

**Debt Sustainability Implications of Hardened  
MDB Lending Terms to African Countries**

Findings from a Preliminary Study of 8 Countries

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## *Findings from a Preliminary Study of 8 Countries*

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### **1. Introduction**

- 1.1 The African Development Fund (ADF) is caught in a squeeze between donor countries facing growing economic challenges at home and client countries needing growing volumes of development finance for public investment and social programs. Reconciling this supply-demand imbalance might require ADF to harden lending terms: donors could be persuaded to supply more funding if terms are less concessional, and client countries may receive less concessional finance than in the past.
- 1.2 During the ADF-13 Mid-Term Review in November 2015, ADF Deputies expressed concern about the debt sustainability implications for African countries of an uncoordinated hardening of terms by MDBs (including ADF and IDA). This note responds to this concern by setting out preliminary findings from a study of 8 Sub-Saharan African countries: Benin, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Rwanda and Zambia. All these countries, except for Kenya, are post-completion point HIPCs and have benefited from debt relief under the HIPC-MDRI program.
- 1.3 Two points are worth stressing. First, the problems being faced by donors are deeply entrenched. This means that we might be on the verge of a structural change in development finance, with hardened terms becoming a permanent feature. Indeed, some donors face increasing domestic political pressure to provide funding as loans, while a hardening of terms will allow other donors to tap more flexibly into sources of non-grant funding. Second, African governments have been increasingly financing themselves from market sources, both externally and domestically, after receiving HIPC-MDRI debt relief. Indeed, concerns have been mounting about rising indebtedness and of the risks of a new African debt crisis, as communicated by articles in prominent periodicals.<sup>2</sup>
- 1.4 These concerns are consistent with the emerging market experience, which demonstrates that the market-based model of sovereign debt and development finance has not worked well.<sup>3</sup> External financial integration has been more likely to enhance macroeconomic vulnerability than support sustained faster growth. Therefore, even as African countries make the transition to hardened official terms as part of the new reality of development finance, leaving them to the mercy of the markets is not be a good idea. The challenge then is to accept that the time has

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<sup>1</sup> The ADF Policy Innovation Lab was created under the Bill & Melinda Gates Trust Fund as an independent think-tank in the AfDB. It comprises a high level panel of eminent persons and an advisory team. Working Paper No 1 was drafted by Brian Pinto, Advisor to the ADF Policy Innovation Lab; Aloysius Ordu is the Lead Advisor.

<sup>2</sup> See "The Coming African Debt Crisis," *The Economist*, Nov 20, 2014, <http://www.economist.com/news/21631955-worrying-build-up-borrowing-coming-african-debt-crisis>. And "Big Africa Debt Burdens, Written off, are Back Again," *Wall Street Journal*, Nov 17 2015, <http://www.wsj.com/articles/big-african-debt-burdens-written-off-are-back-again-1447705258>

<sup>3</sup> Indermit Gill and Brian Pinto 2005. "Public debt in Developing Countries: Has the Market-based Model Worked?" World Bank WPS 3674. <http://siteresources.worldbank.org/INTDEBTDEPT/Resources/468980-1190907436115/wps3674.pdf>

come to “harden budgets” so-to-speak for African governments, but also recognize that these countries are not ready for market-based finance.<sup>4</sup> A via media has to be crafted.

- 1.5 The main finding of this report is that hardened MDB terms are not going to be the pivotal factor in debt sustainability problems for recipient countries. Moreover, if such hardening is accompanied by a large increase in the volume of donor funding that displaces expensive market borrowing, it could even bolster debt sustainability. The key is to accompany harder terms with a hardened economic policy dialogue. The challenges for AfDB are discussed after examining the debt sustainability implications of hardened MDB terms.

## 2. Approach

- 2.1 The debt sustainability implications of hardened ADF terms depend upon four factors: (a) the country’s initial indebtedness as measured by ratio of external or public debt to GDP; (b) debt dynamics, as determined by primary fiscal and non-interest current account balances, the nominal (real) interest rate paid on debt, GDP nominal (real) growth and the impact of exchange rate movements on debt in foreign currency; (c) the prospective borrowing plans of the government in local currency (from local commercial banks or foreign portfolio investors who buy local currency Treasury bills or bonds, typically at market interest rates) and in foreign currency (official sources as well as market, for example, Eurobonds). This will provide information about the marginal cost of borrowing; and (d) the weight of ADF in total borrowings or the debt stock.
- 2.2 In looking at a country’s debt and its dynamics, there are thus two choices: external debt, which is the sum of the country’s total foreign currency debt owed by the public and the private sectors; or public debt, which is the amount of external debt that is public and publicly guaranteed (PPG) plus local currency debt issued by the public sector in the domestic market (“domestic debt”).
- 2.3 This study concentrates on public debt for the following analytical reasons:
- In most cases, the public sector (PPG) share of external debt is significant: 100% for Benin and Mali; above 75% for Ethiopia, Ghana, Rwanda and Zambia; and above 55% for Côte d’Ivoire and Kenya. Since public debt also includes domestic debt, looking at public debt provides a more complete picture of debt dynamics and vulnerability.
  - The impact of hardened MDB terms will be first and foremost on the public finances and public debt dynamics as conveyed by the share of MDB debt and its cost relative to alternative borrowing sources (principally, Eurobonds and domestic debt, which are on commercial terms and account for a growing fraction of total public debt). The point is that a 40-year MDB loan with a 10-year grace period carrying a “hardened” interest rate of 2-3% could be far preferable to a 10-year Eurobond charging significantly more.
  - What ultimately matters when a government issues Eurobonds (as many African countries have been doing) is the state of the public finances and the ability of the government to service and eventually repay the debt. Looking at public (as opposed to external) debt and its dynamics is then the logical choice. A second important consideration is the adequate availability of foreign exchange to ensure timely payment. This requires looking at a host of foreign exchange reserve adequacy

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<sup>4</sup> Provided economic governance is good, countries which face hardened terms are more likely to use the money better. It is hard to accept that rates of return are so low in Africa that governments cannot afford to pay even 2-3% on their loans.

measures as for emerging market countries, but is not currently systematically done for African countries.<sup>5</sup>

- 2.4 The study examined the public debt dynamics of the 8 countries listed earlier based on data for 2014 and 2015. It then used this as a springboard for examining the implications of hardened MDB terms. For each country, an assessment was made about whether public debt dynamics are sustainable over the medium term based on IMF data and projections. For example, if a country has a significant primary deficit (fiscal deficit excluding interest payments) and nominal interest rates exceed nominal GDP growth rates, then the ratio of public debt to GDP will increase indefinitely without a policy correction. The nominal interest rate referred to here is a composite of the interest rates on foreign currency-denominated (forex) debt and domestic (local currency) debt. Its calculation is derived in Annex 2, using data from the IMF's debt sustainability analysis for each country.
- 2.5 In addition, for each country, an attempt was made to estimate the marginal cost of borrowing for forex and domestic debt based on recent actual borrowings or announced borrowing programs.
- 2.6 Putting the two pieces of information together would enable a conclusion to be drawn about the debt sustainability implications of hardened MDB terms.

### **3. Main Findings**

- 3.1 Annex 1 contains the country-wise analysis of public debt dynamics and information on marginal borrowing costs. The following countries were found to have unsustainable debt dynamics: Benin, Ghana, Mali and Zambia. Dynamics have deteriorated in Kenya but remain relatively comfortable in Côte d'Ivoire, Ethiopia and Rwanda. The findings for 5 countries are briefly discussed now to give a flavor of the results: Ghana, Mali, Kenya, Ethiopia and Zambia.

#### *Ghana*

- 3.2 Ghana's public debt rose from 71% of GDP in 2014 to an estimated 78% in 2015. This was driven by the large difference between the composite interest rate and the growth rate. Debt dynamics are unsustainable in the sense that the primary surplus needed to stabilize the debt-to-GDP ratio in 2015 was over 10% of GDP compared to an actual primary deficit of -0.1%. Such a huge fiscal effort is unlikely to occur in short order, meaning a continuing rise in the debt-to-GDP ratio beyond 78%. Not surprisingly, yields on Ghana's 2023 Eurobond are 15%, indicating the market's elevated concern about default risk.
- 3.3 Yet the IMF DSA (paragraph 5 of the DSA in IMF Country Report 16/16, January 2016) recommends issuing another \$1 billion in Eurobonds as part of a "debt management" strategy to lower borrowing costs. This is a strategy clearly fraught with risk, as it increases exposure to forex debt in a highly uncertain macroeconomic environment: in addition to its unsustainable public debt dynamics, Ghana's current account deficit exceeds 8% of GDP. So the recommended debt strategy indicates domestic borrowing costs are exceptionally high. Indeed, the monetary policy rate of the Bank of Ghana is 26% and the domestic debt market is likely saturated.
- 3.4 In these circumstances, hardening terms on MDB loans could even improve debt sustainability at the margin if the volume of such funds increases sufficiently to displace expensive market borrowing. But clearly, this is a small part of the solution for a country like Ghana, with weak

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<sup>5</sup> Such measures include the ratio of short-term external debt (STED) to reserves or even the current account deficit plus STED to reserves, if there are concerns about a retrenchment in external capital inflows. A related issue is the degree of overvaluation of the real exchange rate.

fiscal fundamentals. More important is a credible medium-term fiscal reform program to get debt dynamics under control and restore creditworthiness.

### *Mali*

- 3.5 In Mali's case, borrowing from official sources predominates. Its debt-to-GDP ratio is not exceptionally high at 37% for 2015, but this ratio will increase given the primary deficit of 2.4% and interest rates above growth rates. Besides, Mali is a relatively poor, fragile country. Comparing it with Cote d'Ivoire, with which it shares a common currency, two differences are of note: first, the real growth rate in Mali fell in 2015, while Cote d'Ivoire was able to maintain it at a high level; second, Cote d'Ivoire has a higher share of local currency debt in public debt, protecting it against the depreciation of the CFA Franc against the US dollar. These two reasons explain why Cote d'Ivoire's debt dynamics are fairly comfortable (see the two country tables and related discussion in Annex 1) while those in Mali are a matter of concern.
- 3.6 Given these conditions and heavy reliance on official borrowings, Mali is a clear-cut case where hardened terms would worsen debt dynamics further.

### *Kenya*

- 3.7 Kenya's macroeconomic fundamentals are worrisome on two counts. First, primary deficits are large at around 5% of GDP and interest rates appear to be catching up with growth rates. Second, current account deficits are exceptionally high at around 10% of GDP. The yield on Kenya's 2024 Eurobond, issued at 6.9% in 2014, is now at 9%.
- 3.8 Yet the IMF's most recent DSA (September 2015), which also forms the basis for the preceding observations, rates Kenya at low risk of debt distress based on various measures of external indebtedness in relation to CPIA-linked thresholds. The Kenyan case illustrates the importance of enlarging the debt sustainability discussion to include public debt, market signals from interest rates and potential vulnerability from insufficient foreign exchange reserves relative to short-term external debt and current account deficits.
- 3.9 According to news reports, the Kenyan government is considering another Eurobond in 2016. Clearly, if issued at or around 9% for 10 years, this would be worse for debt dynamics than a "hardened" MDB loan.

### *Ethiopia*

- 3.10 Ethiopia's risk of external debt distress was raised from low to moderate in the IMF's September 2015 assessment, with questions about its public debt trajectory. Both primary deficits (7-8% of GDP) and current account deficits (10% of GDP) are exceptionally high. Public debt dynamics remain under control only because nominal growth rates are well above the artificially low composite interest rate. The latter has been suppressed through a combination of an overvalued real exchange rate and a highly negative real interest rate on domestic debt
- 3.11 The root of a debt sustainability problem in Ethiopia is more likely to come from a macroeconomic problem (for example, an eventual collapse in the real exchange rate or a growth slowdown because of terms of trade shocks or declining competitiveness) than marginally hardened MDB terms: Ethiopia's annual ADF allocation is about 0.2% of GDP (and the loan component just 0.14% of GDP). It issued its first Eurobond in December 2014 for \$1 billion at a yield of 6.625%. It is unclear whether it will tap this market again given the recent general deterioration in sentiment. But marginally hardened MDB terms are unlikely to be the swing factor tipping Ethiopia into debt sustainability problems

## *Zambia*

- 3.12 Zambia was rated at moderate risk of external debt distress but with public sustainable debt dynamics in IMF Country Report 15/152 dated June 2015. However, the latter conclusion is debatable given a projected primary deficit of 5% of GDP and interest rates some 5 percentage points above growth rates for 2015 (data as of June 2015). Moreover, it is likely that the prospects for both external and public debt sustainability will be revised downwards once data for the full year become available.
- 3.13 The main factor is vulnerability to the falling price of copper and a collapsing exchange rate. For example, although foreign currency denominated debt was only about 18% of GDP at the end of 2014, the sizable depreciation of the kwacha from 6,390 at the end of 2014 to around 11,000 by the end of 2015 will alone add some 10 percentage points to the 2015 public debt-to-GDP ratio. The June 2015 IMF report projected 2015 public debt-to-GDP at 40%, but more recent estimates suggest it could be as high as 55%.
- 3.14 Zambia's experience points to three important considerations.
- First, the situation for commodity exporters can deteriorate very quickly. When Zambia issued its first Eurobond in September 2012 (\$750 m at 5.625%), it was applauded as an African trendsetter. Its second Eurobond, issued in April 2014 at 8.625% with a 10-year maturity, won IMF approval, according to a Bloomberg story, given the country's strong growth and large investment needs.<sup>6</sup> The yield on this Eurobond is now (February 2016) close to 16%.
  - Second, the big risk associated with MDB loans is not the interest rate, which is much lower than market rates. Indeed, Zambia issued a third Eurobond in July 2015 at a yield of 9.375%, far higher than any envisaged hardening of MDB terms. On this count alone, Zambia's debt dynamics would clearly benefit relative to Eurobonds if it could receive larger MDB loans at 2-3%. The big risk is from the exchange rate.
  - Third, hardened MDB terms must be accompanied by good economic governance to reap the long-run benefits of development finance. Zambia's wooing of the market has been premature with the benefit of hindsight.

## *Overall*

- 3.15 Of the 8 countries examined, only in the case of Mali is it clear-cut that a hardening of MDB terms would worsen the outlook for debt dynamics. The reason is that Mali's current debt dynamics are adverse and the vast bulk of its borrowings are from official sources. The marginal cost of its borrowings is therefore determined by concessional borrowings and hardening MDB terms would worsen the situation.
- 3.16 What about Benin, Ghana, and Zambia, where the debt dynamics are also clearly adverse? The answer is that for these countries the marginal cost of forex debt is so high that even hardened MDB terms would be far cheaper. If the volume of resources from official sources was simultaneously increased, displacing some of the expensive market borrowing, debt dynamics could even improve. The chief concern about Ghana and Zambia would be their creditworthiness.
- 3.17 Similar logic applies to the remaining four countries listed above. In all of them, to the extent that economic returns to public investment remain high and economic governance is solid, a hardening of MDB terms would not tip the countries into debt sustainability problems. Indeed,

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<sup>6</sup> <http://www.bloomberg.com/news/articles/2014-02-05/zambia-eurobond-plan-wins-imf-support-as-yields-surge-to-record>

additional resources with the long maturities and significant grace periods typical of MDB loans would help, since public investments have low financial returns and long payback periods.

- 3.18 To sum up, we can say with some confidence that hardened MDB terms (a) are likely to constitute the new reality of development finance; (b) will not be a pivotal factor in worsening debt sustainability; and (c) will serve as a wake-up call for better economic governance.

#### 4. Challenges for AfDB

- 4.1 The macroeconomic condition of many Sub-Saharan African countries is precarious given their foray into market-based finance combined with falling commodity prices, slowing growth and in some cases, poor economic governance. Countries with high debt levels and deteriorating debt dynamics, external and public, may be vulnerable to a disruptive sudden stop in external financing. Current account deficits are exceptionally high and have been financed in part by Eurobonds, FDI (with a concentration in natural resource sectors) and non-resident investment in domestic debt. Table 1 shows current account deficits as a percentage of GDP for the eight countries in this study, all exceptionally large except for Côte d’Ivoire, Mali and Zambia. For comparison, of the emerging markets that comprised the so-called “Fragile Five” when the US Federal Reserve Board started tapering its asset purchases in 2013, South Africa and Turkey were regarded as the most vulnerable with current account deficits (CAD) in the 6% of GDP range. For the other three countries (Brazil, India, Indonesia) the CAD was 3-5% of GDP.

**Table 1: Current Account Deficit as a % of GDP**

	2014	2015
Benin*	9.3	11.0
Côte d’Ivoire*	0.7	2.3
Ethiopia*	12.8	9.4
Ghana	9.6	8.2
Kenya	10.4	9.9
Mali*	5.5	2.8
Rwanda*	11.5	14.5
Zambia <sup>1/</sup>	1.7	0.6

**Source:** Same IMF Country Reports as for Annex 1. In general, the projected, rather than program, number is used.

\* Including grants.

<sup>1/</sup> As of June 2015. The situation has deteriorated considerably since then.

- 4.2 This configuration creates a challenge for AfDB: while hardened MDB terms per se are unlikely to tip Sub-Saharan African countries into debt sustainability problems, this might not be the best time UNLESS the hardening is accompanied by a sufficiently large increase in the volume of funds to displace expensive market borrowing. But nor would it be a good idea to use official funds to “refinance” expensive market borrowing. This would be an invitation to moral hazard (and in the case of Eurobonds, such refinancing may not even be an option). Instead, the time may be ripe for hardening the policy dialogue with African countries. For post-completion point HIPC countries with unsustainable public debt dynamics, there needs to be an insistence on a hard-headed program to restore debt sustainability. Unfortunately, the emerging market experience suggests that this is far from easy or quick. And the medium-run growth consequences are likely to be negative.

- 4.3 A related challenge is how to respond should a sudden stop in external private finance materialize, or the domestic debt market reach saturation point as in the case of Ghana and Zambia, or both. ADF resources are not going to be enough to deal with such an eventuality. For example, total donor contributions for ADF-13 were UA3.86 billion, approximately \$5.4 billion. Total Eurobonds issued by African countries during 2013-15 amounted to \$20.9 billion. The costs of a sudden stop for infrastructure and social programs will be huge, should inadequate financing put such programs on hold.
- 4.4 In these circumstances, AfDB could enhance its role as a Bank not simply of money, but also of knowledge and ideas. Relevant ideas in the current context include knowledge about public debt management, economic governance and the changing nature of development finance. While there are ongoing programs in some of these areas, such as the Debt Management Performance Assessment or DeMPPA program sponsored by the World Bank, AfDB has an advantage owing to its franchise value since its clients would be more willing to accept tough advice from an African bank. This would require using AfDB's on-the-ground presence to be proactive in anticipating problems and convening other development partners to craft solutions. A priority area in this regard involves ideas to keep development finance flowing in sufficient volumes in the event of a retrenchment in private finance, thereby preventing damage to long run growth and development in Africa. The knowledge Bank idea is consistent with President Adesina's grand ambition for the Bank Group<sup>7</sup>.
- 4.5 To conclude, African development finance is on the verge of a structural change. Pure grants from donors are likely to be cut back and hardening of MDB terms to accompany less concessional donor funding seems inevitable. Hardened terms are unlikely to tip African countries into debt sustainability problems because such terms are likely to be much cheaper than the market borrowings that are already being pursued. At the same time, accessing international capital markets by developing countries has not proved a successful route to faster growth but has tended to enhance macroeconomic vulnerability.
- 4.6 AfDB's challenge is to manage this transition to hardened terms while at the same time not leaving African countries to the mercy of the markets. Achieving this will need fresh thinking beyond the framework AfDB and other MDBs at present operate within. The ideal situation would be one where hardened terms are accompanied by a much larger pool of resources for African countries combined with a hardened policy dialogue.
- 4.7 ADF donors have a critical role to play in expanding that pool—by adding a Concessional Donor Loan as a supplement to grants that replicate ADF-13 pledge levels, they will position the institution to bring greater influence on the debt dynamics and economic stability of ADF countries. On the contrary, a retraction and diminution of the ADF resource pool at this point in time would be perilous to its clientele and detrimental to the Bank.

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<sup>7</sup> It is also in line with the High Level Panel Report (2007) "Investing in Africa's Future. *The ADB in the 21st Century*".

## Annex 1: Public Debt Dynamics and Marginal Borrowing Costs by Country

### 1. Benin<sup>8</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (estimate)
External debt/GDP %	20.1	22.4
Of which public share %	100	100
Public debt/GDP %	30.9	37.1
Forex share %	65	60
Primary deficit/GDP%	1.6	5.1
Nominal interest rate % (composite of domestic and forex debt)	9.05	8.69
<i>Real interest rate %</i>	<i>10.49</i>	<i>7.83</i>
Nominal GDP growth %	5.12	6.04
<i>Real GDP growth %</i>	<i>6.5</i>	<i>5.2</i>

Source: DSA in IMF Country Report 16/6, January 2016:  
<http://www.imf.org/external/pubs/ft/scr/2016/cr1606.pdf>

#### *Public Debt Dynamics*

Benin's public debt/GDP ratio is not high, but dynamics have deteriorated sharply between 2014 and 2015. Not only has the primary deficit risen, the nominal interest rate is far higher than the nominal growth rate. Therefore, absent a policy change, debt/GDP will be on an unsustainable trajectory.

The IMF calls for accelerated reform to raise domestic revenue mobilization while increasing expenditure efficiency and strengthening debt management. IMF analysis also notes (paragraph 4 of the DSA) that the Government plans to issue bonds in the regional market and raise a projected total of 4% of GDP in non-concessional borrowing over 2016-20 to finance the increase in public investment. Given estimated 2015 GDP at around \$8.5 billion (numbers from Table 1, selected economic and financial indicators), this means roughly \$350 million.

#### *Impact of hardened MDB terms*

Marginal borrowing costs went up during 2014 and 2015. Regarding local currency ("domestic") debt, the Government borrowed money from BOAD (West African Development Bank) for road projects. The average cost is above 7%, higher than the 6.5% interest rates on government bonds. The government plans to mobilize, in 2016, more than \$200 million-equivalent through this channel with a nominal interest rate of 7-8%. The amount could be higher if we take into account the new decision of the government to pre-finance projects with private enterprises to build roads.

Regarding forex debt, the government plans to borrow non-concessional resources for an amount of around \$125 million with an estimated interest rate of 6% in 2016. There is also an estimated \$500 million of semi-concessional resources (interest rate 2.3%, maturity 20 years) to be raised from multilateral and bilateral partners, beyond concessional resources.

Benin's 2016 ADF allocation is around \$27 million. A hardening of ADF terms (by 2-3 percentage points) will probably not worsen Benin's debt sustainability especially if more money is forthcoming, as the cost will be less than the marginal cost of planned forex borrowing.

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<sup>8</sup> Benin is an ADF-only country.

## 2. Côte d'Ivoire<sup>9</sup> : Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (projected)
External debt/GDP %	33.6	38.8
Of which public share %	58	65
Public debt/GDP %	38.3	42.6
Forex share %	51	59
Primary deficit/GDP%	2.3	3.1
Nominal interest rate % (composite of domestic and forex debt)	9.17	7.88
<i>Real interest rate %</i>	<i>9.04</i>	<i>5.66</i>
Nominal GDP growth %	8.55	10.68
<i>Real GDP growth %</i>	<i>7.9</i>	<i>8.4</i>

Source: DSA in IMF Country Report 15/341, December 2015:  
<http://www.imf.org/external/pubs/ft/scr/2015/cr15341.pdf>

### *Public Debt Dynamics*

The country's debt dynamics remain under control with the rise in the primary deficit offset to some extent by a favorable shift in the interest rate- growth rate difference from positive to negative. The IMF notes that after reaching the enhanced HIPC completion point in 2012, Côte d'Ivoire has ramped up its energy and infrastructure investments. Naturally, the ability to continue such investments is key to faster long-run growth and future taxes, which in turn will underpin long-run debt sustainability.

### *Impact of hardened MDB terms*

Côte d'Ivoire issued Eurobonds in 2014 (\$750 million) and 2015 (\$1 billion, at 6.625%). The IMF's DSA notes that as of end 2014, commercial creditors (mainly Eurobonds) accounted for 55% of public and publicly guaranteed external debt. The financing scenario envisaged "...incorporates projected disbursements of four large semi-concessional loans (Soubre hydroelectric dam, extension of the Port of Abidjan (2014), potable water for Abidjan (2014), and extension and rehabilitation of the electricity network (2015) during 2015–19: \$364 in 2015, \$601 million in 2016, \$448 million in 2017, \$317 million in 2018, and \$42 million in 2019. The main source of new borrowing, excluding the 2015 Eurobond, are multilateral and official bilateral creditors..."

Côte d'Ivoire's 2016 ADF allocation is \$43.5 million. If it goes back to the Eurobond market, it is very likely to pay at least 6.625% (the yield at issuance on its 2015 Eurobond). Therefore, a hardening of MDB terms by 2-3 percentage points is not likely to tip the country into debt sustainability problems especially if it displaces some of the planned non-concessional borrowing. The key is to make the necessary institutional improvements in debt management noted by the IMF, including collecting data on the debts of public enterprises, and maintain social peace and harmony.

<sup>9</sup> Côte d'Ivoire is a Gap country in a situation of fragility.

### 3. Ethiopia<sup>10</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (estimate)
External debt/GDP %	25.5	30.0
Of which public share %	87	87
Public debt/GDP %	41.2	50.3
Forex share %	54	52
Primary deficit/GDP%	7.4	8.1
Nominal interest rate % (composite of domestic and forex debt)	6.05	6.02
<i>Real interest rate %</i>	-3.42	-2.64
Nominal GDP growth %	21.11	18.37
<i>Real GDP growth %</i>	10.3	8.7

Source: DSA in IMF Country Report 15/300, September 2015:  
<http://www.imf.org/external/pubs/ft/scr/2015/cr15300.pdf>

#### *Public Debt Dynamics*

In spite of a huge negative differential between the nominal interest rate and nominal growth rate, Ethiopia's public debt-to-GDP increased by a significant 9 percentage points in 2015. This was driven by a large primary deficit and additional borrowings of 5% of GDP to support investments by nonfinancial public enterprises (captured in the DSA residual for 2015).

The IMF is concerned about the speed of public investment (“...public investment should be paced carefully, and be subjected to careful cost-benefit analysis”), the sharp real appreciation of the birr and the issuance of domestic debt at highly negative real interest rates. While the latter two improve the appearance of debt dynamics (by keeping the composite nominal interest rate on domestic and forex debt low), the sustainability of such policies remains at question. Besides, real overvaluation (put by the IMF at 30% in June 2015) could hurt growth and exports.

#### *Impact of hardened MDB terms*

It is clear from the above discussion that the root of a debt sustainability problem in Ethiopia is more likely to come from a macroeconomic problem (for example, an eventual collapse in the real exchange rate or a growth slowdown because of terms of trade shocks or declining competitiveness) than marginally hardened MDB terms. Ethiopia issued its first Eurobond in December 2014 for \$1 billion at a yield of 6.625%. It is unclear whether it will tap this market again given the recent general deterioration in sentiment. Ethiopia's 2016 ADF allocation stands at \$126.8 million (with \$70.3 million in loans).

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<sup>10</sup> Ethiopia is an ADF-only country.

#### 4. Ghana<sup>11</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (estimate)
External debt/GDP %	48.5	56.0
Of which public share %	88	93
Public debt/GDP %	70.7	77.9
Forex share %	60	67
Primary deficit/GDP%	3.3	-0.1
Nominal interest rate % (composite of domestic and forex debt)	39.2	23.5
<i>Real interest rate %</i>	<i>19.28</i>	<i>8.14</i>
Nominal GDP growth %	21.4	17.6
<i>Real GDP growth %</i>	<i>4.0</i>	<i>3.0</i>

Source: DSA in IMF Country Report 16/16, January 2016:  
<http://www.imf.org/external/pubs/ft/scr/2016/cr1616.pdf>

##### *Public Debt Dynamics*

Notwithstanding a significant fiscal effort that led to a small surplus in its primary balance in 2015 compared a deficit of 3.3% of GDP in 2014, Ghana’s public debt levels remain highly elevated. In addition, the dynamics are adverse, given the large difference between nominal interest rates and nominal growth rates. For example, a primary *surplus* of close to 10% of GDP will be needed just to keep the debt-to-GDP ratio at its 2015 levels of 77.9%.

Instead of bigger primary surpluses, the IMF DSA projections (Table 2 of the DSA) rely on a substantial narrowing of the interest rate-growth rate differential with the growth rate picking up considerably from the estimated 3% for 2015 to keep debt dynamics under control. These assumptions can be questioned given the bleak outlook for commodity prices, slowing global growth and market concerns about Ghana’s debt sustainability.

At the same time, the strategy to lower overall interest payments on government debt by replacing “expensive” cedi debt with “cheap” Eurobonds (paragraph 5 of the DSA) is fraught with risk. This is exactly what Russia attempted to do (replacing ruble T-bills with US dollar Eurobonds) in 1998, and served as a trigger for its macroeconomic crisis in August that year. According to paragraph 5, Ghana will be allowed to issue another \$1 billion in Eurobonds; the secondary market yield on its existing Eurobonds were above 15% in January, signaling elevated market concerns about default risk. Ghana’s credit rating was lowered by Moody’s from B2 to B3 (equivalent to B-, six levels below investment grade) in March 2015, with a negative outlook.

##### *Impact of hardened MDB terms*

With this background, a hardening of MDB terms would help Ghanaian debt sustainability if it displaced expensive Eurobonds. Ghana’s 2016 ADF allocation is \$64 million. The real question is whether Ghana would be deemed creditworthy by AfDB.

Ghana also illustrates the shortcomings of the IMF-World Bank Debt Sustainability Framework, with its focus on official creditors. It ignores the strong signals from the market on default risk and in fact crafts a strategy to lower interest payments based on substituting Eurobonds for local currency debt as part of “debt management” that could backfire.

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<sup>11</sup> Ghana is a Gap country.

## 5. Kenya<sup>12</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (projected)
External debt/GDP %	42	48.8
Of which public share %	63	61
Public debt/GDP %	52.6	56.2
Forex share %	50	53
Primary deficit/GDP%	4.8	5.4
Nominal interest rate % (composite of domestic and forex debt)	8.33	10.18
<i>Real interest rate %</i>	<i>0.77</i>	<i>3.26</i>
Nominal GDP growth %	13.20	13.64
<i>Real GDP growth %</i>	<i>5.3</i>	<i>6.5</i>

Source: DSA in IMF Country Report 15/269, September 2015:  
<http://www.imf.org/external/pubs/ft/scr/2015/cr15269.pdf>

### *Public Debt Dynamics*

Kenya's debt dynamics have deteriorated in 2015, with a continued large primary deficit and a considerable narrowing of the nominal interest rate-growth rate differential. The IMF's projections include continued rapid growth and the maintenance of a highly favorable interest rate-growth rate differential over the medium term. It rates Kenya as at low risk of external debt distress based on CPIA-linked debt burden thresholds even though the projections show large non-interest current account deficits over the medium term. It also considers public debt to be on a sustainable trajectory: the "path remains consistent with the EAC convergence criteria and below the relevant public debt benchmark".

Such an assessment based on appealing to CPIA-linked thresholds and official benchmarks would be appropriate if Kenya's debt was primarily from official sources. Likewise, the observation in paragraph 11 of the DSA that natural resource discoveries should help would make sense. But markets tend to be myopic and less forgiving and may attach far less importance to revenues from natural resources unless these are immediately due and available for debt service.

### *Impact of hardened terms*

Kenya issued a total of \$2 billion in Eurobonds in June 2014: a \$500 million five-year note with an interest rate of 5.9 per cent and another \$1.5 billion 10-year note at 6.9 per cent interest. By January 2016, the yield on the 10-year note was above 9%, reflecting concerns about global growth and Africa-specific concerns, including falling commodity prices. One-year Kenyan shilling (KES) Treasury Bills were issued at 13.8% in January 2016.

If we take the marginal cost of Kenyan borrowing as 7.5% in USD and 14% in KES, a hardening of MDB terms by 2-3 percentage points is not going to worsen debt dynamics and could even improve these if the volume of funds increases sufficiently to displace expensive market borrowings domestically or internationally. Kenya, a blend country, has a 2016 ADF allocation of \$50.6 million.

<sup>12</sup> Kenya is a Blend country.

## 6. Mali<sup>13</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (projected)
External debt/GDP %	25	28
Of which public share %	100	100
Public debt/GDP %	32.4	36.5
Forex share %	77	77
Primary deficit/GDP%	2.7	2.4
Nominal interest rate % (composite of domestic and forex debt)	11.45	10.6
<i>Real interest rate %</i>	9.59	7.17
Nominal GDP growth %	9.02	8.26
<i>Real GDP growth %</i>	7.2	4.9

Source: DSA in IMF Country Report 15/339, December 2015:  
<http://www.imf.org/external/pubs/ft/scr/2015/cr15339.pdf>

### *Public Debt Dynamics*

Mali's debt dynamics are clearly adverse with significant primary deficits and interest rates well above growth rates. The latter is driven by the high share of forex debt in total public debt (about 80%). Although nominal interest rates on forex debt are low (with commercial creditors virtually absent), currency depreciation has pushed up the effective cost considerably.

### *Impact of hardened terms*

Given the low per capita income of the country, the fragile security situation and the dependence upon gold (gold accounts for 60% of exports), Mali is a clear-cut case where even marginal hardening of MDB terms would worsen the debt situation. Mali's 2016 ADF allocation is \$28.1 million (of which loans \$15.2 million).

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<sup>13</sup> Mali is an ADF-only country in situation of fragility.

## 7. Rwanda<sup>14</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (projected)
External debt/GDP %	28	32.5
Of which public share %	85	88
Public debt/GDP %	29.9	35.1
Forex share %	80	81
Primary deficit/GDP%	4.4	4.1
Nominal interest rate % (composite of domestic and forex debt)	7.89	10.16
<i>Real interest rate %</i>	<i>4.14</i>	<i>6.64</i>
Nominal GDP growth %	10.75	10.53
<i>Real GDP growth %</i>	<i>6.9</i>	<i>7.0</i>

Source: DSA in IMF Country Report 16/24, January 2016: (corrected)  
<https://www.imf.org/external/pubs/ft/scr/2016/cr1624.pdf>

### *Public debt Dynamics*

Rwanda is in a relatively good position regarding its debt dynamics, with solid economic governance, relatively rapid growth, most of its forex debt from official sources and limited domestic debt. This puts it in a position to run sizable primary deficits (needed for infrastructure projects in energy and roads) without fearing unsustainable debt dynamics.

### *Implications of hardened terms*

The country's main vulnerability stems from its exposure to minerals exports, with the sharp decline in commodity prices. Its medium strategy is to diversify exports, borrow prudently, increase revenues and pursue medium-term fiscal consolidation. Whether or not hardened terms have a negative impact on debt dynamics depends upon borrowing plans and the returns to prospective public investments. If the latter are high and the record of good economic governance continues, it is entirely conceivable that Rwanda can absorb hardened terms on MDB loans without too much difficulty. Rwanda's 2016 ADF allocation is \$67.4 million.

<sup>14</sup> Rwanda is an ADF-only country.

## 8. Zambia<sup>15</sup>: Debt Indicators and Public Debt Dynamics

	IMF for 2014 (actual)	IMF for 2015 (projected)
External debt/GDP %	23.9	32.4
Of which public share %	76	80
Public debt/GDP %	34.8	40.3
Forex share %	52	64
Primary deficit/GDP%	3.3	4.9
Nominal interest rate % (composite of domestic and forex debt)	16.26	18.73
<i>Real interest rate %</i>	8.55	10.45
Nominal GDP growth %	13.1	13.52
<i>Real GDP growth %</i>	5.6	5.6

Source: DSA in IMF Country Report 15/152, June 2015:  
<https://www.imf.org/external/pubs/ft/scr/2015/cr15152.pdf>

### *Public Debt Dynamics*

Zambia's debt dynamics are definitely unsustainable with sizable primary deficits and interest rates far greater than growth rates. The collapse in copper prices has had a huge impact and fiscal deficits blew past targets for 2015. The IMF numbers for 2015 above were projected in June 2015, but the situation has worsened considerably since then, indicating how volatile the economic environment is for commodity exporters dependent upon Chinese growth. The depreciation of the kwacha (from 6,390 per USD at the end of 2014 to 11,000 at the end of 2015) alone would have added some 10 percentage points to the debt-to-GDP ratio during 2015. The latest estimate of debt-to-GDP at the end of 2015 is now 55%, 15 percentage points higher than projected in June 2015.

### *Impact of hardened MDB terms*

Zambia issued a third Eurobond for \$1.25 billion in July 2015 at a yield of 9.375% (with tranches maturing in 2025, 26 and 27). The yield on Zambia's 2024 Eurobond (issued in 2014) was close to 16% in the secondary market in February 2016, indicating heightened concerns about default. Not surprisingly, Zambia's credit rating was lowered to B from B+ by S&P with a stable outlook in July 2015; this is 5 levels below investment grade.

As with Ghana, Zambia would benefit from additional MDB resources even at hardened terms (by 2-3 percentage points) if this enabled it to refrain from expensive market borrowings. Besides, the maturity on official loans would be much longer, making debt management easier. Once again, the question would be Zambia's creditworthiness. Zambia is a blend country with a 2016 ADF allocation of \$7.2 million.

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<sup>15</sup> Zambia is a Blend country.

## Annex 2: Computation of Composite Nominal Interest Rate on Domestic and Forex Debt

The IMF Public Debt Sustainability Framework table has, for each year, the "identified debt-creating flows" during that year. This has two components: the primary deficit; and the so-called "Automatic debt dynamics" or ADD. Together, the primary deficit plus ADD capture the impact of the fiscal deficit (primary deficit plus interest payments on debt), GDP growth and the impact of exchange rate movements on the forex component of the public debt.

By itself, ADD captures the impact of interest rates, exchange rates and growth rates on debt dynamics. In the IMF's public debt table, ADD is given by the equation:

ADD= Contribution from interest rate/growth rate differential + Contribution from real exchange rate depreciation.

In turn, the first term on the right hand side of the above equation is given by:

Contribution from interest rate/growth rate differential=contribution from average real interest rate + contribution from real GDP growth.<sup>16</sup>

In discrete time, the decomposition, into various components, of the increases in the debt-to-GDP ratio from year to year is given by the equation:

$$(1) \quad d_t - d_{t-1} = pd_t + \frac{(r_t - g_t)}{(1 + g_t)} d_{t-1}, \text{ where:}$$

$d$  denotes the public debt-to-GDP ratio,  $pd$  is the ratio of the primary fiscal deficit to GDP,  $r$  is the composite real interest on domestic and forex debt, including the impact of real exchange rate changes,  $g$  is the real growth rate and  $t$  denotes the year.<sup>17</sup> In terms of the discussion above, the second term on the right hand side of equation (1) equals ADD.

Now the real growth rate,  $g$ , as well as inflation measured by the GDP deflator,  $\pi$ , are given in the "Key macroeconomic and fiscal assumptions" at the bottom of the IMF's DSF table. This can be used to compute the nominal growth rate,  $G$ , given by the equation:  $(1 + G) = (1 + g)(1 + \pi)$ .

The next step is to use the fact that the second term on the right hand side of equation (1) (which equals ADD) can also be written as:

$$(2) \quad \frac{(i_t - G_t)}{(1 + G_t)} d_{t-1} = ADD.$$

In equation (2),  $i_t$  is the composite nominal interest rate on domestic and forex debt and also, by construction, captures the impact of exchange rate movements on the forex component of public debt. The formula used for the various country tables in this report to compute the composite nominal interest rate is obtained by rearranging equation (2):

$$(3) \quad i_t = G_t + \frac{ADD}{d_{t-1}} (1 + G_t).$$

<sup>16</sup> Note that contribution from real GDP growth is given by  $-[g/(1 + g)]d_{t-1}$ , where  $g$  is real GDP growth in year  $t$  and  $d_{t-1}$  is the public debt-to-GDP ratio at the end of year  $(t-1)$ .

<sup>17</sup> For a complete derivation, see Annex 2 in Pinto, Brian (2014) *How Does My Country Grow? Economic Advice Through Story-Telling*. Oxford University Press.