

DEALING WITH AFRICA'S RISK OF DEBT DISTRESS

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Zambia's recent sovereign default has cast a shadow of a looming wave of debt restructuring in Sub-Saharan Africa. The Covid shock has brought a significant risk of debt distress in several African countries, by exacerbating vulnerabilities that have built up over the past decade. While liquidity facilities through the DSSI and emergency lines have provided temporary support to many countries in the region, solvency issues remain and the prospect of debt restructuring is gaining ground. In this context, the methodology of the IMF and the World Bank remains the most suitable tool for assessing debt sustainability for low-income countries. The framework for common treatment of restructuring has recently been extended to all creditors. Given the scale of its financial commitments to African countries, China's participation is essential. So far, the country has demonstrated a lack of transparency and limited cooperation. Its commitment to the common framework for debt treatment thus remains to be confirmed.

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**DEBT SUSTAINABILITY
INCREASINGLY AT RISK**

7

**CALL FOR DEBT
RESTRUCTURING**

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Zambia's recent sovereign default has cast a shadow of a looming wave of debt restructuring in Sub-Saharan Africa. The Covid shock has brought a significant risk of debt distress in several African countries, by exacerbating vulnerabilities that have built up over the past decade. While liquidity support through the DSSI and emergency lines have provided temporary support to many countries in the region, solvency issues remain and the prospect of debt restructuring is gaining ground. The previous debt treatment framework might however prove insufficient to resolve the crisis, given that regional debt composition has changed. Debt crisis resolution thus requires an adaptive approach, of debt sustainability analyses and an equal sharing of the burden between creditors, including China.

Debt sustainability increasingly at risk

Regional pre-Covid outlook and dynamics

Increasing debt level

Back in the late 1990s, the high level of emerging countries' public debt raised concerns over the ability of governments to free up resources and pursue efforts toward sustainable and inclusive growth. Referring to the idea of debt overhang¹, developing countries could become stuck in a vicious circle whereby debt burden prevented investment and consumption, acting as a drag on growth.

In reaction to this, the Heavily Indebted Poor Countries Initiative (HIPC), initiated in late 1996 by the IMF and the World Bank, allowed for debt relief in 36 countries, including 30 countries in sub-Saharan Africa (SSA). Back then, eight countries in the region were in debt distress² while seven others were at high risk of becoming so³. This initiative, supplemented in 2005 by the Multilateral Debt Relief Initiative (MDRI), entailed the participation of multilateral financial institutions, bilateral official creditors, and (to a much lesser extent) private creditors. The Paris Club, initially created to provide coordinated debt treatment and ensure predictable resolutions of debt crises, provided substantial efforts under the HIPC, sharing around 36% of the relief. Altogether, these lenders completed a significant debt haircut in the most vulnerable countries that resulted in more than USD 100 billion in debt relief in SSA. These initiatives slashed the SSA public debt ratio from an average of 66% of GDP in 2000 to a low of 24% in 2008, allowing for debt service alleviation and increased investment. Regional average GDP growth gained momentum, with an average of 5.8% over 2000-2010 (against 2.5% over the previous decade). Although the immediate benefits of the initiative were unequivocally positive, their permanence implied a moderate re-accumulation of debt in order to prevent situations of over indebtedness similar to that observed prior to the debt relief. The absence of provisions to address this has come to represent a significant shortcoming.

In the aftermath of the financial crisis of 2008-2011, the dynamic shifted toward a widespread resurgence in debt in SSA. Between 2008 and 2019 the regional public debt ratio increased from 29% of GDP to nearly 40%, with the largest increases seen in Angola (+77 ppt), Zambia (+72 ppt) and Mozambique (+71 ppt). Within the region, two-fifths of countries exceeded the IMF's prudential debt benchmark ratio of 55% of GDP⁴. Multiple factors added to weak revenue mobilization and paved the way for extensive public financing.

1 Krugman (1988)

2 Inability to fulfil their financial obligations

3 According to the LIC Debt Sustainability Framework (LIC-DSF) analysis by the IMF and the World Bank.

4 The 55% threshold refers to the benchmark for public debt (in NPV) used in the Debt Sustainability Framework (DSF) set out jointly with the WB. It corresponds to a medium debt carrying capacity.

INCREASING GENERAL GOVERNMENT DEBT RATIO

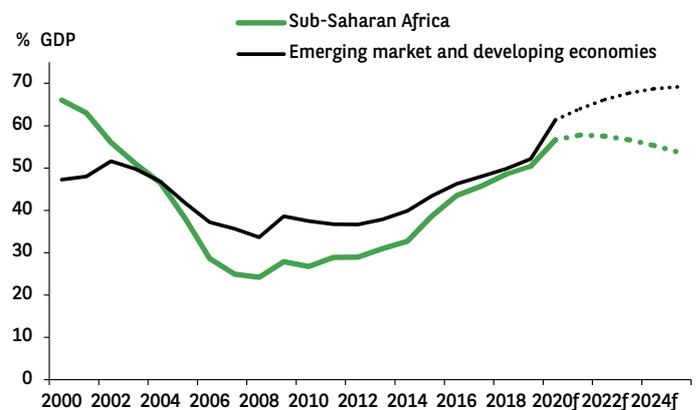


CHART 1

SOURCE: IMF WEO

As a result debt ratios almost reached pre-HIPC period levels (average public debt stood at 60% of GDP in 2000).

On the domestic side, output and development stimulus efforts have boosted public expenditure. When the shock of the financial crisis in 2008-2009 led to a decline in private spending, countercyclical policies were implemented to fill the gap between fiscal needs and revenues. These aimed to pursue reforms, moving towards attaining development goals and realizing infrastructure projects, as illustrated by the rising average contribution of public investment to GDP for the region (+3 pp between 2000 and 2015). Meanwhile, the fiscal deficit widened, requiring governments to finance projects by contracting new debt. Although debt can act as a catalyst on investment that unlocks long-term growth, favorable external factors are necessary to enable such a trend, especially for Low Income Countries (LICs).

Rising debt burden and riskier debt profiles in SSA

Besides its rising level, the region's debt underwent significant compositional changes. The largest component of public debt in SSA countries continues to be from external sources. The traditional official lending sources from multilateral creditors have however given way to an increase in new bilateral creditors, along with new access to bond market issuance. The share of concessional debt has been declining in favor of private and non-Paris Club creditors.

When it comes to bond market access, the post-financial crisis outlook, characterized by high commodity prices and a context of enduring low interest rates, allowed emerging and SSA markets to thrive, with



SSA EXTERNAL GENERAL GOVERNMENT DEBT CREDITORS SHARE (% TOTAL)

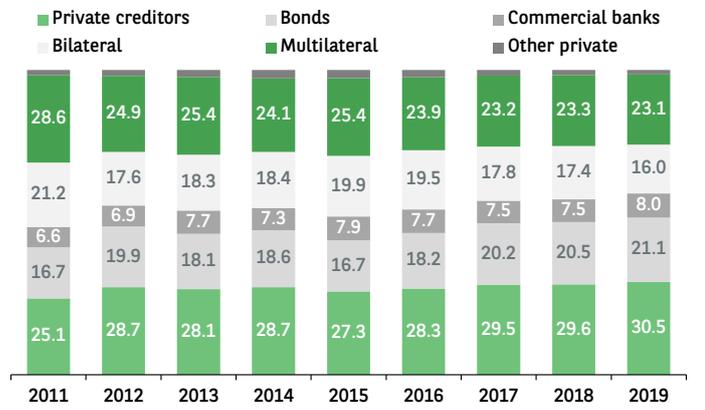


CHART 2 SOURCE: WORLD BANK, INTERNATIONAL DEBT DATABASE (IDS)

CHINESE LOANS TO AFRICA

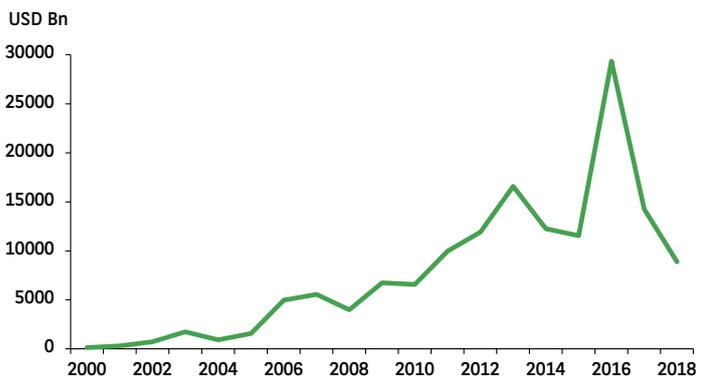


CHART 3 SOURCE: CARI, JOHN HOPKINS UNIVERSITY

investors searching for high-yield investment opportunities. This has represented a successful alternative to concessional loans, the latter being often conditional on reforms and specific spending commitments. While only South Africa had access to bond market issuance until 2006, 16 countries have issued sovereign bonds since then. The market nevertheless remains very concentrated⁵, exemplifying the heterogeneity and selectivity in market access. One interesting feature of bond issuance in the SSA region has been the relative indifference of investors relating to Debt Sustainability Analysis (DSA): despite unsustainable debt classifications, some countries (such as Cameroon in 2015 and Ghana in 2018) managed to tap into markets on quite favorable terms.

5 Angola, Côte d'Ivoire, Ghana, Kenya, Nigeria, and Senegal account for the majority of issuance.

Meanwhile, bilateral creditors' share fell and their composition changed. Paris-club external public debt share in SSA dropped by about 50% between 2006 and 2018, to about 30% of the total⁶. China became the biggest official creditor in the region. The countries with the highest public debt commitment to China are Angola (USD 20 billion, 45% of its total external public debt), Ethiopia (USD 11 billion, 32%) and Kenya (USD 7 billion, 22%). In the region overall, 20% of total government debt today is estimated to be owed to China⁷. Of this, only 15% benefits from concessional terms and an estimated 60% takes the form of commercial loans. Most of China's lending is denominated in USD and part of it is also collateralized, meaning that debt repayments are secured by commodity revenues. Nevertheless, the precise amount of China's lending is unclear. About 50% of Beijing's lending is not reported officially and therefore does not appear in IMF and World Bank figures⁸: this makes it hard to quantify bilateral financial transactions, making it challenging to monitor high-risk countries. China is not part of the OECD's Creditor Reporting System, which shares data, and it operates outside the Paris Club framework. These practices thus significantly increase the probability of hidden debt surprises. The resulting reconfiguration in public debt has fueled concerns over the sustainability of debt in sub-Saharan Africa, whose threshold has lowered.

Impact of borrowing conditions on debt dynamics and external refinancing requirements

The virtuous circle by which expected investment-led growth should stabilize or even allow a decrease in the debt-to-GDP ratio (stock effect), and improve fiscal and external balances (flow effect), has not produced the intended effects. Persistently large non-interest fiscal deficits explained about 40% of the increase in LICs' debt ratios between 2013 and 2019. Moreover, while fiscal and current account deficits have deteriorated, the new sources of financing have offered less favorable lending agreements than those of traditional official lenders, and have accordingly resulted in riskier forms of debt.

Sovereign loans and bonds have increasingly been agreed on commercial terms, with foreign currency denomination, higher interest rates and shorter maturities than those of the traditional lenders. These features imply negative debt dynamics and entail higher refinancing risks. For SSA countries, we estimate public debt interest at 5.1% of GDP over 2009-18 (against 3.2% in 2000-08).

This existing debt structure has mechanically fostered a debt accumulation dynamic. The latter is a function of primary fiscal balance, real GDP growth but also of real interest rate and the exchange rate (see Box1). In the present case, all these variables have significantly acted as upward forces in the public debt law dynamic.

The large share of foreign-denominated debt has also exposed SSA governments to currency risk. This weakness relates to the original sin⁹ (foreign currency borrowing) due to the inability to borrow in domestic currency, mainly because shallow financial systems provide limited investment opportunities in local currencies). Although the share of public debt in domestic currency has increased somewhat over the past few years, on average the proportion that is foreign-

6 World Bank Group, *Africa's Pulse*, Volume 17 (April 2018)
 7 C. Calderón & A.G. Zeufack, *Borrow with Sorrow? The Changing Risk Profile of Sub-Saharan Africa's debt*, Policy Research Working Paper 9137, World Bank Group, African Region (January 2020)
 8 S. Horn, C.M. Reinhart & C. Trebesch, *China's Overseas Lending*, Working Paper 26050, NBER (July 2019)
 9 B.Eichengreen, R. Hausmann & U.Panizza, *The Pain of Original Sin* (2003)

denominated remains predominant¹⁰. The dynamic shows that while domestic currency debt issuance has somewhat improved, domestic markets remain modest in size, since they offer less favorable issuance conditions than international markets. Real exchange rate depreciation (measured as the exchange rate effect minus the inflation effect, see Box1) accounted for about 20% of the increase in the debt ratio of LICs¹¹ between 2013 and 2019.

The proportion of complex and/or collateralized debt structures also makes risk monitoring and prevention complicated. In the case of collateralized debt, creditors (especially China, where the practice is common) acquire ownership of infrastructure or natural resources in the event of default. China often resorts to these type of guarantees. These insurance terms have far-reaching consequences in the event of a crisis, as this would further weaken the affected government's revenues. This also goes against the equal burden sharing principle which is at the core of the G20 guidelines.

Under these conditions, liquidity and solvency (see box 1¹²) have come increasingly under threat. The oil shock in 2015 made the issue more acute, with weakening exports, ballooning fiscal and current account deficits and depreciating currencies. Debt dynamics eroded further in the region, particularly in oil-intensive economies¹³. In 2015, two countries were in debt distress and six others faced a high risk of debt distress.

The effect of the pandemic crisis

The current crisis further highlights the pitfalls of debt in Sub-Saharan Africa. Although the coronavirus has spared the region in relative terms so far, its economic effects are highly detrimental.

The outlook in SSA outlook has worsened as a result of sharp fiscal and external financing pressures. Given the already limited room for manoeuvre, debt sustainability has deteriorated significantly further.

Slowdown in growth and erosion of fiscal outlook

The SSA region suffers from the shock, as shown by the steep GDP contraction observed in almost every country. The continent is set to suffer its first recession in 25 years, with regional economic activity anticipated to drop on average by -3% in 2020 according to the IMF (from +3.2% in 2019). This shock is unprecedented, with substantially more detrimental impact than those of 2009 and 2015. Estimates for recovery also illustrate the severity of the shock: GDP levels are not predicted to reach their pre-pandemic levels before 2022, and recovery in the largest economies is expected to take even longer (2024/25).

The channels of transmission of the crisis to the SSA economies are many-fold. On the domestic side, the countries' activity has been hindered by the negative effect of lockdowns and social distancing measures. Although most containment measures have been lifted, the external environment has remained a drag on economic activity. The collapse of global demand and disruption of supply chains in developed countries has hindered domestic production. But in LICs, the services sector – with tourism and hospitality at the forefront – has been particularly affected. With developing countries seeing resurgence of

10 C. Calderón & A.G. Zeufack, *Borrow with Sorrow? The Changing Risk Profile of Sub-Saharan Africa's debt*, Policy Research Working Paper 9137, World Bank Group, African Region (January 2020)

11 This figure includes non-SSA countries.

12 A large part of this overview retains some definitions and developments of an article by Charles Wyplosz on debt sustainability ("*Debt sustainability assessment: Mission impossible*," Review of Economic Institutions (2011).

13 Angola, Nigeria, Cameroon, Congo, Equatorial Guinea, Chad, Gabon, South Sudan

LAW OF MOTION FOR PUBLIC DEBT

$$\Delta d_t = d_{t-1} \times (i_t / (1+g_t)) - d_{t-1} \times (gr_t / (1+g_t)) - d_{t-1} \times (\pi_t (1+gr_t) / (1+g_t)) + \alpha \times d_t + \varepsilon_t \times (1+i_t) / (1+g_t) - pb_t + f_t$$

The interest rate effect:	$d_{t-1} \times (i_t / (1+g_t))$
The real GDP growth effect:	$-d_{t-1} \times (gr_t / (1+g_t))$
The inflation effect:	$-d_{t-1} \times (\pi_t (1+gr_t) / (1+g_t))$
The exchange rate effect:	$\alpha \times d_t + \varepsilon_t \times (1+i_t) / (1+g_t)$

With:

d	Stock of public debt
i	Average nominal debt interest rate
g	Nominal GDP growth rate
r	Real interest rate
π	Inflation
α	Share of foreign currency denominated public debt
ε	Change in the exchange rate (local currency per USD)
pb	Primary budget balance
f	Other debt creating flows and residual

BOX1

SOURCE: BNP PARIBAS

the virus, tourism inflows will remain very scarce as global mobility stays far below its usual level. This has deprived tourism-dependent economies of an importance source of fiscal revenue and foreign exchange reserves, as well as a significant share of employment. Security issues and political instability may also hinder tourism in the short term, affecting economic activity. Meanwhile, the slump in commodity prices has hit the most dependent economies hard. With the oil price estimated at USD 43 per barrel this year (more than 30% down on 2019), oil-intensive SSA economies have been particularly affected by the dynamic: GDP is likely to contract by 4% in these countries.

The growth shock has created a storm for public financing through its effects on revenues. Overall, SSA government revenue in 2020 is estimated to have fallen by 17.5% in nominal value terms compared to 2019. Meanwhile, exceptional spending plans for health and welfare measures have been implemented to mitigate the crisis. The impact on public finances has therefore been substantial and fiscal vulnerabilities, already stacking up since 2008, have been exacerbated.

The most indebted countries are Cape Verde, Mozambique, Angola and Zambia. Overall, debt ratios are projected to increase by about 14 ppt compared to 2019. Mozambique, Togo and Burundi are the countries with the sharpest predicted increase in public debt as compared to last year. Accordingly, the situation is likely to become unsustainable and debt metrics point both to liquidity and solvency issues.

The interest burden should average 32.2% of revenue in 2020, and could reach more than 76% of revenue for SSA oil-exporting countries.



Rising external financing requirements

While their current account balances will not return to pre-oil shock levels, SSA countries have faced a substantial increase in external financing requirements. Moreover, the pandemic has also put new external financing into disarray, as SSA countries are overall quite heavily dependent on financial flows from countries that have themselves been hit hard by the virus.

Current account receipts have dropped on the back of the sharp global contraction and declining trade volumes. In the first half of 2020, global demand has stalled, and value chains have been disrupted significantly. Global trade would have contracted by 9.5% this year overall. The decline in commodity prices has allowed importing economies to counterbalance falling exports. However, in oil-dependent economies, current account deficits have widened; for these countries as a whole, this figure is expected to have reached -3.8% on average in 2020 and to remain negative in 2021. Moreover, remittances from migrant workers have also dropped (-20% estimated in 2020), on the back of weak economic growth and lower employment levels in host countries.

Foreign direct investment (FDI) flows, already on a downward trend before the crisis, also came to a sudden stop. Although this drying-up could prove temporary, net FDI in SSA is likely to decrease by around -20% this year.

The outlook for basic balances (current account balances + FDI) has thus considerably weakened, such that the regional external financing gap will remain significant, estimated at USD 290 billion over the period 2020-23. Given the already high level of external debt, and limited FX reserves (4.1 months of imports on average), the ability to cushion and adjust to the shock is extremely narrow.

Debt issuance and refinancing

Given the already concerning debt outlook and the necessity to fill fiscal and external financing gaps, countries are bound to rely on further debt issuance. Yet, before the pandemic, SSA's debt load projection stood at 56.4% of GDP in 2020; the current projection is now 65.6%. In the region as a whole, over 50% of gross external financing needs (estimated at USD 900 bn in 2020-23) will relate to external amortization.

SSA AVERAGE EXTERNAL DEBT SERVICE

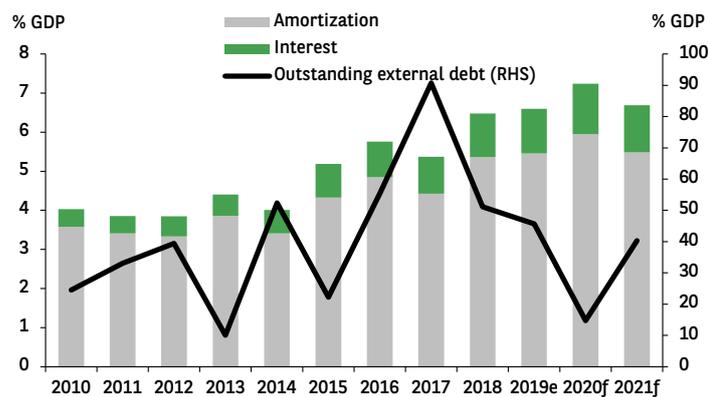


CHART 4

SOURCE: IMF WEO

SSA INCREASING EXTERNAL VULNERABILITIES

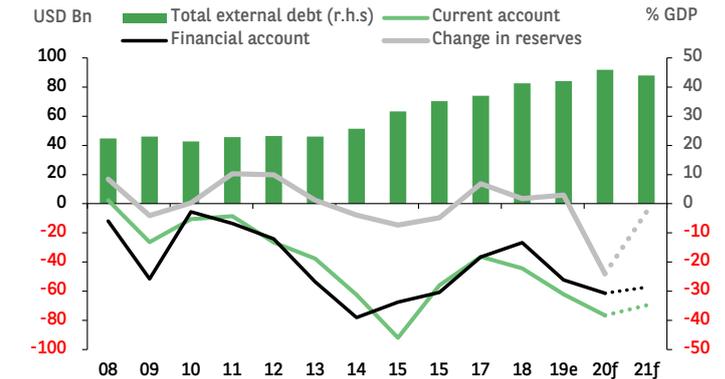


CHART 5

SOURCE: IMF WEO, BNP PARIBAS

STEEP GDP CONTRACTION

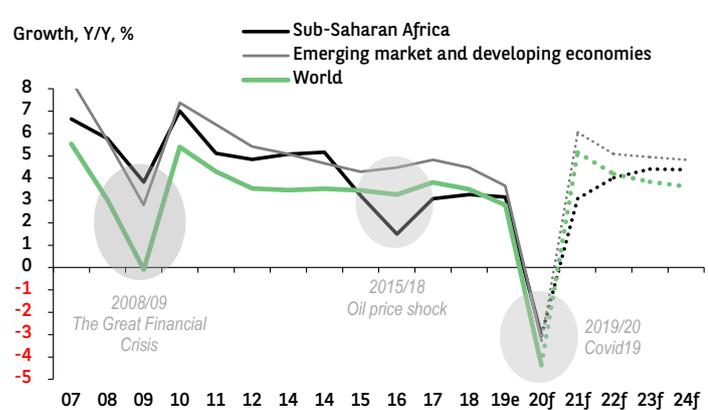


CHART 6

SOURCE: IMF WEO, BNP PARIBAS

MOST INDEBTED SSA COUNTRIES

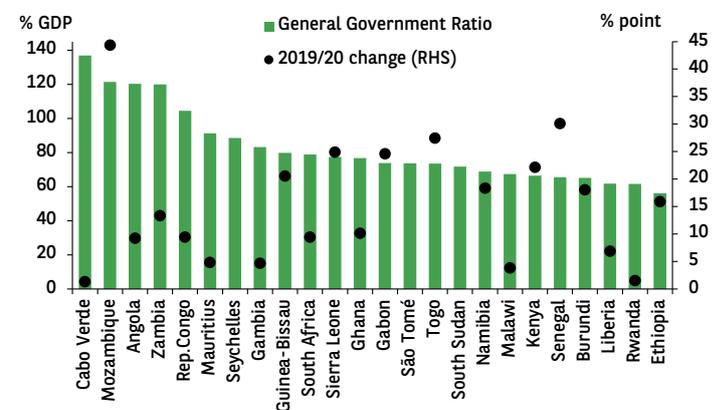


CHART 7

SOURCE: IMF, BNP PARIBAS

The unprecedented shock thus ramps up external debt servicing costs, exposing countries to a significant risk of external debt distress. External debt service accounted for about 37% of exports in 2020 (compared with the IMF's 23% maximum threshold).

In several countries, the exceptionally degraded outlook may be temporary. For others, return to a sustainable trajectory increasingly looks a long way off. The impossibility of meeting debt repayments and/or refinancing their debt could leave default as the only option. The IMF's DSA analysis currently identifies six countries in debt distress (Republic of Congo, Mozambique, Somalia, Sudan, Zimbabwe, and Zambia).

In another eleven countries, pressures have raised debt distress to high levels (Angola, Ethiopia, Kenya, Sierra Leone, Cameroon, South Sudan, Burundi, Gambia, Cape Verde, Ghana and Chad).

Countries in debt distress

A deeper analysis allows the introduction of some granularity, to better understand the issues at stake in the above-mentioned countries. Using liquidity and solvency indicators enables us to draw a more accurate outlook for those countries facing a high risk of debt distress. While the two issues can be interrelated, there are situations where they are distinct from each other.

HIGH RISK OF DEBT DISTRESS SSA COUNTRIES (2020)

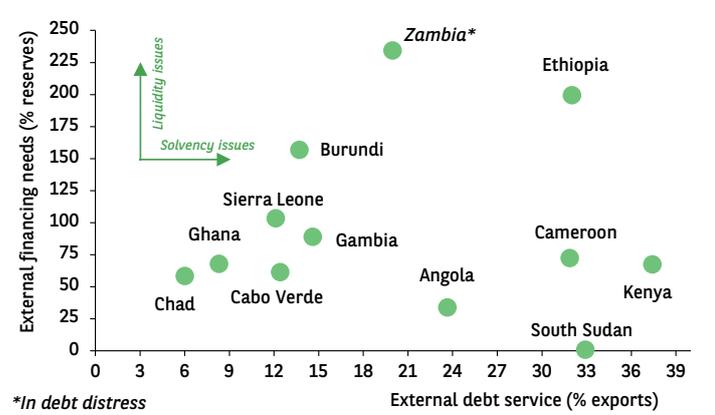


CHART 8 SOURCE: IMF WEO, BNP PARIBAS

Zambia is a case in point: it combines both high external debt service ratio (in percentage of exports) and external financing needs (in percentage of FX reserves). The country has both liquidity and solvency issues. The high external financing need translates into high liquidity pressures, because reserves are not sufficient to fill the gap between this year's financing requirements and resources. The level of external debt service, as a percentage of export, illustrates the structural increase of external debt. Zambia's liquidity issue recently crystalized into a default, with the missed payment of Eurobond coupons in November 2020 and January 2021. The country's insolvency highlights the necessity for debt restructuring to reduce debt service and restore debt sustainability.

LIQUIDITY, SOLVENCY AND SUSTAINABILITY

The most basic definition of solvency is the capacity of an economic agent (a state, a company, a household) to generate resources to repay its debt over the entire lifetime of a loan (one refers also to capacity/ability to repay its debt). Liquidity is defined by the capacity of economic agents, at a point in time, to have or to gather the necessary resources to service the debt. One usually makes this distinction to discriminate between insolvent economic agents and agents that may face short-term liquidity constraints for specific reasons (temporary lack of cash, and/or refinancing difficulties) but retains a good capacity to pay. This classical distinction was first introduced by Bagehot (in *"Lombard Street, a description of the money market"*).

Debt solvency is also commonly defined more formally as a situation when the expected present value of primary surpluses is large enough to pay back the debt, principal and interest (or, more technically, when the current debt plus the present discounted value of all expenditures does not exceed the present discounted value of all revenues). Thus solvency is accurately defined, though it raises implementation difficulties as it is forward-looking.

By contrast, debt sustainability is not as clearly defined. According to Charles Wyplosz, debt sustainability aims at answering a deceptively simple question: when does a country's debt become so big that it will not be fully repaid? Actually, it is virtually impossible to answer the question due to methodological and measurement issues according to Wyplosz (the *"impossibility principle"*).

Like solvency, sustainability is entirely forward-looking. Secondly, and more importantly, there is the idea that there is a threshold to the debt. Lastly, sustainability also means that the government can service its debt without requiring an unrealistic correction (from a social and political point of view). This refers to the IMF definition, according to which *"a debt is sustainable if it satisfies the solvency condition without a major correction"* and also *"given the cost of financing"*.

In practice, as a first approach, it is widely acknowledged that debt is sustainable if ratios are bounded and stable or declining.

Given the forward nature of this definition, Debt Sustainability Analysis (DSA) has emerged as the most complete tool for assessing Lower Income Countries' debt-carrying capacity and thus solvency (although the IMF has only partially addressed Wyplosz's impossibility principle). Based on each country's current macroeconomic framework, the DSF compares debt burden indicators (in baseline and alternative scenarios) to determine the risk of debt distress (see box 3).

BOX2 SOURCE: BNP PARIBAS

In some countries, the debt burden is below the IMF threshold (external debt service to export ratio of 23%). However, their limited liquidity means that, although they would have the financial ability to pay, they do not have sufficient reserves to adjust with a shock. As detailed earlier, the fall in foreign exchange inflows (through tourism, commodity exports, etc.), along with inflationary pressures, have significantly eroded FX reserves. In these cases (upper part of the chart 8), the urgent financing lines provided by IFIs and the rescheduling of debt repayment within the DSSI framework allows such countries to make ends meet.

By contrast, high external debt service in some countries translates into a deeper issue of insolvency (right part of the chart), as for Zambia; it applies also to Cameroon, Ethiopia and Kenya (in the bottom right of the chart). For these countries, temporary relief might be insufficient to overcome the crisis. Indeed, financing sources and lending conditions offer limited options for countries willing to refinance their debt in a sustainable manner.

As average debt burden grows and the exchange rate depreciates, re-financing risk can materialize even though financing conditions were to normalize. Even if issuance has been on favorable terms, conditions may change to prevent a government from debt rollover. Large coupon payments on governments' bonds are due between 2021 and 2025, with a yearly average payment estimated at USD 4 bn.

In addition, further bond issuance could now prove difficult as the frontier market enthusiasm has faded away. Although SSA sovereign yields have recently decreased, after peaking in May, they remain on average 17% higher than their 2019 level¹⁴. Cote d'Ivoire recently succeeded in issuing a 12-year USD 1.2 billion bond with historically favorable conditions. However, its economy has fairly solid fundamentals by regional standards; large divergences remain between countries.

The market move therefore might not apply to the weakest countries, whose market access will likely take longer to recover. Unable to refinance their debt, they could find debt restructuring the only option. In this regard, the nature of creditors is crucial, given that their profile influences the length and conditions of any possible restructuring.

The Paris Club and its guidelines allow for a coordinated, fair, transparent and effective approach to debt treatment between defined bilateral creditors. Within its framework, restructuring operations are conducted in close cooperation with the IMF and accompanied by reform programs. Given the existence and relatively successful history of debt treatment frameworks (such as HIPC), it is reasonable to expect this could apply in the current context - particularly for countries whose debt is mostly owed to multilateral and bilateral creditors: Burundi, Chad, CAR, Cape Verde, Gambia and Sierra Leone.

Restructuring negotiations might however prove more difficult for countries where the bulk of debt service in 2021 is mostly owed to China, non-officials or bondholders. Regarding bondholders, most of SSA bonds will come to maturity as of 2024. Payments due to China, by contrast, represent significant amounts in 2020 and 2021¹⁵.

Given the lack of transparency in China's practices, debt treatment agreements could face some hurdles. The case of Zambia again provides a concrete example: in the absence of a coordinated and transparent approach, private bondholders refused to provide debt relief (i.e. payment deferral). Lacking information, investors could not price the risk involved in the operation and therefore turned down Zambia's re-profiling request in order not to unilaterally bear the risk. The country's situation is therefore subject to high uncertainty, all the more so given that no IMF program will be granted as long as the public debt is deemed unsustainable. Accordingly, the debt-restructuring framework calls for an adaptive approach.

Call for debt restructuring

The need for urgent action requires identifying the challenges relating to the current debt-restructuring framework, and those regarding the involvement of China.

The debt-restructuring framework: the importance of Debt Sustainability Analysis

The debt-restructuring framework

In November, the G20 and Paris Club creditors agreed on a framework to address unsustainable sovereign debt ("Common Framework for Debt Treatments beyond the DSSI"). The rationale behind this framework is that "prevention is better than cure". There is indeed a large consensus about the cost of sovereign defaults in terms of output losses directly or indirectly through various channels (trade, investment, credit, borrowing costs, exclusion from capital markets)¹⁶. Given the severity of the economic impact of the pandemic, prominent economists have not only called for a necessary suspension of debt service, at least during the pandemic (that is the purpose of the DSSI), but also recognized that "many countries' debts will need to be restructured; there will be no alternative to a negotiated partial default"¹⁷. In October the IMF general manager, Ms. Kristalina Georgieva, urged creditors and debtors to start restructuring processes sooner rather than later, quoting a recent academic study showing that post-default restructuring is associated with larger declines in GDP (together with other macroeconomic variables) than preemptive restructuring¹⁸.

The Common Framework on Debt Treatment (CFDT) was adopted by the G20. It is expected to ensure 1/ broad participation, involving official creditors not previously part of the established Paris Club process, and also private creditors; and 2/ fair burden sharing between creditors (i.e. participating debtor countries may seek treatment on terms that are comparable to or better than those of other creditors, including those in the private sector). The recent request for debt relief from Chad and Ethiopia will come under this Common Framework, and will test the effectiveness of such a debt reduction process.

The framework will be based on Debt Sustainability Analysis (DSA), carried out jointly by the IMF and the World Bank, which will help to inform the treatment needed to restore debt sustainability, as it is already the case. The IMF takes a case-by-case approach on whether a country requires debt restructuring, taking into account debt sustainability analysis and the continued availability of the financing that countries need for their longterm growth and development.

From debt overhang to comprehensive Debt Sustainability Analysis

The rationale behind debt restructuring/cancellation is not new; it has been developed in the seminal theoretical framework called the debt overhang approach¹⁹. According to this approach, under a bargaining process between debtor and creditor, there is a level of debt beyond which the debtor has no interest in repaying their debt despite financial sanctions (i.e. there exists a "laffer curve" for debt). If so, it would be beneficial for creditors to propose a debt reduction in order to maximize repayments.

14 S&P Africa Hard Currency Sovereign Bond Index

15 Loan commitments, which peaked in 2013, generally have a grace period of 5-10 years, suggesting African countries now face significant repayment (CARI, Johns Hopkins estimates).

16 Das, Papaioannou, Trebesh (2012) for a survey

17 Carmen Reinhart and Kenneth Rogoff (Project Syndicate, April 2020)

18 Aonuma, Chamon, Erce, Sasahar (2020)

19 Eaton and Gersovitz (1981), Eaton & al (1986), Cohen & Sachs (1986) quoted in Raffinot (2008)



DEBT BURDEN THRESHOLDS AND BENCHMARKS UNDER HIPC INITIATIVE			
	PV of external public debt in % of:		External debt service in % of exports (indicative targets):
	Exports	Revenue	Exports
Initial HIPC	200-250	280	20-25
Enhanced HIPC	150	250	15-20

DEBT BURDEN THRESHOLDS AND BENCHMARKS UNDER THE DEBT SUSTAINABILITY FRAMEWORK					
Sustainability ¹	PV of external public debt in % of:		External debt service in % of exports (indicative targets):		PV of total public debt in % of:
	GDP	Exports	Exports	Revenue	GDP
Weak	30	140	10	14	35
Medium	40	180	15	18	55
Strong	50	240	21	23	70

TABLE 1

¹ depends on the debt carrying capacity of the country

The difficulty here is to set thresholds beyond which it would be optimal to restructure or to cancel debt and which will be usable as benchmarks for all countries or limited clusters of countries, and whatever the economic and social context. Despite this, debt sustainability methodologies rely basically on the use of thresholds.

There have been a very large number of applied studies with various methodologies (macroeconomic indicator-based decision trees, early warning signals, econometric estimates) aiming at selecting risk indicators of default and their associated thresholds. Unsurprisingly, studies have highlighted numerous different risk indicators and, in some cases, different threshold values for the same indicator.²⁰

In practice, debt thresholds were first introduced under the HIPC initiative framework (see table 1). The actual official thresholds are those used for DSF analysis by the IMF/WB. The DSF analysis is more flexible since it allows for a granularity of thresholds depending on the debt-carrying capacity of the country. But, for the weakest countries, the threshold for external-debt-to-GDP ratio has remained broadly the same (150% for HIPC, 140% for the DSF). The range for debt-service-to-exports has not changed.

The DSA approach has been criticized. On top of the difficulty of setting appropriate debt ceilings, the DSA method can suffer from the impossibility principle²¹. DSA is indeed a forward-looking methodology, with a very long horizon; thus, not only are macroeconomic assumptions (growth, inflation, primary fiscal balance, interest rates) by definition uncertain, but also public debt projections are very sensitive to those assumptions.

²⁰ Das, Papaioannou, Trebesh (2012) for a survey

²¹ Wyplosz (2011)

The impossibility criticism is partly addressed in the enhanced version of the DSA with the inclusion of stochastic tools (fan charts) that give “a spectrum of possible outcomes based on the stochastic properties of country-specific data”²². Moreover, “fan charts incorporate feedback between macroeconomic variables that drive the debt dynamics”, allowing for the persistence of shocks.

So far, fan charts have been developed for Market Access Countries DSA (i.e. advanced and emerging countries). More recently, a complementary methodology to the fan chart approach has been proposed²³. Like fan charts, it is based on a stochastic approach to debt dynamics but unlike fan charts it helps to rule out, via stress tests, unusual predictions regarding variables over which uncertainty is high. The purpose of this methodology is not to determine the spectrum of debt trajectory (as fan charts do) but to determine the distribution of the default probability for 1/ a spectrum of socially and politically feasible macroeconomic scenarios and 2/ a given level of indebtedness.

Then, for a given level of indebtedness, the methodology assesses the appropriate size of debt relief consistent with a maximum probability of default. Debt sustainability is defined by the level of debt relief required, or the equivalent maximum probability of default.

In our view, these criticisms/alternative methodologies do not put into question the DSA exercise, especially for LICs. Indeed, for LICs, the interest of stochastic methods is questionable; taking into account a country’s specificities is more valuable than simulating debt dynamics using a spectrum of the states of the economy.

The DSF analysis goes beyond the “mechanical use” of thresholds. True, the DSF framework analysis provides a final rating of debt distress risk (low, moderate, high risk and debt distress) which relies on the comparison of solvency indicators with indicative benchmarks. But the framework includes stress tests, the use of judgment at different levels of the decision process, and, to some extent, countries’ specificities (see box 2). Moreover, the rating process thus allows for some flexibility, and it has been improved over time to refine analysis.

There is little doubt that for a growing number of SSA countries, debt sustainability is at stake, as shown in chart 9 (countries at high risk and in debt distress). DSSI will provide a temporary relief, but the need for restructuring will eventually become urgent. In this regard, some questions remain about the concrete involvement of China in any debt-restructuring framework.

China’s involvement: progress and shortfalls

The key role of China in the present situation makes its involvement a necessary part of SSA debt restructuring. Past experience, however, shows that China has opted for various methods of debt relief that differ from those used by the IMF or the Paris Club. The latter is typified by the principles of creditor solidarity, conditionality, information sharing and comparability of treatment.

In contrast, the lack of transparency from China considerably complicates the ambition to provide solvency relief to SSA countries. The difficulty in appreciating the very scale and scope of Chinese loans make it more difficult to develop the trust needed for collective action.

Creditor solidarity and comparability of treatment also seem not to feature in China’s practices. The country’s treatment of debt has often taken place under non-disclosure requirements, with bilateral negotiations mostly behind closed doors.

²² IMF guidance note for public debt sustainability analysis in LICs

²³ Guzman & Lombardi (2017)



EVOLUTION OF RISK OF DEBT DISTRESS IN SSA DSA COUNTRIES

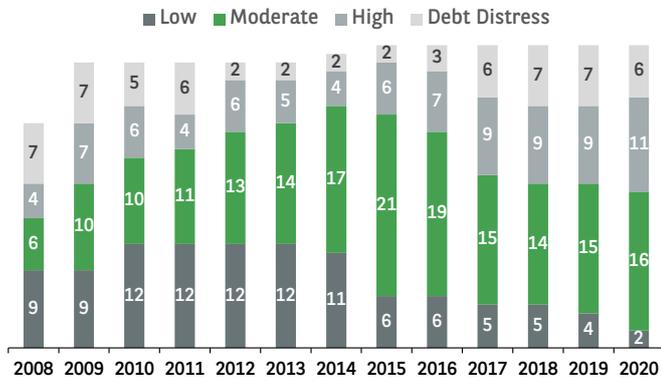


CHART 9

SOURCE: IMF, DSA LIC DATABASE

DSSI ELIGIBLE COUNTRY'S DEBT SERVICE: CREDITOR'S SHARE, 2021 (% TOTAL)

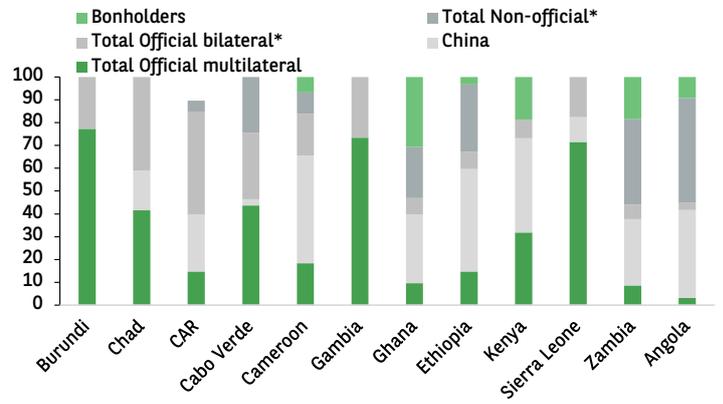


CHART 10

SOURCE: WORLD BANK INTERNATIONAL DEBT STATISTICS (IDS), BNP PARIBAS

SSA BONDS MATURITY SCHEDULE

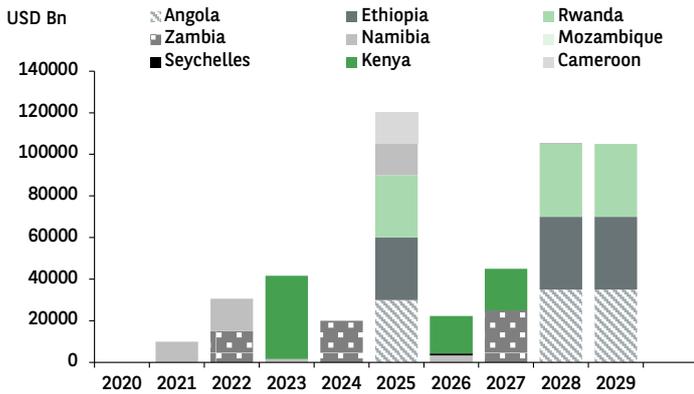


CHART 11

SOURCE: BLOOMBERG, BNP PARIBAS

CHINESE LENDERS SHARE (% TOTAL AFRICA LENDING)

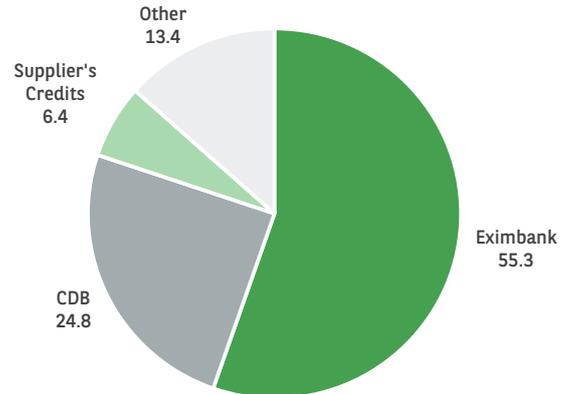


CHART 12

SOURCE: CARI JOHN HOPKINS UNIVERSITY, BNP PARIBAS

Collateral clauses furthermore imply that Chinese creditors might benefit from preferential treatment, distorting payment seniority rules. China's restructuring programs are often agreed in parallel with IMF assistance programs. Yet studies show that restructuring requirements are often tighter than those provided by the G20, and appear unrelated to the IMF assessment.

While extension of debt repayment periods is widely used, other restructuring methods like haircuts, reduced interest rates or refinancing have been less common in China's practices. These features have thus fueled doubt over Chinese lenders' motives and alleged lack of sustained support. The concept has emerged of China's debt trap diplomacy²⁴, with the idea that the country was using its financial power to saddle African countries with debt in order to increase its leverage.

China's exposure makes it crucial for it to share comparable treatment with other creditors. With the crisis, the country has shown itself to be moving slowly toward increased multilateralism by committing to the G20 DSSI in April 2020. This unprecedented move notwithstanding, China remains cautious in its commitment. The country does not classify its state-owned banks – specifically, EximBank and CDB (which hold 80% of total loans in Africa) – as official lenders, thus exempting their loans from the moratorium. Accordingly, it has so far pursued loan reprofiling on a bilateral basis: recent official statements have mentioned bilateral agreements with 11 African countries, and the waiving of interest-free loans with maturity due in 2020 for 15 African countries. In particular, the country has granted Angola a 3-year debt repayment moratorium, allowing for significant relief. That was however NPV (Net Present Value) neutral: this means that the relief is bound to be temporary, and financial pressures are likely to reappear when the moratorium ends.

²⁴ B.Chellaney (2017)



Thus, there are questions around the effectiveness of the current initiative and its adequacy with respect to current SSA debt-related challenges. Although the Common Framework for Debt Treatment could be extended, it remains to be proved that it can ensure an effective management of the crisis.

The crisis surely highlights the risk of debt sustainability in a number of SSA countries. In cases where liquidity pressures are the most salient, debt service suspension and emergency disbursement facilities could prevent the risk of distress materializing. However, for countries exposed to solvency issues, debt restructuring may prove unavoidable. Indeed, debt must be brought back to sustainable levels in order not to jeopardize long-term growth. Pre-emptive debt restructuring might be preferable to a curative action.

The restructuring decision relies on a debt sustainability analysis (DSA) runs jointly by the IMF and the World Bank. This methodology poses some theoretical and practical issues. It is fundamentally based on thresholds alerts according to different scenarios and the method entails the risk that some countries would not qualify for debt restructuring based on these thresholds.

In addition, given its forward-looking nature, the analysis of debt sustainability is complicated by the current unprecedented uncertainty. Nevertheless, the DSA remains the most sophisticated tool for assessing debt sustainability as it takes into account each country's characteristics

Beyond DSA, the debt-restructuring framework may be hindered by practical shortcomings. Debt restructuring history has shown that a successful coordinated creditors' mobilization is possible. In the present context, it is worth noting that China's involvement is unprecedented and will be crucial for a few sub-Saharan African countries to avoid default.

So far, China has shown little transparency regarding loans and the restructuring agreements it granted did not meet the principles of solidarity between creditors and comparability of treatment. With the crisis, the country has however showed a greater willingness for cooperation. The first debt restructuring requests from Chad and Ethiopia under the G20 Common Framework for Debt Treatment (CFDT) will act as a test regarding China's changing stance.

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THE DEBT SUSTAINABILITY ANALYSIS FOR LOW INCOME COUNTRIES

The DSF (Debt Sustainability Framework) from the IMF and the WB for LICs aims to support countries in their development goals while minimizing the risk of debt distress. DSA (Debt Sustainability Analysis) is the support tool for DSF and assesses the risk of debt distress, drawing on a country's capacity to carry debt and its projected debt burden under both baseline projections and alternative scenarios. It focuses on external public and public guaranteed (PPG) gross debt. The DSA produces a final debt distress rating based on a very in-depth methodology that can be adapted and calibrated to each country's experience.

Components: Macroeconomic scenarios, debt and debt service indicators and thresholds

DSA methodology is based on a prospective macroeconomic baseline scenario controlled by realistic tools. The baseline scenario is supplemented by numerous stress tests: these alternative scenarios are standardized, tailored or even fully customized for countries with no data or with very specific risks such as war or health crises. Countries' classifications are first established from the baseline scenario to assess their debt-carrying capacity with regard to public debt level and servicing. More specifically, historical data (over 5 years) and forecasts (over 5 years) of certain variables of the macroeconomic framework make it possible to assign a country score that in turn defines the thresholds for the debt and debt service indicators.

Tools: The construction of intermediate debt distress signals

In the baseline and the alternative scenarios, the comparison between the projected external debt burden indicators (over a 10 to 20-year projection) and the thresholds provide a core risk signal of debt distress. For the alternative scenarios, the methodology favors the most pessimistic forecast scenario.

A first core risk signal of external debt distress is determined according to the following decision rules:

- Low when no debt burden indicator breaches the determined threshold under the baseline and alternative (even most extreme) scenarios
- Moderate when no indicator breaches thresholds in the baseline scenario but at least one indicator exceeds its threshold under the stress tests
- High as soon as an indicator exceeds its threshold under the baseline scenario

A second core risk signal of overall debt distress is defined by combining the first signal derived from external debt indicators and a decision rule (based on an estimated indicative benchmark) for the total PPG. For countries with access to market financing, the core risk signal is supplemented by a signal of market financial pressures, measured via projected public gross financing needs (as a percentage of GDP) and the sovereign risk premium. These two indicators are measured as a deviation from reference values.

Fine-tuning: The use of expert judgment

Expert adjustments are made to complete the signal-based analysis and develop the assessment with factors that are not necessarily accounted for in the model. This enables:

- Discounting of the effect of temporary and marginal threshold breaches
- Additional assessment of the ability to repay in foreign currency in the event of a high risk of debt distress; to identify a potential conflict between fiscal austerity, imposed by the control of total indebtedness, and the external debt repayment, or if the debt share of non-residents might represent a potential source of decline in FX reserves
- Additional assessment of the potential risk arising from pressures on market financing and exposure to contingent liabilities and asset liquidity
- Taking into account the potential cost of specific factors not included in the methodology (endemic violence, war, pooling of FX reserves, etc) and long-term constraints that could justify a persistent exceeding of the threshold (e.g. depletion of natural resources or population ageing)

Completion: The final rating

The final debt distress risk assessment is given by a final classification: low, moderate, high, or materialized debt distress (e.g. debt restructuring, arrears). A final stress test is also carried out, to characterize the space available to the country to absorb a shock without breaching thresholds.

Verdict: Debt Sustainability Assessment

Debt unsustainability implies that, in the baseline scenario, one or more indicators exceed their threshold from the start of the forecast period and are likely to deteriorate continuously. In situations where indicators would improve, expert judgment allows the timing, the severity and the duration and nature (liquidity vs insolvency) of the breach to be assessed, along with confidence in the macroeconomic scenario.

In general, the assessment of debt unsustainability must be broader than the technical analysis of sustainability; sustainability implies that the economic policy measures aimed at stabilizing the debt in a baseline scenario are politically feasible and socially acceptable, while maintaining growth at a satisfactory level, and consistent with moving towards SDGs. Conversely, when the country is in a situation of materialized debt distress and the authorities have drawn up an adjustment plan and/or decided to restructure their debt, the DSA criteria must be consistent with the framework.

BOX3

SOURCE: BNP PARIBAS



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