporters, Eritrea among fragile states, and Cabo Verde, Egypt Ghana and Morocco among frontier markets – need to undertake fiscal adjustment. The scope and the speed should account for its likely impact on investment and growth, to avoid debt traps;²⁰
- In frontier markets with more developed financial system and monetary policy space (e.g., Cabo Verde, Mauritius), the government could try to ease the impact of fiscal adjustment on growth via less tight monetary policy;
- Countries with large share of external debt and with limited hedging instruments may need to develop them further, alongside effective policies for capital account management.
- Countries’ could also benefit from macro frameworks based on fiscal rules and medium-term expenditure frameworks, to facilitate transition to counter-cyclical and growth-supporting fiscal policies. In countries where rapid debt accumulation is of concern ‘debt break rules’ could be also useful. Taking a long-term view, fiscal policy buffers are needed for emerging challenges such as creation of social protection schemes;
- African countries also need to strengthen their capacity to carry out independent debt sustainability analysis and apply it to their borrowing activities. Together with improved debt management capacity, such changes would allow frontier markets to access additional (non-concessional) funds while maintaining fiscal sustainability.
- Changes in the debt sustainability frameworks of the international financial institutions, and in particular better links between investment and growth may be needed to reflect ‘rising Africa’. Key question in this regard is: given the current high growth, lower risk premia, and lower global interest rates, what should be the new sustainable debt levels (and thresholds) in various African countries, especially frontier markets?
- Besides changes to the debt sustainability frameworks, for African countries reaching objectives of enhanced borrowing space and fiscal sustainability hinges critically on increased transparency and improved communication. While progress has been made, most African countries could utilize technology more effectively for sharing information on key

²⁰ Eyraud and Weber (2013) discuss the possible negative short term impact of fiscal adjustment on debt, in cases where decline in growth would more than offset the improvements in fiscal balance.

macroeconomic developments. Similarly, communicating fiscal stance and changes on it early on (and delivering on the announcements) can help raise credibility of fiscal policy.

The African Development Bank has an important role to play in helping African countries regain policy buffers and maintain debt sustainability, while expanding borrowing space for inclusive growth. The Bank supports its member countries through its statistical databases and analysis, policy advice, budgetary and sectoral support, and by helping develop financial markets.

Annex I. Country Classification, Tables and Graphs

Country Classification

1. Oil Exporters:

Algeria, Angola, Cameroon, Chad, Republic of Congo, DRC, Cote d'Ivoire, Gabon, Libya, Nigeria, Sudan.

2. Frontier Markets:

Benin, Botswana, Burkina Faso, Cameroon, Cabo Verde, Egypt, Ghana, Kenya, Lesotho, Mauritius, Morocco, Mozambique, Namibia, Senegal, Seychelles, South Africa, Rwanda, Tanzania, Tunisia, Uganda, Zambia.

3. Fragile States

Burundi, Central African Republic, Eritrea, Guinea, Guinea-Bissau, Liberia, Mali, Sierra Leone, Togo, Zimbabwe.

4. Other

Comoros, Djibouti, Ethiopia, Gambia, Madagascar, Malawi, Mauritania, Niger, Sao Tome & Principe, Swaziland.

Annex II. Fiscal and External Buffers by Africa Sub-groups

Table 1a, Annex II. Oil Exporters: Fiscal and External Buffers, 2008 – 2012

	Public Debt			Fiscal Balance			Total External Debt			Curr. Acc. Bal.		
	2008	2012	change	2008	2012	change	2008	2012	change	2008	2012	change
	percent of GDP											
Algeria	8.1	9.9	1.8	9.0	-2.7	-11.7	3.5	2.0	-1.5	20.1	5.9	-14.2
Angola	31.6	29.3	-2.3	-4.5	8.5	12.9	16.6	18.8	2.2	10.3	9.6	-0.8
Cameroon	9.5	14.9	5.3	2.3	-0.9	-3.2	5.2	8.6	3.4	-1.2	-4.4	-3.2
Chad	23.4	34.5	11.0	4.5	-1.4	-5.9	15.6	16.2	0.6	8.9	-2.1	-11.0
Congo, DR	133.1	36.0	-97.0	-3.8	-2.4	1.4	116.3	30.9	-85.5	-17.5	-12.4	5.1
Congo, R	68.1	21.1	-46.9	23.4	6.1	-17.3	66.7	22.1	-44.6	2.3	3.6	1.2
Cote d'Ivoire	75.3	49.1	-26.2	-0.6	-3.4	-2.9	80.3	53.2	-27.1	2.3	-1.8	-4.1
Equat. Guinea	0.8	8.2	7.4	18.7	-2.0	-20.7	0.7	7.8	7.2	-1.2	-14.7	-13.5
Gabon	16.7	22.0	5.3	10.8	-0.2	-11.1	15.7	11.0	-4.7	23.3	12.6	-10.6
Libya	26.5	20.9	-5.6	6.3	7.4	1.1	42.5	35.9	-6.7
Nigeria	11.6	17.8	6.2	6.3	0.9	-5.4	2.1	2.3	0.2	14.1	6.6	-7.5
Sudan	68.8	97.6	28.8	0.6	-5.0	-5.5	60.2	84.8	24.6	-1.5	-11.2	-9.7
Average	40.6	30.9	-9.7	7.8	1.5	-6.2	32.4	22.1	-10.3	8.5	2.3	-6.3
Median	23.4	22.0	-1.4	5.4	-1.1	-6.5	15.7	13.6	-2.1	5.6	0.9	-4.8
Rel St Dev.	1.0	0.8	3.6	1.3	4.7	1.4	1.2	1.1	2.8	1.8	6.0	1.0

Source: Authors' calculations based on the AfDB and IMF databases.

Table 1b, Annex II. Fragile states: Fiscal and External Buffers, 2008 – 2012

	Public Debt			Fiscal Balance			External Debt			Curr. Acc. Bal.		
	2008	2012	change	2008	2012	change	2008	2012	change	2008	2012	change
	percent of GDP											
Burundi	111.5	32.0	-79.5	-2.7	-1.7	1.0	94.0	22.4	-71.6	-1.0	-15.6	-14.7
Central Afr. R.	80.2	30.6	-49.6	-1.0	-0.1	0.9	54.2	19.3	-34.9	-10.0	-6.2	3.7
Eritrea	174.9	125.8	-49.1	-21.1	-13.5	7.6	61.9	29.0	-33.0	-5.5	2.3	7.8
Guinea	89.9	43.0	-46.9	-1.3	-3.3	-1.9	82.0	63.2	-18.9	-10.6	-34.1	-23.5
Guinea-Bissau	167.5	59.8	-107.8	-2.4	-1.8	0.6	120.1	20.2	-99.9	-4.9	-6.1	-1.3
Liberia	315.1	29.1	-286.0	-9.8	-0.5	9.3	291.1	12.1	-279.0	-43.3	-36.7	6.6
Mali	22.6	32.0	9.4	-2.2	-1.1	1.1	18.9	24.8	5.8	-12.2	-3.4	8.8
Sierra Leone	42.5	44.5	2.0	-3.5	-2.8	0.7	24.8	23.7	-1.1	-9.0	-20.8	-11.8
Togo	89.0	46.7	-42.3	-0.9	-6.8	-6.0	56.1	19.2	-36.9	-6.9	-7.9	-1.0
Zimbabwe	92.2	60.5	-31.8	-2.7	-0.9	1.7	121.8	147.3	25.4	-21.1	-24.1	-3.1
Average	118.6	50.4	-68.2	-4.8	-3.2	1.5	92.5	38.1	-54.4	-12.4	-15.3	-2.8
Median	91.1	43.7	-47.3	-2.5	-1.7	0.8	72.0	23.1	-48.9	-9.5	-11.8	-2.3
Rel St Dev.	0.7	0.6	1.2	1.3	1.3	2.9	0.8	1.1	1.6	1.0	0.9	3.8

Source: Authors' calculations based on the AfDB and IMF databases.

Table 1c, Annex II. Frontier Markets: Fiscal and External Buffers, 2008 – 2012

	Public Debt			Fiscal Balance			External Debt			Curr. Acc. Bal.		
	2008	2012	change	2008	2012	change	2008	2012	change	2008	2012	change
	percent of GDP											
Benin	26.9	32.5	5.6	-0.1	-0.8	-0.7	15.6	17.1	1.4	-8.1	-9.8	-1.7
Botswana	6.4	14.9	8.6	-8.2	0.3	8.4	9.9	21.1	11.2	6.9	4.9	-1.9
Burkina Faso	23.6	27.7	4.1	-4.3	-3.1	1.1	19.5	24.4	4.9	-11.5	-4.7	6.8
Cabo Verde	67.9	80.0	12.1	-0.7	-7.5	-6.9	60.1	86.0	25.9	-15.7	-11.1	4.6
Egypt	70.2	80.2	10.0	-8.0	-10.7	-2.7	21.1	13.8	-7.2	0.5	-3.1	-3.6
Ghana	33.6	56.5	22.9	-8.5	-11.5	-3.1	21.8	26.5	4.7	-11.9	-12.6	-0.7
Kenya	45.6	48.2	2.6	-4.4	-5.3	-0.9	21.4	25.5	4.1	-6.6	-9.1	-2.5
Lesotho	52.2	41.9	-10.3	8.9	5.9	-3.1	40.4	33.1	-7.3	10.0	-14.1	-24.1
Mauritius	44.0	50.3	6.3	-2.8	-1.8	1.0	12.0	15.2	3.2	-10.1	-10.0	0.1
Morocco	48.2	59.6	11.4	0.7	-7.5	-8.2	20.5	24.3	3.8	-5.2	-9.6	-4.4
Mozambique	42.1	46.6	4.5	-2.5	-3.0	-0.5	65.1	51.2	-14.0	-12.9	-26.1	-13.2
Namibia	17.7	26.6	8.9	4.2	-4.1	-8.3	22.7	37.4	14.7	2.8	-1.6	-4.4
Rwanda	21.4	28.0	6.7	1.0	-1.7	-2.6	17.5	16.9	-0.6	-4.9	-10.9	-6.0
Senegal	23.9	45.0	21.1	-4.7	-5.7	-1.0	43.7	59.7	16.0	-14.1	-9.8	4.3
Seychelles	130.0	82.5	-47.5	5.5	1.9	-3.6	81.0	58.1	-22.9	-20.1	-22.0	-1.9
South Africa	27.8	42.3	14.5	-0.4	-4.8	-4.3	26.7	34.4	7.7	-7.2	-6.3	0.9
Tanzania	29.2	41.4	12.2	-2.6	-5.0	-2.4	24.1	33.3	9.2	-10.2	-15.8	-5.6
Tunisia	43.3	44.5	1.2	-0.6	-4.9	-4.3	45.9	52.8	6.9	-3.8	-8.0	-4.2
Uganda	22.1	34.5	12.4	-2.8	-3.6	-0.8	18.1	23.8	5.8	-7.7	-10.9	-3.2
Zambia	23.5	26.9	3.4	-0.8	-4.5	-3.7	38.7	29.9	-8.8	-7.2	-3.5	3.7
Average	40.0	45.5	5.5	-1.5	-3.9	-2.3	31.3	34.2	2.9	-6.9	-9.7	-2.8

Table 1d, Annex II. Other Countries: Fiscal and External Buffers, 2008 – 2012

	Public Debt			Fiscal Balance			External Debt			Curr. Acc. Bal.		
	2008	2012	change	2008	2012	change	2008	2012	change	2008	2012	change
	percent of GDP											
Comoros	57.5	42.6	-14.9	-2.8	3.4	6.2	64.7	38.2	-26.5	-12.1	-5.4	6.7
Djibouti	43.0	38.6	-4.4	1.3	-2.7	-4.0	60.2	53.9	-6.3	-24.3	-13.4	10.9
Ethiopia	30.5	21.6	-8.9	-2.9	-1.2	1.7	11.1	19.1	8.0	-5.6	-5.8	-0.2
Gambia	71.7	77.2	5.4	-1.4	-4.4	-3.1	35.3	43.0	7.7	-12.3	-17.0	-4.7
Madagascar	31.9	38.3	6.4	-1.1	-3.1	-2.0	38.9	49.4	10.5	-20.6	-7.7	12.9
Malawi	44.6	54.9	10.3	-4.5	-4.6	-0.1	16.8	20.8	4.0	-9.7	-3.7	6.0
Mauritania	98.7	79.7	-19.0	-6.5	2.6	9.2	83.0	93.0	10.0	-14.8	-25.8	-11.0
Niger	21.3	31.1	9.7	1.5	-3.5	-5.0	14.0	20.1	6.1	-13.0	-17.7	-4.7
Sao Tome & Prin.	60.0	75.5	15.5	14.2	-6.2	-20.4	59.5	85.5	26.0	-34.9	-26.6	8.3
Swaziland	16.6	19.0	2.4	-0.7	3.7	4.3	15.9	11.2	-4.7	-8.2	0.3	8.4
Average	47.6	47.8	0.3	-0.3	-1.6	-1.3	39.9	43.4	3.5	-15.5	-12.3	3.3

Source: Authors' calculations based on the AfDB and IMF databases.

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