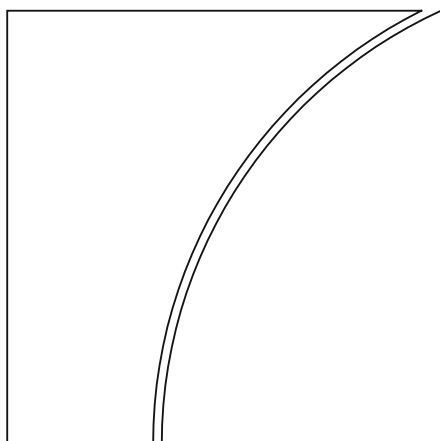




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### Central banks and debt: emerging risks to the effectiveness of monetary policy in Africa?

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Monetary and Economic Department

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# Central banks and debt: emerging risks to the effectiveness of monetary policy in Africa?<sup>1</sup>

Benedicte Vibe Christensen and Jochen Schanz<sup>2</sup>

## Introduction

The last two decades have seen some major changes in the size and composition of debt in African countries. The relief of part of the public sector's external liabilities since the early 2000s lowered the level of outstanding debt in low-income countries to sustainable levels. However, in the 2010s, debt levels started to rise again. Initially, the increase reflected favourable external financing conditions on the back of higher commodity prices and improved terms of trade. Yet, when the tide turned and commodity prices started to fall again in 2014, debt continued to rise in many countries as fiscal spending exceeded subsiding revenues. Thus, debt has become an issue of concern again, not only because of its macroeconomic impact, but also because of its possible adverse effects on the conduct of monetary policy.

High debt can undermine the effectiveness of monetary policy regardless of the level of development. Whenever the exchange rate comes under pressure, high debt, especially if foreign currency-denominated, can give rise to a difficult policy trade-off – limiting exchange rate depreciation and capital outflows through higher interest rates, on the one hand, and containing borrowing costs, on the other. And high government debt more specifically may give rise to pressure on central banks to keep interest rates lower than warranted or even to cover funding needs directly.

In most African countries, debt has not reached levels at which it risks rendering monetary policy ineffective. However, the balance of risk may change if debt continues to increase, particularly in a period of rising trade protectionism and rising interest rates abroad. While central banks can influence the level and composition of debt held or owed by the financial sector if they have supervisory powers, they can only influence government debt indirectly, notably through communications, either behind closed doors or publicly. Institutional arrangements for monetary policy, such as inflation targeting accompanied by operational independence of central banks, might put discipline on fiscal policy and thereby hinder the accumulation of debt and reduce pressure on inflation.

Focusing primarily on the largest component of debt, government debt, the following sections describe recent trends, discuss how these trends can pose risks to the effectiveness of monetary policy, and examine how central banks might use their influence to address them.

<sup>1</sup> This article is also available in French.

<sup>2</sup> The authors would like to thank Andreas Freitag and Luis Lopez Vivas for excellent research assistance and Claudio Borio, Stijn Claessens and Christian Upper for major comments. The views expressed in the paper are those of the authors and do not necessarily reflect those of the Bank for International Settlements.

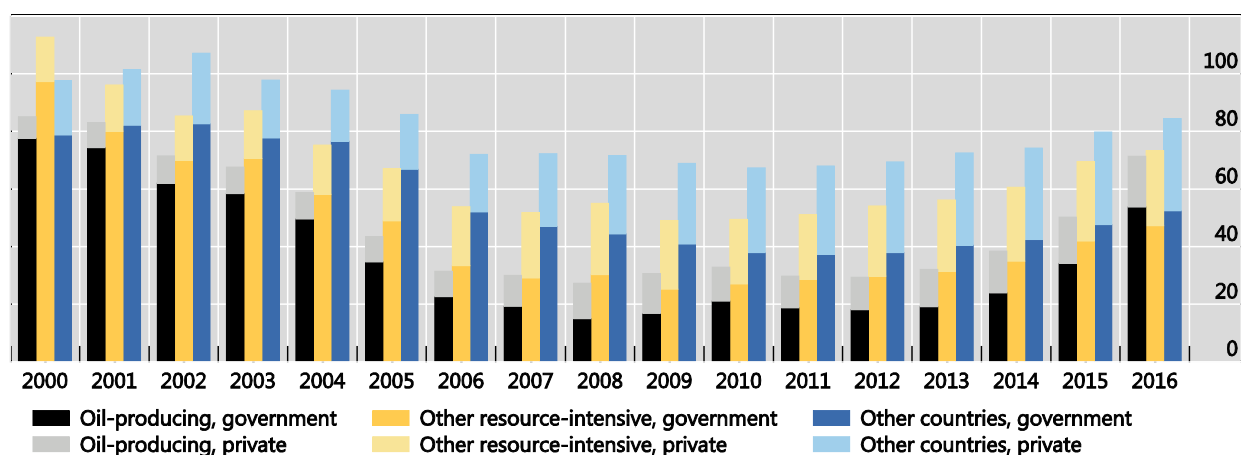
## Recent trends in debt

Africa consists of a diverse group of countries at various stages of development. That said, most differ from the majority of advanced (AEs) and emerging market economies (EMEs) in other regions by having relatively low levels of both public and private sector debt. Their economies typically rely on income from a small number of sectors, often commodities. Therefore, their terms of trade, output growth and fiscal revenues are much more volatile. As a result, debt can rise quickly in response to adverse developments, as expenditures cannot adjust swiftly enough to incomes. Indeed, this has been so since the 2014–16 downturn in commodity prices.

### Private and government debt, by country type and borrowing sector

As a percentage of GDP

Graph 1



Estimate, using simple averages across countries where data are available. For country groups, see Annex. For Congo, Egypt, Ethiopia, Mauritius, Tanzania, Uganda and the UEMOA, “government” refers to general government debt; for other countries, it is central government debt.

Sources: IMF; BIS calculations.

How has African countries’ debt evolved recently? <sup>3</sup> Following the relief of part of the public sector debt in the 2000s, public and private sector debt started to increase again (Graph 1), from both domestic and external sources.

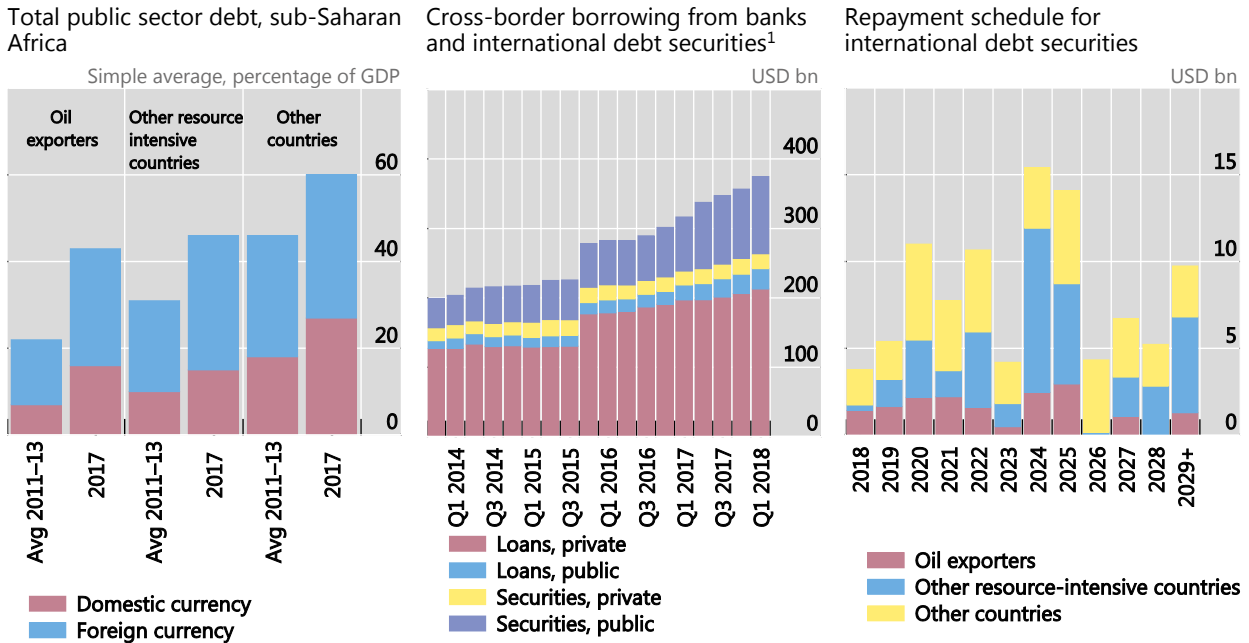
External debt has risen by almost 10 percentage points since 2010, to about 40% of GDP but with considerable differences among countries. In a few countries, external debt has doubled during this period relative to GDP (eg Cameroon, Liberia, Mozambique, Senegal and Zambia). While the composition of lenders has changed – in particular, China’s share of Africa’s external debt has increased rapidly, reflecting that country’s growing economic engagement in the region (see Box 1) – key lending terms have remained broadly constant: only 10% of outstanding debt matures in less than a year, and new lending has an average maturity of just over 20 years. With roughly a third of external debt on concessional terms, average interest rates remain low (1.75% on new commitments). Four fifths of external debt is owed by the public sector. Governments’ external debt vis-à-vis private sector lenders has mostly taken

<sup>3</sup> There is no comprehensive breakdown of debt for most African countries. Data on the domestic component of debt are particularly scarce. Very sparse data on the components of private debt suggest that perhaps half of it is owed by households.

the form of international debt securities, while private sector borrowers have relied more on bank loans (Graph 2, centre panel).<sup>4</sup> Repayments of international debt securities will be peaking in the mid-2020s (right-hand panel).

## Debt composition

Graph 2



<sup>1</sup> International debt securities (IDS) show the amounts outstanding of debt securities issued by African residents outside their local markets. “Public securities” are IDS issued by governments and public corporations. “Public loans” are stocks of cross-border bank loans to African governments; “private loans” are the difference between total and “public” cross-border loans. Cross-border bank loans exclude loans by pan-African banks other than those reporting in South Africa. The jump in cross-border loans in Q4 2015 coincides with the inclusion of China and Russia as reporting countries.

Sources: IMF (2018a); Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS locational banking statistics; BIS calculations.

Information about domestic debt is sparser. Household debt appears to be relatively small relative to GDP in most African countries. Liabilities of commercial banks are overwhelmingly towards residents, to some extent in foreign currency (Annex Tables A1 and A2). A significant share of their claims are on the government and the central bank (Annex Tables A3 and A4). Governments have increasingly borrowed in local currency in the form of bonds. Most of these bonds are held by residents, despite a gradual increase in foreign ownership (Annex Table A7).

The reasons for the increase in debt during the 2010s vary significantly across time and countries, and involve both a greater ability and a need to borrow. A greater ability to borrow has resulted from debt relief, improved fundamentals and favourable global financial conditions (Graph 3). A greater need reflects, in particular, negative terms of trade shocks (Christensen (2016)). Not only did these shocks weigh on economic growth and fiscal revenues, but they may also have increased the size of governments’ contingent liabilities to banks and state-owned enterprises. For example, banks’ non-performing loans have risen to about 11% of total loans, or 22% (net of provisions) of capital, partly because highly indebted governments had incurred arrears vis-à-vis their suppliers (simple averages over data shown in Annex

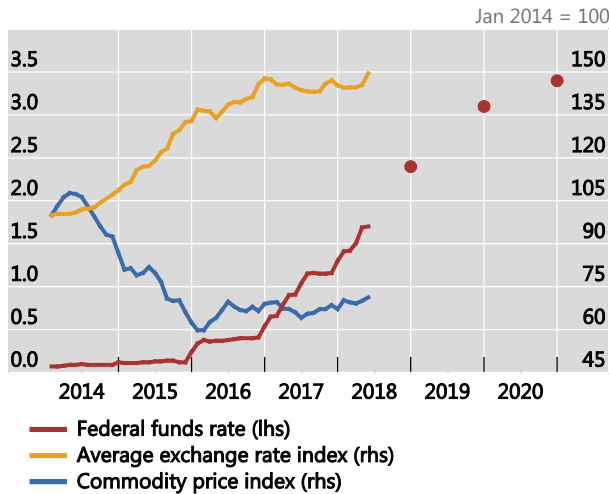
<sup>4</sup> The three largest issuers are South Africa (41% of nominal values), Nigeria (14%) and Egypt (12%).

Table A5).<sup>5</sup> In addition, loans to government-owned enterprises have played a prominent role in countries such as The Gambia and Mozambique. Debt-financed spending on infrastructure has also boosted government debt (eg in Kenya).

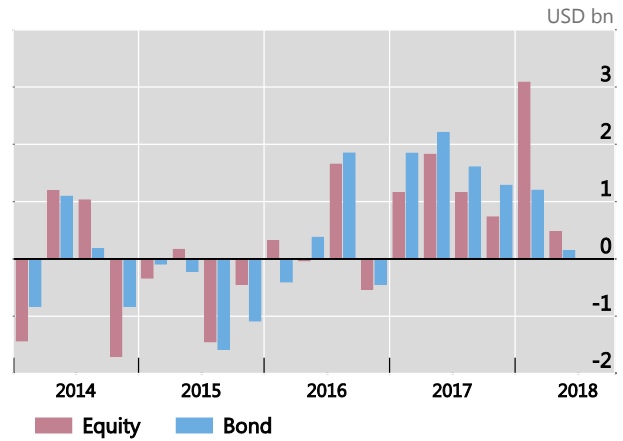
## Macro-financial background to the changes in indebtedness

Graph 3

Macro-financial environment and exchange rates



Net portfolio flows into Africa<sup>1</sup>



The dots in the left-hand panel are the projections of Federal Reserve Board members and Federal Reserve Bank presidents for the federal funds rate as of 14 June 2018. See Federal Reserve Board (2018) for details. The commodity price index includes both fuel and non-fuel items. The exchange rate index is a simple average of the exchange rates of the countries listed in the Annex (country groups). <sup>1</sup> Net portfolio flows as of end-April 2018.

Sources: Federal Reserve Board; Bloomberg; EPFR; BIS calculations.

While not in itself affecting the ability to service debt, the depreciation of local currencies was another important reason for the increase in debt-to-GDP ratios, given that a large part of debt is denominated in foreign currency (Graph 2, left-hand panel covering sub-Saharan Africa). For example, a currency depreciation of 45% vis-à-vis the US dollar raised Ghana's debt-to-GDP ratio by almost 8 percentage points from 2013 to 2014.<sup>6</sup> Indeed, most African borrowers' external funding is in US dollars.<sup>7</sup> The US dollar share is particularly high for international debt securities, at 90%. In contrast, cross-border bank loans are denominated in a wider set of currencies – about half in US dollars and a quarter in euros. Renminbi-denominated cross-border loans, while still small, are estimated to have grown rapidly in the past few years, to 3% (\$9 billion).

Already, governments' interest payments have increased on the back of rising debt stocks: for example, the median ratio of interest payments to revenues in sub-Saharan countries nearly doubled from 5% to close to 10% between 2013 and 2017.

<sup>5</sup> While banks' capitalisation has suffered in some countries, it appears ample on average: Average Tier 1 capital rates are around 18% and leverage ratios around 12%.

<sup>6</sup> IMF (2017).

<sup>7</sup> This is typical also for EMEs. See eg Avdjiev et al (2018) for the implications for cross-border bank flows and real investment.

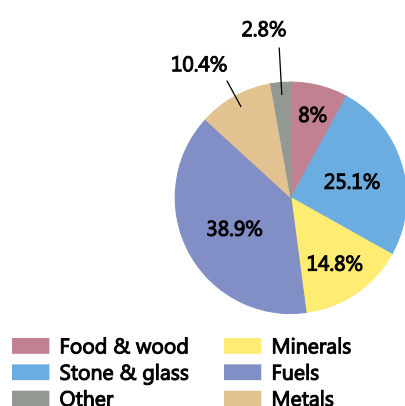
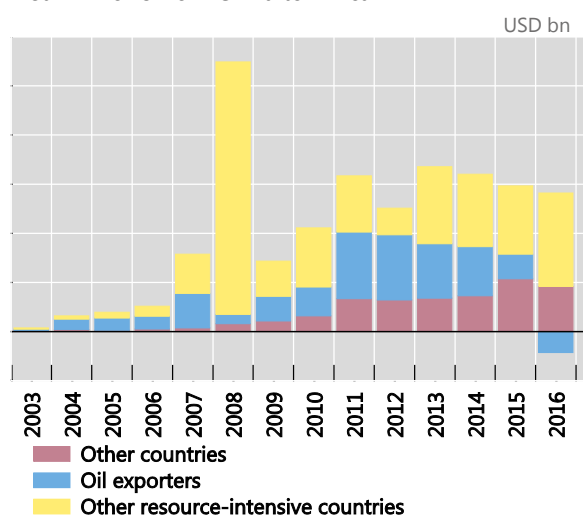
## Chinese lending to Africa

The strength of Chinese demand for commodities has become a key determinant of economic activity in Africa. In 2017, China received 11% of all African countries' exports, making it the region's largest trading partner. China's demand is focused mainly on commodities (Graph A, left-hand panel), making resource-rich countries such as Angola (50% of total African exports to China), South Africa (23%), Nigeria (8%) and the Republic of Congo (5%) China's largest trading partners in the region. These trade links are also reflected in investment flows. The stock of China's foreign direct investment (FDI) in Africa has more than trebled since 2010. FDI inflows target mostly resource-intensive countries (blue and yellow bars in Graph A, right-hand panel), although net inflows to oil-exporting countries turned negative in 2016 following the sharp decline in oil prices.

### Economic links between China and Africa

Graph A

Composition of African exports to China (2016)

Net FDI flows from China to Africa<sup>1</sup>

<sup>1</sup> The peak in net FDI inflows in 2008 was driven by the \$5.6 billion acquisition of a stake in Standard Bank in South Africa by Industrial and Commercial Bank of China.

Sources: UN COMTRADE and CEIC database; BIS calculations.

Chinese lending to African governments shows the same pattern. Lending has increased rapidly over the past decade, from about \$2 billion in 2005 to almost \$12 billion in 2015.<sup>①</sup> Eighty per cent of the loans concerned were granted by official Chinese banks (Eximbank of China and China Development Bank). Between 2000 and 2015, loans were concentrated in eight oil-exporting countries (about \$40 billion out of \$94 billion), including Angola (\$19 billion), Sudan (\$6.5 billion), Cameroon (\$3.7 billion) and Nigeria (\$3.5 billion). Ethiopia (\$13.1 billion) and Kenya (\$6.8 billion) were among the largest non-resource-intensive recipients.

About two thirds of lending from China flowed into infrastructure, mostly into transport and communication. According to Bräutigam et al (2016), about a third of these loans are collateralised, for example with future resource exports. Chinese companies are often involved in carrying out the construction projects for which loans are being granted. An example is the Addis Ababa–Djibouti Railway, designed to boost Ethiopia's exports by opening a route to the Arabian Sea. Eximbank supported the \$4.5 billion project with a loan to the Ethiopian government. The design, construction and operation of the railway have all been contracted to Chinese companies.<sup>②</sup>

Since 2015, Chinese lending to Africa is likely to have grown further. In the context of the 2015 Forum on China-Africa Cooperation, China pledged new funding for the three subsequent years, including loans totalling \$35 billion with preferential conditions.

<sup>①</sup> The sources for the data presented in this paragraph are Atkins (2017) and Bräutigam et al (2016). <sup>②</sup> Eximbank of China (2017).

## Does high debt reduce monetary policy effectiveness?

The level and structure of an economy's debt, especially if denominated in foreign currency, can undermine the central bank's ability to pursue its policy objectives. This section recalls the channels that appear most relevant for Africa.

The first channel works through foreign currency debt levels and implied currency mismatches. For foreign currency debt, financial conditions depend directly on the monetary policy of the country issuing the relevant currency – in the case of Africa, mostly the US dollar, but also the euro. Higher interest rates in the United States and the euro area, therefore, tighten financing conditions and put pressure on domestic currencies.<sup>8</sup> Depreciating local currencies might also give rise to vulnerabilities in sectors in which foreign currency assets or revenues are insufficient to match foreign currency liabilities. This may be an issue for some banks in Africa (the banking sectors in The Gambia and Rwanda, for example, had small negative net open foreign exchange positions in 2017). In countries with substantial foreign investor participation in domestic currency markets (eg Ghana, Nigeria, South Africa and Zambia), depreciating local currencies may also induce unhedged foreign investors to repatriate investments to limit valuation losses in their home currency (Bruno and Shin (2015)). More broadly, high external debt makes domestic borrowers more vulnerable to swings in market sentiment. When external financial conditions tighten, and the exchange rate comes under pressure, the central bank may face a difficult balancing act, between attempting to limit exchange rate depreciation and capital outflows, on the one hand, and containing borrowing costs, on the other.

The second channel works primarily through domestic currency debt levels. Changes in policy rates have a larger impact the higher the level of domestic debt. Central banks may come under greater pressure to keep interest rates lower than warranted and to ease the refinancing burden, or even to cover funding needs directly via loans or bond purchases. While central bank funding of the government has increased in some regions (Annex Table 6) and contributed to a decline in reserves, it has rarely triggered inflation bursts – counter-examples are Zimbabwe during 2008–09 and South Sudan in 2016.<sup>9</sup> Across the region, monetary policy frameworks have generally been strengthened (for example, by introducing inflation targeting) and many countries have implemented limits to curb direct deficit financing.<sup>10</sup>

<sup>8</sup> Just under half of African countries (22 out of 54) have de jure floating exchange rate regimes; of these, IMF (2016) classifies 10 as managed, stabilised or crawl-like arrangements. Twenty-three countries have pegged their exchange rate to another currency, 17 of them to the euro.

<sup>9</sup> Busogoro (2015) finds that, in Burundi in 2005–15, central bank advances to government had no significant impact on the price level.

<sup>10</sup> For example, the Bank of Central African States (BEAC), after expanding its advances to national Treasuries during 2016, decided to eliminate statutory advances by end-2017. See IMF (2018c).



## What could central banks do to mitigate these risks?

Many African central banks are able to influence borrowing patterns and risk-taking in the private sector in their capacity as macro- or microprudential authorities.<sup>11</sup> Yet they cannot control the size of sovereign debt in the same way, and their sway over its composition is typically very small. This is a concern, given that it is public sector debt, by virtue of its size, which continues to pose the most substantial risk to the effectiveness of monetary policy in Africa.

As the experience of other emerging market economies has shown, institutional factors play an important role in ensuring that monetary policy remains effective. These factors include prudent fiscal management (in particular fiscal rules), sound prudential supervision and clear objectives for the central bank (including a prohibition in law to extend loans to the government) combined with operational autonomy in achieving those objectives (including curtailing the government's ability to recall a central bank Governor).

Pursuing reforms that strengthen their autonomy could therefore be one way forward for some central banks. Indeed, the independence of central banks appears to have come under pressure in some African countries (Kganyago (2018)). The adoption of inflation targeting might be able to help avoid an increase in debt – partly because inflation targeting helps stabilise the economy, and partly because the public announcement of an inflation target provides greater accountability for missing the target, thereby helping to put pressure on governments to tighten fiscal policy (Tapsoba (2010)). That said, if debt nevertheless rises, inflation targeting alone cannot ensure that monetary policy remains effective.

But even within the existing institutional frameworks, there may be a number of options central banks have to influence public sector debt.

An obvious avenue is debt management. To the extent that central banks have a role, they could work with the government to increase debt tenors and ensure that the timing of debt service does not overwhelm the fiscal budget.<sup>12</sup> For example, the National Bank of Rwanda participates in joint committees with the Treasury and the debt management office, which serve to refine the government's macroeconomic policies and forecasts. In Botswana, the central bank advises state-owned companies seeking to raise debt. However, the effectiveness of such arrangements clearly depends on a desire to take advice into account. In addition, there may be a risk that too close an involvement infringes upon the central bank's independence. One way to limit such risks is a more indirect role. For example, the Central Bank of Kenya embarked on an initiative to develop the country's debt markets, in part to ensure government access to longer-term domestic currency funding.<sup>13</sup>

<sup>11</sup> For instance, central banks supervise commercial banks in Algeria, Botswana, Egypt, Mozambique, The Gambia, Ghana, Liberia, Nigeria, Rwanda, Sierra Leone, South Africa, Tanzania and Zambia. For an overview of the institutional framework for macroprudential policies, see IMF (2018b), Table 1.

<sup>12</sup> See eg Vajs (2014), CGFS (2011) and FSB (2010).

<sup>13</sup> See Central Bank of Kenya (2014).

An alternative avenue for the central bank to build support for a fiscal policy that does not endanger monetary policy effectiveness is communication. Designing such a strategy, however, is not straightforward.<sup>14</sup>

One aspect is the appropriate messaging. Central banks might find it difficult to get the government's attention: for example, suggestions to rein in spending might be brushed aside with reference to the need to fund infrastructure investments. Too timid warnings of fiscal difficulties may not acquire sufficient traction. Too forceful ones might cause lasting damage to the central bank's relationship with the Treasury or trigger undesired market volatility. To guard against the criticism that the central bank exceeded its mandate, it might be useful to point out the disadvantages of excessive debt for monetary policy rather than criticising fiscal policy more generally. How candid central banks can be depends on their mandates, the degree of independence and even country-specific implicit norms. As a result, the extent to which criticism is acceptable, and how far it may be voiced in public, is bound to vary across countries.

Another aspect is the optimal frequency of communications. Risk warnings are bound to receive more attention when they are issued judiciously. Frequent warnings, in contrast, are likely to lead to communication fatigue.

The third aspect concerns available data. Credible communications require appropriate data to support the central banks' own analysis and enable others to conduct independent assessments. In many African countries, debt statistics are incomplete – lacking, for example, information about publicly guaranteed debt and debt incurred by public enterprises. Central banks have a key role to play in collecting and publishing such statistical information.

## Conclusion

In a period of rising trade protectionism and higher interest rates abroad, there is renewed urgency to ensure that debt, already on an upward path, does not impede the effectiveness of monetary policy in African countries. Given African economies' integration in global value chains, protectionism would probably lower export revenues and raise demand for external finance precisely when tighter monetary policy in advanced economies pushes up external funding costs. The increase in funding costs might be felt broadly across African countries as foreign investors may not differentiate much between frontier economies.

While central banks can affect the level and composition of debt held or owed by the financial sector if they have supervisory powers, they can only influence government debt indirectly, notably through communications. Advising the government and state-owned companies on debt management and macroeconomic developments might help slow a build-up in debt. Should debt nevertheless rise, certain institutional arrangements, such as rules against direct funding of the government budget, setting an inflation target for monetary policy, and operational independence, could help protect the effectiveness of monetary policy. Pursuing reforms that implement such arrangements could be one way forward for some African central banks.

<sup>14</sup> See CGFS (2016) for a discussion of the design of effective communication of financial stability risks.

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## Annex

### Country groups

Unless otherwise indicated, countries are grouped as follows:<sup>15</sup>

- Oil exporters: Angola, Algeria, Cameroon, Nigeria and the group of countries that form the Economic and Monetary Community of Central Africa (Cameroon, the Central African Republic, Chad, Congo, Equatorial Guinea and Gabon).
- Other resource-intensive countries: Botswana, the Democratic Republic of the Congo, Ghana, Namibia, South Africa, Tanzania and Zambia.
- Other African countries: Burundi, Egypt, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Morocco, Mozambique, Rwanda, Tunisia, Uganda, Zimbabwe and the group of countries that form the West African Economic and Monetary Union (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo)

<sup>15</sup> For the groups covered in Graph 2, left-hand panel, see IMF (2018a), p 70.

## Commercial banks' foreign currency assets and liabilities

Share of total liabilities or assets, in per cent

Table A1

		2007	2010	2012	2013	2016	2017
Algeria	Liabilities	-	4.1	-	4.0	-	4.4
	Assets	-	4.8	-	4.6	-	5.0
Angola	Liabilities	-	9.8	7.6	8.2	3.7	4.0
	Assets	-	8.1	10.8	8.4	6.7	6.5
Botswana	Liabilities	26.3	12.3	13.1	12.0	14.7	13.9
	Assets	1.9	10.5	3.9	14.8	4.7	18.2
Burundi	Liabilities	-	17.5	-	17.5	-	11.0
	Assets	-	19.9	-	17.2	-	10.2
Congo, DR	Liabilities	73.7	78.8	77.3	76.9	78.1	79.8
	Assets	73.1	75.9	75.6	75.9	78.0	80.4
Egypt	Liabilities	31.6	27.6	24.6	24.2	36.7	32.0
	Assets	31.1	27.2	24.1	23.7	36.6	32.6
Eswatini	Liabilities	1.0	3.5	6.6	7.3	2.6	1.8
	Assets	11.0	19.5	18.2	12.0	14.5	11.0
Ethiopia	Liabilities	2.5	2.2	1.9	2.2	1.5	1.5
	Assets	6.7	9.5	5.9	7.7	3.0	3.1
Ghana	Liabilities	27.5	28.4	29.7	34.6	28.2	26.9
	Assets	26.1	23.0	24.5	25.1	23.9	22.8
Kenya	Liabilities	16.2	14.6	21.0	17.3	22.6	19.7
	Assets	8.7	10.4	13.3	13.8	16.8	14.2
Lesotho	Liabilities	-	1.6	-	3.8	-	3.5
	Assets	-	47.6	-	31.8	-	31.2
Madagascar	Liabilities	20.1	19.3	17.5	16.3	15.7	15.0
	Assets	21.6	21.1	18.5	17.7	16.6	16.0
Malawi	Liabilities	17.3	8.4	17.9	27.6	24.3	24.4
	Assets	11.7	10.4	17.8	20.2	11.9	20.0
Mauritius	Liabilities	69.4	64.6	63.9	62.2	61.9	57.9
	Assets	66.2	66.9	61.8	64.4	61.4	60.6
Morocco	Liabilities	2.8	3.5	4.3	4.2	6.0	4.4
	Assets	7.3	6.5	6.1	6.3	7.4	8.1
Mozambique	Liabilities	34.9	37.7	31.2	25.5	33.5	25.0
	Assets	32.9	-	29.1	-	32.7	-
Namibia	Liabilities	2.9	3.7	2.3	3.7	2.5	4.7
	Assets	3.7	3.6	4.4	5.9	2.9	1.9
Nigeria	Liabilities	-	10.9	-	14.0	-	11.6
	Assets	-	21.4	-	19.1	-	25.8
Rwanda	Liabilities	-	19.0	-	23.4	-	28.6
	Assets	-	17.9	-	16.3	-	19.0
South Africa	Liabilities	-	-	12.0	8.3	9.5	7.6
	Assets	-	-	13.9	11.7	13.0	11.6
Tanzania	Liabilities	33.8	29.6	34.4	34.3	37.4	36.1
	Assets	29.1	29.2	31.0	29.6	31.1	29.4
Tunisia	Liabilities	14.4	-	13.1	-	14.6	-
	Assets	11.5	-	11.2	-	10.8	-
Uganda	Liabilities	30.9	25.2	30.1	31.8	35.9	32.0
	Assets	30.1	24.7	31.7	30.8	35.6	29.5
Zambia	Liabilities	31.4	42.0	22.9	30.4	37.3	44.3
	Assets	-	33.0	2.7	25.3	1.3	37.7
Zimbabwe	Liabilities	-	100.0	-	100.0	-	100.0
	Assets	-	100.0	-	100.0	-	100.0
UEMOA <sup>1</sup>	Liabilities	-	0.8	-	1.1	-	2.3
	Assets	-	5.1	-	3.1	-	1.6
CEMAC <sup>2</sup>	Liabilities	-	6.6	1.8	2.5	2.5	3.8
	Assets	-	11.1	7.2	6.5	4.1	4.9

<sup>1</sup> West African Economic and Monetary Union. <sup>2</sup> Economic and Monetary Community of Central Africa. "-": no data. Source: BIS Questionnaire.

## Commercial banks' claims and liabilities vis-à-vis non-residents

Share of total liabilities or assets, in per cent

Table A2

		2010	2013	2014	2015	2016	2017
Algeria	Liabilities	0.5	0.9	1.2	1.7	1.3	1.2
	Assets	0.4	0.5	0.4	0.5	0.5	0.5
Angola	Liabilities	9.4	8.2	4.8	4.7	3.7	4.0
	Assets	10.1	8.4	7.3	7.0	6.8	6.5
Botswana	Liabilities	5.4	1.7	2.9	2.5	2.8	2.8
	Assets	11.1	9.9	10.3	11.2	10.1	11.8
Burundi	Liabilities	5.6	6.7	9.4	9.1	7.7	7.2
	Assets	18.0	14.9	12.7	13.0	7.2	6.9
Congo, DR	Liabilities	4.7	6.6	5.1	5.8	6.2	0.0
	Assets	38.2	32.1	30.7	28.7	30.2	-
Egypt	Liabilities	3.2	2.1	2.2	3.3	7.5	6.2
	Assets	11.5	6.9	4.9	3.1	4.3	7.4
Eswatini	Liabilities	3.6	7.6	5.0	3.9	2.3	1.9
	Assets	19.5	12.3	9.0	12.5	13.5	10.8
Ethiopia	Liabilities	-	-	-	-	-	-
	Assets	-	-	-	-	-	-
Ghana	Liabilities	6.1	8.8	8.8	6.5	5.1	4.7
	Assets	7.3	7.6	9.0	8.2	8.7	8.1
Kenya	Liabilities	4.1	7.3	8.1	9.2	8.0	7.7
	Assets	5.1	5.8	4.9	5.9	4.9	5.3
Lesotho	Liabilities	1.4	3.3	2.3	2.7	2.5	2.9
	Assets	47.9	30.8	26.3	29.7	24.5	30.3
Madagascar	Liabilities	3.3	2.8	2.8	1.7	1.7	1.9
	Assets	18.3	12.2	13.2	12.0	11.1	10.1
Malawi	Liabilities	-	-	-	-	-	-
	Assets	-	-	-	-	-	-
Mauritius	Liabilities	34.7	35.9	32.8	28.4	25.1	25.9
	Assets	63.4	57.8	57.4	55.1	51.4	49.2
Morocco	Liabilities	1.8	2.5	2.6	2.4	2.8	1.9
	Assets	2.3	2.4	2.6	3.0	2.7	3.9
Mozambique	Liabilities	5.6	6.5	5.8	5.6	5.7	5.7
	Assets	18.1	11.2	9.3	10.5	12.2	8.5
Namibia	Liabilities	1.0	2.6	2.6	3.3	4.4	4.4
	Assets	15.6	13.7	9.4	7.5	5.9	6.6
Nigeria	Liabilities	1.0	2.2	4.6	5.7	6.0	7.1
	Assets	7.6	8.6	7.7	5.6	6.5	7.6
Rwanda	Liabilities	5.0	8.2	8.3	6.4	7.3	5.9
	Assets	17.1	12.7	11.5	7.4	10.3	7.6
South Africa	Liabilities	9.7	8.7	11.2	12.8	9.7	8.8
	Assets	11.9	12.7	12.8	15.1	11.6	11.0
Tanzania	Liabilities	1.6	4.8	4.9	5.1	6.0	0.0
	Assets	11.7	6.7	5.6	7.6	5.7	0.0
Tunisia	Liabilities	10.2	10.6	11.3	10.9	10.9	11.3
	Assets	3.7	3.4	3.1	3.1	2.8	2.3
Uganda	Liabilities	6.8	9.9	9.3	10.0	8.4	7.7
	Assets	10.2	9.1	5.8	10.1	9.5	7.7
Zambia	Liabilities	7.1	4.4	6.0	7.2	9.2	7.0
	Assets	15.3	11.3	10.9	17.3	18.5	18.7
Zimbabwe	Liabilities	-	-	-	-	-	-
	Assets	-	-	-	-	-	-
UEMOA <sup>1</sup>	Liabilities	10.8	10.7	10.5	11.9	11.3	13.2
	Assets	22.2	23.9	23.5	23.0	25.9	25.4
CEMAC <sup>2</sup>	Liabilities	5.8	6.3	6.6	5.1	6.4	6.0
	Assets	15.4	15.4	9.9	10.4	11.4	11.0

<sup>1</sup> West African Economic and Monetary Union (simple average over member countries). <sup>2</sup> Economic and Monetary Community of Central Africa (simple average over member countries where data available). "-" = no data. Source: IMF.

## Commercial banks' claims and liabilities vis-à-vis government<sup>1</sup>

Share of total liabilities or assets, in per cent

Table A3

		2010	2013	2014	2015	2016	2017
Algeria	Liabilities	4.7	5.1	4.9	4.6	2.9	3.8
	Assets	14.4	13.9	13.1	16.2	21.3	15.6
Angola	Liabilities	5.6	9.2	9.7	9.5	9.1	8.7
	Assets	14.8	17.0	23.4	26.1	30.0	34.0
Botswana	Liabilities	0.6	0.3	0.3	0.4	0.2	0.3
	Assets	1.2	2.7	2.6	2.1	3.4	4.4
Burundi	Liabilities	7.1	6.2	4.9	4.3	4.3	4.1
	Assets	12.1	8.1	11.6	17.6	25.2	30.2
Congo, DR	Liabilities	1.0	6.0	4.1	3.5	3.7	-
	Assets	1.1	2.6	2.6	3.0	3.9	-
Egypt	Liabilities	7.8	9.0	9.8	10.0	9.7	8.7
	Assets	26.0	40.5	43.6	43.0	38.7	35.1
Eswatini	Liabilities	4.6	2.2	2.0	2.7	2.2	1.8
	Assets	5.4	11.2	10.0	9.7	10.4	11.2
Ethiopia	Liabilities (B)	9.5	11.3	-	-	-	7.8
	Assets (B)	4.7	1.5	-	-	-	2.7
Ghana	Liabilities	5.3	4.5	4.1	5.6	6.1	4.4
	Assets	24.1	26.2	22.3	20.1	20.1	18.5
Kenya	Liabilities	4.7	4.4	4.4	4.1	4.6	4.5
	Assets	24.5	20.4	19.4	18.7	21.3	22.7
Lesotho	Liabilities	0.3	0.1	0.1	0.8	0.2	0.0
	Assets	5.6	5.6	4.8	5.8	6.2	6.1
Madagascar	Liabilities	10.5	6.0	5.3	4.8	4.4	3.7
	Assets	9.8	13.1	10.3	10.0	11.9	13.2
Malawi	Liabilities	-	-	-	-	-	-
	Assets	-	-	-	-	-	-
Mauritius	Liabilities	1.7	1.0	0.6	0.7	0.5	0.6
	Assets	5.2	4.4	5.4	5.7	7.1	6.6
Morocco	Liabilities	1.5	1.3	1.1	1.3	1.2	0.7
	Assets	9.6	14.0	12.9	13.2	12.1	12.9
Mozambique	Liabilities	5.5	6.6	6.0	5.0	5.7	5.9
	Assets	10.1	16.9	17.0	16.6	15.8	24.7
Namibia	Liabilities	2.0	1.8	1.9	1.1	2.2	0.8
	Assets	3.7	6.9	6.3	7.8	8.2	10.1
Nigeria	Liabilities	2.4	3.9	4.0	1.8	1.7	0.9
	Assets	18.7	18.8	12.5	16.3	15.1	11.6
Rwanda	Liabilities	8.3	12.9	12.2	11.8	10.4	12.0
	Assets	9.8	8.8	8.8	12.9	9.8	11.9
South Africa	Liabilities	2.5	3.2	3.3	2.6	3.1	2.7
	Assets	7.6	8.4	9.0	8.4	10.3	10.9
Tanzania	Liabilities	5.3	3.9	3.5	3.0	2.0	-
	Assets	18.5	18.8	17.5	14.1	14.2	-
Tunisia	Liabilities	2.1	1.9	1.8	2.0	1.9	2.0
	Assets	5.4	5.9	7.5	8.7	9.3	9.6
Uganda	Liabilities	2.1	2.4	2.7	2.4	2.5	2.5
	Assets	21.6	19.6	21.2	17.4	19.5	19.2
Zambia	Liabilities	6.6	8.4	8.4	6.1	8.5	6.6
	Assets	19.9	26.1	21.1	13.6	15.0	25.8
Zimbabwe	Liabilities (B)	3.2	0.8	-	-	-	1.0
	Assets (B)	0.0	5.3	-	-	-	21.4
UEMOA	Liabilities	10.2	9.6	8.8	8.3	7.5	8.1
	Assets	8.6	8.9	11.2	13.9	15.3	15.4
CEMAC	Liabilities	10.7	8.8	10.8	10.2	8.6	10.5
	Assets	5.2	5.6	6.8	9.0	12.7	12.4

<sup>1</sup> Where IMF data is presented, other depository corporations' claims and liabilities vis-à-vis central government. "-" = no data. Sources: IMF; BIS questionnaire (B).

## Banks' claims on government and central bank; liabilities to government<sup>1</sup>

Share of total liabilities or assets, in per cent

Table A4

		2010	2013	2014	2015	2016	2017
Algeria	Liabilities	4.7	5.1	4.9	4.6	2.9	3.8
	Assets	50.7	44.3	40.5	35.9	32.3	30.5
Angola	Liabilities	5.6	9.2	9.7	9.5	9.1	8.7
	Assets	38.2	33.1	39.7	41.8	42.5	45.8
Botswana	Liabilities	0.6	0.3	0.3	0.4	0.2	0.3
	Assets	39.5	18.6	15.4	17.9	19.2	15.2
Burundi	Liabilities	7.1	6.2	4.9	4.3	4.3	4.1
	Assets	21.0	16.6	21.3	24.5	35.0	43.1
Congo, DR	Liabilities	1.0	6.0	4.1	3.5	3.7	-
	Assets	9.5	13.5	12.8	13.4	12.2	-
Egypt	Liabilities	7.8	9.0	9.8	10.0	9.7	8.7
	Assets	42.5	51.9	55.1	57.1	54.4	54.8
Eswatini	Liabilities	4.6	2.2	2.0	2.7	2.2	1.8
	Assets	15.4	18.2	18.1	18.7	20.0	19.7
Ethiopia	Liabilities (B)	9.5	11.3	-	-	-	7.8
	Assets (B)	20.7	9.8	-	-	-	12.0
Ghana	Liabilities	5.3	4.5	4.1	5.6	6.1	4.4
	Assets	35.8	40.4	35.1	33.7	36.3	35.7
Kenya	Liabilities	4.7	4.4	4.4	4.1	4.6	4.5
	Assets	30.5	26.1	25.9	24.6	26.4	27.7
Lesotho	Liabilities	0.3	0.1	0.1	0.8	0.2	0.0
	Assets	9.4	10.2	10.9	10.5	12.4	11.4
Madagascar	Liabilities	10.5	6.0	5.3	4.8	4.4	3.7
	Assets	26.3	28.2	24.1	23.3	27.6	29.6
Malawi	Liabilities	-	-	-	-	-	-
	Assets	-	-	-	-	-	-
Mauritius	Liabilities	1.7	1.0	0.6	0.7	0.5	0.6
	Assets	7.9	8.1	9.7	10.9	13.2	14.5
Morocco	Liabilities	1.5	1.3	1.1	1.3	1.2	0.7
	Assets	13.4	16.5	14.6	15.3	15.0	15.6
Mozambique	Liabilities	5.5	6.6	6.0	5.0	5.7	5.9
	Assets	18.1	28.1	26.3	27.6	29.4	41.1
Namibia	Liabilities	2.0	1.8	1.9	1.1	2.2	0.8
	Assets	9.0	10.4	10.8	11.5	13.0	16.3
Nigeria	Liabilities	2.4	3.9	4.0	1.8	1.7	0.9
	Assets	23.3	35.9	32.6	34.3	30.7	33.3
Rwanda	Liabilities	8.3	12.9	12.2	11.8	10.4	12.0
	Assets	22.3	16.2	18.4	21.4	17.1	21.2
South Africa	Liabilities	2.5	3.2	3.3	2.6	3.1	2.7
	Assets	10.8	11.2	11.8	10.9	13.1	13.6
Tanzania	Liabilities	5.3	3.9	3.5	3.0	2.0	-
	Assets	31.5	31.1	30.5	28.2	26.6	-
Tunisia	Liabilities	2.1	1.9	1.8	2.0	1.9	2.0
	Assets	10.4	10.9	10.7	11.6	12.1	13.0
Uganda	Liabilities	2.1	2.4	2.7	2.4	2.5	2.5
	Assets	31.1	31.3	34.0	28.3	32.9	37.0
Zambia	Liabilities	6.6	8.4	8.4	6.1	8.5	6.6
	Assets	40.1	40.9	38.2	31.1	34.8	37.0
Zimbabwe	Liabilities (B)	3.2	0.8	-	-	-	1.0
	Assets (B)	-	-	-	-	-	-
UEMOA	Liabilities	10.2	9.6	8.8	8.3	7.5	8.1
	Assets	19.7	17.0	19.9	22.2	22.1	20.8
CEMAC	Liabilities	10.7	8.8	10.8	10.2	8.6	10.5
	Assets	31.8	28.0	33.8	29.2	24.4	25.2

<sup>1</sup> Where IMF data is presented, other depository corporations' claims and liabilities vis-à-vis central government and central bank. "-" = no data. Sources: IMF; BIS questionnaire (B).



## Non-performing loans

Share of gross loans or, net of provisions, of capital, in per cent

Table A5

		2010	2013	2014	2015	2016	2017
Algeria	rel to loans (B)	18.3	10.6	9.2	9.8	11.9	12.3
	rel to capital	-	-	-	-	-	-
Angola	rel to loans (B)	3.7	9.8	11.7	11.6	13.6	29.8
	rel to capital <sup>1</sup> (B)	-9.5	6.7	11.4	1.4	4.5	45.6
Botswana	rel to loans (B)	3.4	3.6	3.6	3.9	4.9	5.3
	rel to capital <sup>1</sup> (B)	3.2	13.4	10.9	9.9	12.8	13.4
Burundi	rel to loans (B)	9.9	10.3	11.1	18.7	14.6	14.7
	rel to capital	-	7.7	4.5	10.1	10.5	7.1
Congo, DR	rel to loans (B)	3.1	4.1	4.0	8.1	7.8	12.0
	rel to capital	-	-	-	-	-	-
Egypt	rel to loans (B)	13.6	9.3	8.5	7.1	6.0	4.9
	rel to capital	-	-	-	-	-	-
Eswatini	rel to loans (B)	7.8	6.6	6.9	6.4	9.2	7.6
	rel to capital	19.3	21.9	17.6	17.7	21.5	28.6
Ethiopia	rel to loans (B)	3.5	2.5	2.0	2.1	2.9	2.6
	rel to capital	-	-	-	-	-	-
Ghana	rel to loans (B)	16.1	12.0	11.0	14.6	17.3	22.7
	rel to capital	16.2	9.6	11.3	13.3	19.3	18.9
Kenya	rel to loans (B)	6.3	5.2	5.6	6.8	9.2	11.0
	rel to capital <sup>1</sup> (B)	6.4	5.8	7.4	11.0	17.6	19.5
Lesotho	rel to loans (B)	2.7	3.5	3.7	3.8	3.5	4.1
	rel to capital	5.7	6.4	5.1	7.2	6.8	8.7
Madagascar	rel to loans (B)	13.1	14.2	11.6	10.6	9.7	8.6
	rel to capital	24.4	23.3	21.9	20.2	18.5	17.1
Malawi	rel to loans (B)	3.9	15.4	14.9	12.7	17.0	15.7
	rel to capital	-	-	-	10.1	16.7	18.4
Mauritius	rel to loans (B)	2.4	3.6	4.3	6.4	6.8	6.2
	rel to capital	8.2	12.6	13.4	17.8	18.6	18.6
Morocco	rel to loans (B)	4.8	5.9	6.9	7.4	7.6	7.6
	rel to capital	-	-	-	-	-	-
Mozambique	rel to loans (B)	-	-	3.3	4.3	5.7	12.6
	rel to capital	-	-	-	-	-	-
Namibia	rel to loans (B)	2.0	1.3	1.5	1.6	1.5	2.5
	rel to capital	11.1	7.7	7.2	8.2	8.9	11.3
Nigeria	rel to loans (B)	15.5	3.2	2.9	4.9	12.8	14.9
	rel to capital	775.3	5.2	5.1	5.3	30.0	42.1
Rwanda	rel to loans (B)	10.7	6.9	6.0	6.2	7.6	7.6
	rel to capital	27.2	20.9	13.2	12.9	16.7	19.8
South Africa	rel to loans (B)	5.8	3.6	3.2	3.1	2.9	2.8
	rel to capital	43.9	21.2	18.1	17.7	16.1	14.2
Tanzania	rel to loans (B)	9.3	6.4	6.8	7.9	10.3	11.2
	rel to capital	17.4	14.9	19.6	21.1	28.3	32.2
Tunisia	rel to loans (B)	13.0	16.5	15.8	16.6	15.6	13.8
	rel to capital	-	-	-	-	-	-
Uganda	rel to loans (B)	2.2	5.6	4.1	5.3	10.5	5.6
	rel to capital	3.6	6.6	8.5	9.8	12.5	9.8
Zambia	rel to loans (B)	14.8	7.0	6.1	7.3	9.7	12.0
	rel to capital	12.1	7.6	5.6	6.0	7.7	10.7
Zimbabwe	rel to loans (B)	4.2	15.9	15.8	10.8	7.9	7.1
	rel to capital	-	-	-	-	-	-
UEMOA <sup>2</sup>	rel to loans (B)	17.6	15.4	15.0	14.9	13.9	14.0
	rel to capital	-	-	-	-	-	-
CEMAC <sup>3</sup>	rel to loans (B)	9.0	10.0	11.0	12.0	14.0	16.0
	rel to capital	2.2	10.2	19.6	21.8	30.5	31.5

<sup>1</sup> Year-end. <sup>2</sup> West African Economic and Monetary Union. <sup>3</sup> Economic and Monetary Community of Central Africa. "-" = no data. Sources: IMF (year-average); BIS questionnaire (B).

## Central banks' net claims on central government

Share of monetary base, in per cent

Table A6

	2010	2013	2014	2015	2016	2017
Algeria	-188.0	-136.5	-96.0	-41.3	-16.1	31.8
Angola	-77.8	-103.8	-77.9	-69.7	-75.8	-3.0
Botswana	-63.9	-221.2	-329.9	-265.3	-223.6	-262.5
Burundi	71.3	74.8	74.2	139.4	121.5	91.0
Congo, DR	-108.2	62.0	56.8	65.3	83.0	-
Egypt	29.8	96.8	113.3	119.2	87.5	56.5
Eswatini	-198.3	-229.1	-224.8	-184.0	-90.0	-76.8
Ethiopia	-	-	-	-	-	-
Ghana	29.0	47.1	43.6	38.3	41.0	22.8
Kenya	4.5	-4.3	-24.4	-18.8	-30.7	-17.8
Lesotho	-423.0	-320.6	-324.8	-319.5	-188.4	-85.8
Madagascar	-8.9	22.0	28.1	34.6	27.0	19.6
Malawi	-	-	-	-	-	-
Mauritius	-21.6	-17.5	-30.5	-38.9	-46.8	-24.4
Morocco	1.9	0.4	-0.1	-0.5	-0.1	0.1
Mozambique	-65.2	-96.1	-89.0	-42.7	-13.0	-76.5
Namibia	-107.4	-107.8	-14.1	-162.0	-57.3	-54.1
Nigeria	-122.5	-33.3	-28.0	-29.2	1.6	-4.8
Rwanda	-114.7	-131.8	-59.6	-57.0	-57.1	-62.1
South Africa	-80.9	-166.4	-171.9	-216.3	-174.1	-148.9
Tanzania	-26.6	-9.9	6.0	25.3	9.8	-
Tunisia	-54.6	-7.9	6.1	-0.3	21.4	17.6
Uganda	-64.4	-71.1	-44.8	-29.0	-36.6	-33.6
Zambia	31.2	25.0	18.3	35.1	54.2	58.4
Zimbabwe	-	-	-	-	-	-
UEMOA <sup>1</sup>	8.0	9.2	4.1	5.4	2.1	3.0
CEMAC <sup>2</sup>	-12.6	-12.5	9.7	31.0	71.3	75.6

<sup>1</sup> West African Economic and Monetary Union (simple average over member countries). <sup>2</sup> Economic and Monetary Community of Central Africa (simple average over member countries where data available).

Source: IMF.

Size and foreign ownership of local currency sovereign bond market

Table A7

	Size (percentage of GDP)			Foreign share (percentage of size)		
	2010	2013	2017 <sup>3</sup>	2010	2013	2017
Algeria	9	6	15	0	0	0
Angola (AFMI)	6	5	14	-	-	-
Botswana	5	5	6	<1%	<1%	<1%
Burundi	4	3	11	0	0	0
Congo, DR	-	-	-	-	-	-
Egypt	35	56	52	-	-	-
Eswatini	4	7	12	0	0	0
Ethiopia (AFMI)	-	-	-	-	-	-
Ghana	19	29	33	18	22	39
Kenya	14	16	17	-	-	6
Lesotho (AFMI)	1	4	4	-	-	-
Madagascar	3	4	4	0	0	34
Malawi	15	21	22	0	0	5
Mauritius	43	41	48	0	0	0
Morocco	35	46	49	0	0	0
Mozambique	5	8	6	0	0	0
Namibia	12	15	27	1	1	1
Nigeria	0	5	5	-	25	7
Rwanda	0	0	2	-	-	3
South Africa	23	31	37	22	36	41
Tanzania	9	11	12	0	0	0
Tunisia	9	11	14	0	0	0
Uganda	8	11	13	1	9	6
Zambia	10	12	16	7	8	21
Zimbabwe	0	0	0	-	-	-
UEMOA <sup>1</sup>	5	8	14	-	-	-
CEMAC <sup>2</sup>	0	1	1	-	-	-

<sup>1</sup> West African Economic and Monetary Union. <sup>2</sup> Economic and Monetary Community of Central Africa. <sup>3</sup> 2016 for data sourced from AFMI.

Sources: African Financial Markets Initiative (AFMI); BIS questionnaire.

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