GABON

SELECTED ISSUES

May 2024

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GABON

SELECTED ISSUES

May 10, 2024

Approved By
African Department

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CONTENTS

APPENDIX

GABON'S DIVERSIFICATION JOURNEY: WHAT IS MISSING? _____ **34**

FIGURES

DETERMINANTS OF SOVEREIGN SPREADS IN EMERGING MARKETS: IMPLICATIONS FOR GABON [1]

Gabon's sovereign spreads have remained relatively high in recent years, hovering around stressed and distressed territories since mid-2022, despite high oil prices. This paper investigates the determinants of sovereign spreads in 50 EMDEs, using a fixed effects panel model and leverages the results to draw lessons for improving funding costs in Gabon. The analysis finds that weak governance, high public debt, weak economic performance, a poor government payment track record, and social vulnerabilities are the main factors that increase Gabon's spreads. Strengthening policies in these areas—by bringing indicators for government effectiveness, regulatory quality, and the fiscal position to the median for sovereigns rated BBB by Fitch, as well as clearing external government arrears—could help reduce spreads by at least 500 bp and save at least 0.4 percent of GDP in annual interest costs (⅓ of the interest bill for external debt).

A. Introduction

1.   Since the onset of the pandemic, heightened volatility, weak market sentiment, and tighter financial conditions have raised the cost of borrowing for Emerging Market and Developing Economies (EMDEs). In the case of Gabon, EMBIG spreads have hovered around distressed and stressed territories since mid-2022 despite the relatively high oil prices, significantly higher than the EMBIG global spread of around 400 bp in 2022–23. When evaluating sovereign credit risk, market players typically focus on the sovereign's willingness and ability to repay its debt, which involves analyzing a wide spectrum of determinants, such as economic robustness, fiscal management, external positions, institutional strength, payment track record, and exogenous factors.[2] The stronger these factors, the lower the perceived risk of potential sovereign default. Given Gabon's precarious fiscal
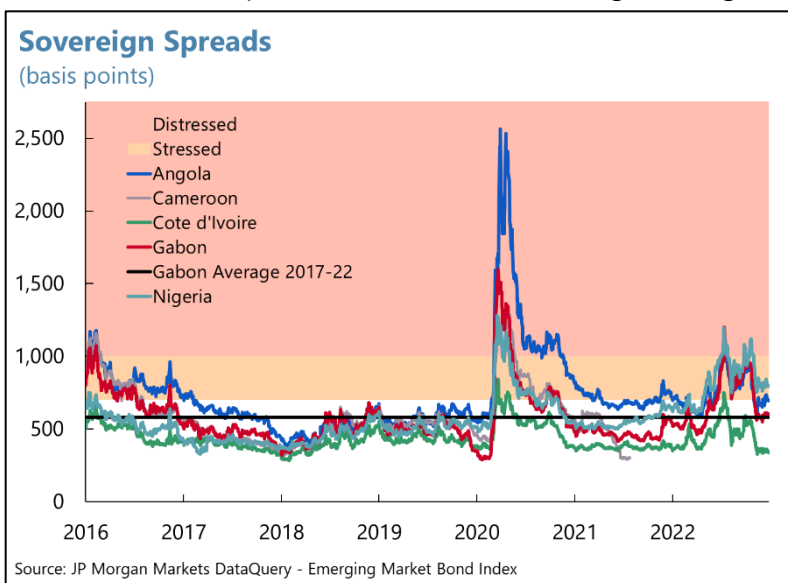
Sovereign Spreads
(basis points)

Source: JP Morgan Markets DataQuery - Emerging Market Bond Index

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[1] Prepared by Carmen Avila-Yiptong, Mahamoud Islam, Chima Simpson-Bell (all African Department) and Ayah Said (Strategy, Policy, and Review Department).

[2] For example, see Moody's rating or Fitch methodologies, for details on metrics used for sovereign credit risk assessment. Institutional investors, such as banks or pension funds, use these rating agencies' information as a guide to make investment decisions or in some cases rely on in-house models.
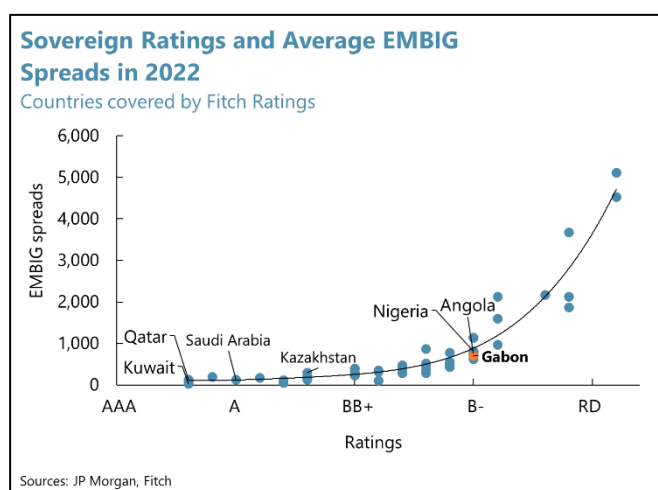
position and high near-term financing needs, lowering government's borrowing costs takes on particular importance.

2.   **This Selected Issues Paper (SIP) investigates the determinants of sovereign spreads for EMDEs and identifies several ways for Gabon to improve its funding costs**. In addition to macroeconomic fundamentals, we examine the impact of arrears and of the environment, social, and governance (ESG) performance on spreads, given Gabon's poor repayment track record and increasing investor interest in sustainable finance. In this paper, we first discuss Gabon's sovereign risk profile, then estimate the determinants of sovereign spreads across a panel of 50 EMDEs over the period 2010–21 and finally use the results to draw implications for Gabon.

B.   Gabon's Credit Risk Profile: A Snapshot

3.   **Gabon's sovereign rating is non-investment grade**, and as such, it issues sovereign bonds with a high-risk premium.[3] Gabon has been rated Caa1 by Moody's and B- by Fitch, two out of the three major rating agencies (Figure).[4] Gabon's ratings have been on a downward trend since the 2014–16 oil price plunge, with a minor improvement in the summer of 2021 when Fitch upgraded Gabon on the back of higher oil prices and a new IMF-supported program. This long-term decline in Gabon's sovereign ratings has resulted in a higher risk premium. The embedded figure suggests that an enhancement of one notch in the country's sovereign rating could potentially reduce its spread by 100 basis points.

Sovereign Ratings and Average EMBIG Spreads in 2022
Countries covered by Fitch Ratings

Sources: JP Morgan, Fitch

4.   **The literature on the determinants of spreads has identified a number of factors that have a significant impact on spreads, including macroeconomic and political factors, as well as repayment history** (Box 1). In what follows, we discuss Gabon's performance against key determinants:

•   *A vulnerable economic structure and weak economic performance*. Gabon is a small open economy that relies heavily on hydrocarbons. Economic performance has been weak over recent years, with income growth below the average in sub-Saharan Africa. Export growth is

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[3] A credit rating below Baa is considered "non-investment" grade by Moody's. A credit rating below BBB is considered "speculative" by Fitch.

[4] The latest credit rating actions for Gabon were taken by Moody's on September 12, 2023, and by Fitch on January 26, 2024.

constrained by a high concentration of activity in the oil sector, which has seen high volatility in the last decade and for which future prospects have deteriorated.[5] Oil represents about 40 percent of the country's GDP, but accounts for two thirds of total exports. This commodity dependence influences investor sentiment through its impact on economic prospects. Oil price declines, for instance, negatively affect risk perception as investors anticipate a deterioration of economic activity, as well as external and fiscal balances (see figure: EMBIG Spreads and Brent price).

- *Limited fiscal and external buffers due to the procyclicality of spending, and low nonoil revenues and exports.* Public debt, estimated at 70 percent of GDP at end-2023, is elevated and above the sub-Saharan African average of about 60 percent. Compared to its peers, Gabon's fiscal revenues are relatively low (figure "Fiscal Revenues to GDP and Import Cover")—primarily due to weak nonoil revenue mobilization and a decline in oil revenues on the back of weaker oil production—while saving from oil wealth over the years has been limited by procyclical spending. Going forward, limited prospects for higher hydrocarbons production mean that fiscal space is unlikely to widen and that further

GDP Growth
(percent, average 2018-2022)

Sources: Fitch, IMF staff calculations based on countries included in EMBI.

EMBIG Spreads and Brent Price

Source: Bloomberg and JP Morgan.

Fiscal Revenues to GDP and Import Cover
(average 2018-22)

Note: Coverage of reserves is calculated in months of external payments based on Fitch's sovereign risk database.
Sources: Fitch, IMF World Economic Outlook, and IMF staff calculation.

buffers may be hard to rebuild. External buffers, or reserves, are also moderate (covering less than 5 months of imports targeted for the CEMAC region) exposing the balance of payments to
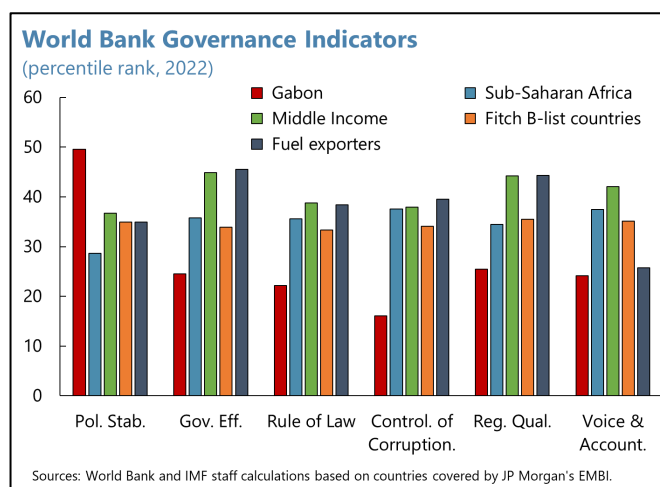
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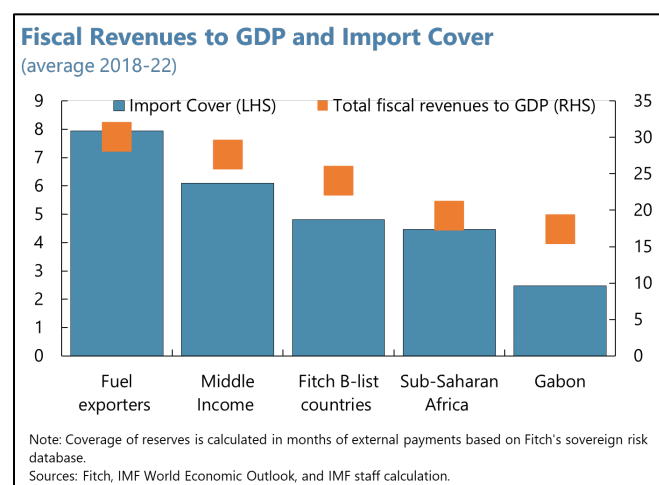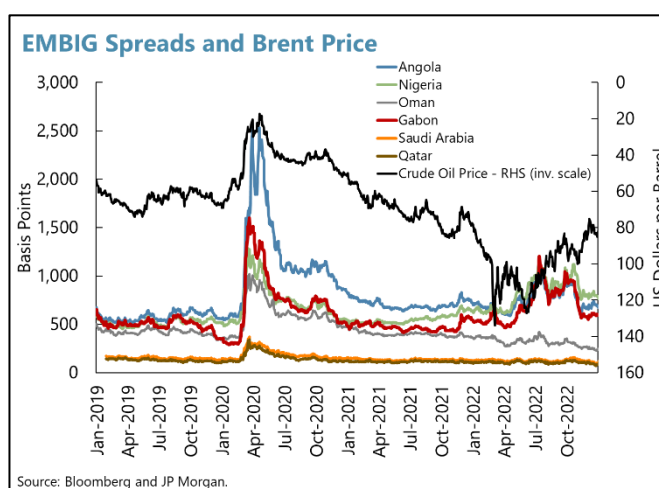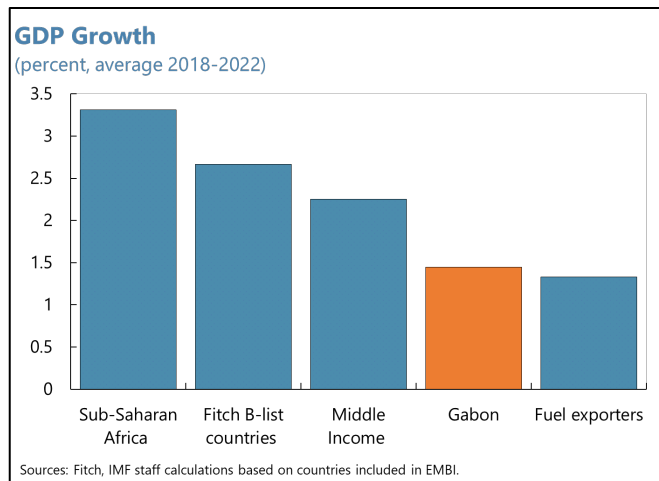
[5] Oil production is projected to deteriorate in the medium to longer term due to aging oil fields. This outlook may worsen further due to global energy transition efforts.

downside oil price risks. The country's ability to generate higher external buffers is held back by its still strong dependence on oil—whose production is expected to decline due to maturing fields and potentially lower global demand as a result of the energy transition— and substantial debt-related commitments (see SIP "*Gabon's diversification journey: what is missing?*", and "*Annex IV. Debt Sustainability Analysis*" in the staff report).

- *Institutional and social fragilities.* The World Bank Worldwide Governance Indicators (WGI) point to Gabon's weak rule of law, poor regulatory quality, elevated level of corruption and lack of government effectiveness, especially compared to credit rating peers. Social fragilities are underpinned by widespread poverty, declining income per capita, a high unemployment rate (estimated at 36 percent) and limited access to basic services.

World Bank Governance Indicators
(percentile rank, 2022)

Sources: World Bank and IMF staff calculations based on countries covered by JP Morgan's EMBI.

- *A relatively poor repayment track record*. While the country has made efforts to repay external bondholders in the past decade, it incurred recurring arrears to bilateral and multilateral creditors, weakening its track record. At end-December 2023, Gabon had external arrears of about one percent of GDP.

C. Methodology

5.   Due to limited data availability for Gabon, we analyze the determinants of sovereign spreads using a panel of EMDEs covering the period 2010–21. We use a fixed effects regression model, which allows us to account for unobservable, time-invariant heterogeneity across countries which may contribute to the cross-sectional difference in sovereign spreads. We estimate the following equation.

$$Spreads_{i,t} = \alpha + \beta X_{i,t} + \delta Z_t + \gamma ESG_{i,t} + \eta_i + \varepsilon_{i,t} \tag{1}$$

where $i = 1,2, \dots, N$ is the country index and $t = 2010, 2011, \dots, T$ is the time index. $Spreads_{i,t}$ denotes the JP Morgan EMBIG spreads (in log terms) of country *I,* at time *t*. X_{it} and Z_t are vectors of domestic and global factors, respectively, where we include a comprehensive list of domestic factors to capture economic activity, fiscal and external positions.[6] Domestic factors include the public debt-to-GDP ratio, real GDP growth, the primary fiscal balance-to-GDP ratio, the share of total arrears to GDP, and trade openness. For the global factor, we include the Chicago Board Options Exchange's VIX as a measure of expected financial market volatility. $ESG_{i,t}$ represents the vectors of Environmental, Social, and Governance (ESG) indicators of country *i* at time *t*,

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[6] Definitions and sources for the explanatory variables used can be found in Annex Table 1.

comprising the Human Development Index (HDI), regulatory quality and government effectiveness (World Bank WGI), and the ND-GAIN Vulnerability Index for climate adaption capacity.[7] η_i and ϵ_{it} are the country fixed effect and the idiosyncratic error term respectively.

D. Results

6.   Our results indicate that fiscal, governance and social performance are the most important determinants of sovereign spreads (Table 1, Annex Table 4). Our findings are broadly in line with the current literature, while we supplement existing empirical findings with the inclusion of ESG factors and arrears in our model.

- *A higher debt-to-GDP ratio* has a statistically significant impact on spreads. A one percentage point increase in the ratio is expected to increase spreads by 0.76- 0.83 percent depending on the model, i.e., about 6–7 basis points if spreads are at 800.

- *A poor track record for repaying debt, captured by arrears*, adversely affects borrowing costs. A one percentage point increase in the arrears-to-GDP ratio widens spreads by about 0.61–0.63 percent.

- A one percentage point *improvement in the primary balance to GDP ratio* is predicted

Table 1. Gabon: Determinants of Sovereign Spreads

Variables	(1) Natural Logarithm of Spreads	(2) Natural Logarithm of Spreads
Country-specific macroeconomic factors		
Debt to GDP	0.00824***	0.00758***
	(0.00151)	(0.00160)
Real GDP Growth	-0.0112**	-0.0157**
	(0.00530)	(0.00713)
Primary Balance to GDP	-0.0118*	-0.0125**
	(0.00614)	(0.00598)
Trade Openness	-0.515*	-0.363
	(0.295)	(0.274)
Total Arrears to GDP	0.00614**	0.00625**
	(0.00291)	(0.00282)
ESG indicators		
WGI – Government Effectiveness	-0.324**	-0.275**
	(0.124)	(0.118)
WGI – Regulatory Quality	-0.696***	-0.701***
	(0.120)	(0.122)
HDI	-2.243**	-2.080**
	(0.973)	(1.013)
ND-GAIN – Adaptation capacity		0.798
		(0.881)
Global factors		
VIX	0.129**	0.122**
	(0.0611)	(0.0565)
Constant	4.383***	4.921***
	(0.367)	(0.726)
Observations	534	482
R-squared	0.453	0.476
Number of countries	54	52

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Note: Column (1) demonstrates the model results of Equation 1 without an indicator for environmental risk. Column (2) demonstrates the model results of Equation 1 with the inclusion of the ND-GAIN adaptive capacity indicator as a measure of environmental risk.

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[7] The Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index measure's a country's (i) vulnerability to climate change impacts (including exposure, sensitivity, and adaptative capacity) and (ii) preparedness for climate change impacts (through economic, governance, and social readiness). We use the measure of adaptive capacity, which comprises a variety of infrastructure, health, food, and ecosystem indicators, to model environmental risks as a determinant of sovereign spreads. This sub-index of the ND-GAIN was selected to avoid issues of heterogeneity that could arise by selecting another of the ND-GAIN's indicators (e.g., economic and governance readiness). Additional details on the ND-GAIN Index can be found here.
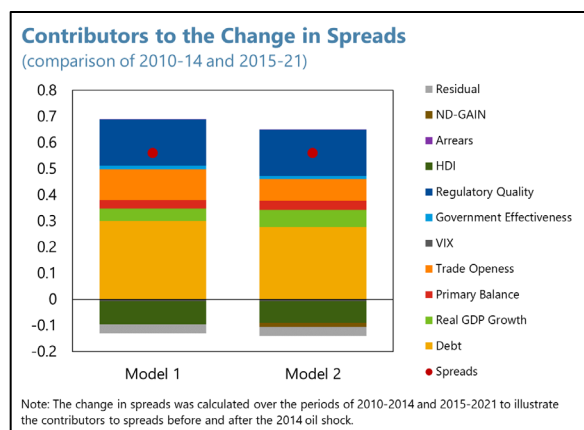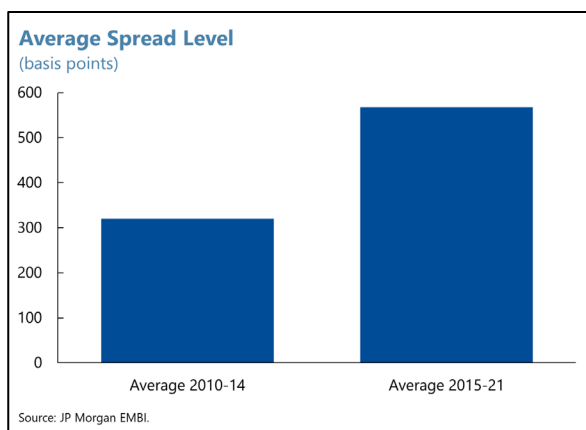
to narrow sovereign spreads by about 1.2 percent.

- *Measures of good governance* contribute the most to the variation in spreads (see figure: Contributions to R^2). A one standard deviation increase in a government's effectiveness score reduces the sovereign premium by 24 to 28 percent, i.e., 192 to 224 basis points for an economy with spreads of 800 basis points. At the same time, a one standard deviation improvement in a country's regulatory quality score narrows spreads by 50 percent in both models. These results are in line with the existing literature including Jeanneret (2018) (see Box 1).

Contributions to R^2

Governance
Debt
GDP Growth
Arrears
HDI
Primary Balance
VIX
Trade Openness
Environment

0%   10%   20%   30%   40%   50%

- *Improvement in the human development index (HDI) score* by one percent reduces sovereign spreads by 2 percent. Given that Gabon's HDI score of 0.71 is behind the upper-middle income average of 0.74, efforts to strengthen human capital would of course also help it catch up with peers in terms of social performance.

- *A higher exposure to environmental risks increases sovereign spreads* (Column 2 of Table 1). As expected, based on the literature, the relationship between a country's adaptive capacity and its cost of borrowing is positive, but does not appear to be statistically significant. Further analysis using more recent and higher frequency data may shed greater light on this relationship as environmental risks are integrated into investment decisions.

- *A deterioration in market sentiment increases risk premiums.* A one percent increase in the VIX widens sovereign spreads by 0.1 percent in both models. This confirms that heightened economic uncertainty and risk aversion are particularly costly for emerging markets as investors seek "safe" assets.

- *Lastly, we find that trade openness*, as an indicator of a country's external vulnerability, does not show a statistically significant relationship with spreads, but the estimate indicates that increased trade activity reduces the sovereign risk premium by 30 to 40 percent.
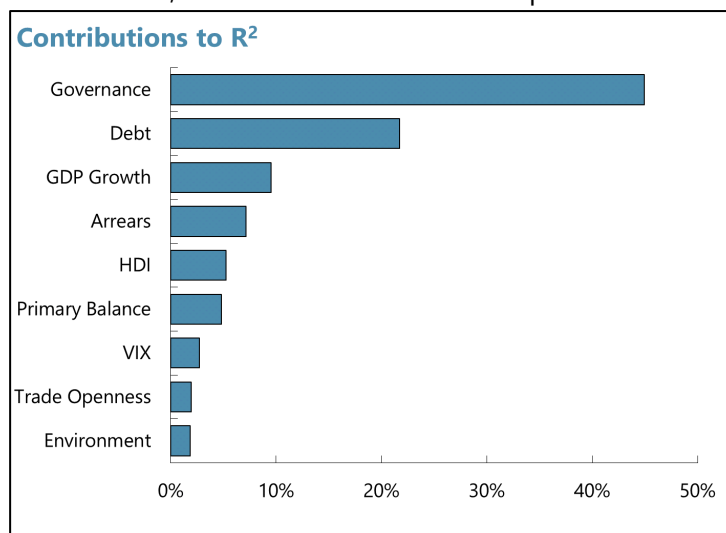
7.   The results suggest that recent episodes of increases in sovereign spreads are largely explained by an increase in debt and a deterioration in governance. Gabon's sovereign spreads increased considerably between 2010–14 (before the 2014–15 oil price shock) and 2015–21 (post-shock, left figure). Our model finds that this level shift in spreads is mainly attributable to the increase in Gabon's debt stock (which explains approximately half of the increase in spreads) and a deterioration in governance-related indicators (about one-third of the increase, right figure).

Average Spread Level
(basis points)

Source: JP Morgan EMBI.

Contributors to the Change in Spreads
(comparison of 2010-14 and 2015-21)

Note: The change in spreads was calculated over the periods of 2010-2014 and 2015-2021 to illustrate the contributors to spreads before and after the 2014 oil shock.

8.   The results also give insights into what it might take for Gabon to reach investment grade. Investment grade bond spreads are approximately 200 basis points, around 400 basis points below Gabon's February 2024 level. Such a reduction in spreads could be achieved, for example, by (i) an improvement in Gabon's regulatory quality and government effectiveness to the median level attained by Fitch-rated BBB sovereigns (i.e., the lowest rank of "investment grade" countries), which could in itself achieve ¾ of the needed reduction in spreads; (ii) reduce debt from 70 percent of GDP to 55 percent, again in line with the median for BBB sovereigns and broadly in line with staff advice, and (iii) eliminate arrears (see figure: Reaching "Investment Grade" Status).[8] This multi-pronged approach is achievable and within the authorities' control in the medium term and could yield significant results and reduce the cost of borrowing. Of course, other combinations of factors or policy reforms in the results we reported above could also be used to achieve the same reduction in spreads.

Reaching "Investment Grade" Status: Model 1
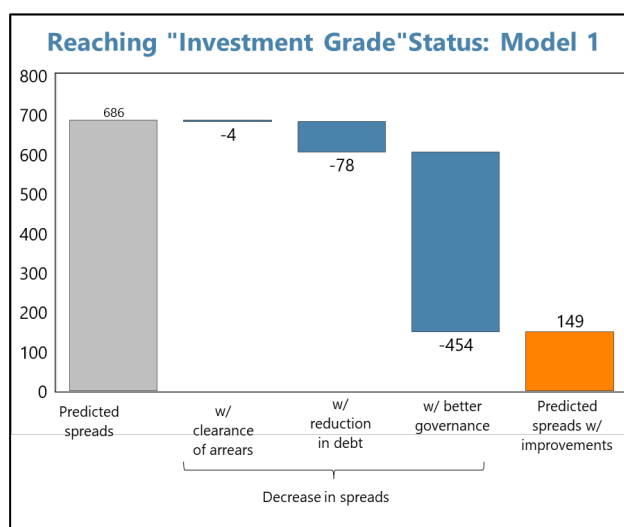
E.   Policy Takeaways

9.   Our analysis highlights the significance of a strong fiscal position and improved governance and social indicators in reducing sovereign spreads for Gabon, and in EMDEs more generally. It can be used to find the combination of policies that could be implemented in Gabon to help reduce borrowing costs, for example, to investment grade levels. In particular, Gabon can improve its debt affordability by:

- Strengthening its fiscal stance, to achieve a gradual reduction in the debt ratio and alleviate liquidity pressures that lead to the accumulation of arrears. Reducing debt to around 55 percent

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[8] Examples of Fitch-rated BBB sovereigns include Kazakhstan, Mexico, Philippines, and Romania, among others. Philippines is approximately a median-level country amongst this list.

of GDP over the medium and long term, broadly in line with staff advice (e.g., as detailed in the accompanying Selected Issues Paper on a "*A Fiscal Framework for Gabon*") and the clearance of domestic arrears, could reduce spreads by some 80 basis points, saving 0.1 percent of GDP in interest costs, in addition to a more than 1 percentage point of GDP decline in the interest bill due to a lower debt level. This would require a significant fiscal adjustment in the near term, based on both revenue mobilization and expenditure cuts, and supported by strengthened public financial management practices. More importantly, the consolidation of the fiscal position, including the clearance of arrears, would reinforce the country's reputation and access to international financial markets at an affordable cost.

- Bolstering governance and transparency, an area where Gabon is lagging significantly behind its peers, could have the most significant contribution to reducing borrowing costs, lower spreads by approximately 450 bps, equivalent to 0.5 percent of GDP of savings in interest costs. Governance can reduce spreads both directly through lower perceived investment and default risks, and also by improving the business environment and supporting higher growth.

- Strengthening growth drivers and economic diversification to improve the long-term performance of the economy (see the accompanying Selected Issues Paper "*Gabon's Diversification Journey: What is Missing?*"). Strategies that foster diversification away from oil would not only support growth but—together with a stronger fiscal stance—would also help build external reserves and contribute to the viability of the currency union.

- Finally, addressing social vulnerabilities, through active policies to improve livelihoods, education, health, and human capital in general would support the country's vulnerable population and improve growth prospects and finally help reduce country risk.

Box 1. Literature Review on Determinants of Spreads

Earlier research has quantified the impact of macroeconomic and political conditions on sovereign spreads for EMDEs. Comelli (2012) tests several regression models for their performance in forecasting emerging market spreads, finding that strong economic fundamentals, especially with respect to **external vulnerabilities** (due to international reserves, the current account and external debt), are associated with lower borrowing costs. This work also highlights the importance of **political risk** for sovereign spreads, consistent with results from Gupta, Mati, and Baldacci (2008) and Baldacci, Gupta, and Mati (2011) which also include governance measures from the World Bank Worldwide Governance Indicators. In addition to **macroeconomic variables**, credit rating decisions can also have an impact on sovereign spreads. For instance, Jaramillo and Tejada (2011) find that a sovereign rating upgrade to "investment grade" lowers spreads by 36 percent "above and beyond what is implied by macroeconomic fundamentals". Related research aims to disentangle the effects of country-specific factors from global variables. Bellas, Papaioannou and Petrova (2010) and Csonto and Ivaschencko (2013) both find that fiscal and external measures are important for spreads in the long term, **but global factors** such as financial stress explain more of the short-term variation. Senga, Cassimon and Essers (2018) similarly differentiate between push and pull factors as determinants of secondary market sovereign yields for SSA Eurobonds, finding that commodity prices, VIX, and US Treasury yields are important push factors while debt, GDP growth, and inflation are important pull factors. In addition, Eichler (2014) considers the effect of a country's **repayment history** which is a relevant factor in the case of Gabon given its repeated accumulation of arrears.

With the recent increase in investor interest in ESG considerations, there is also some recent work on the impact of ESG factors on bond spreads. On the impact of governance, Jeanneret (2018) found that sovereign credit default swap (CDS) spreads decrease with lower government effectiveness, especially in countries with a high default risk, indebtedness, and weak macroeconomic performance. On environmental and climate-related risks, Cevik and Jalles (2020), Boehm (2022) and Boitan and Marchewka-Bartkowiak (2022) provide evidence that higher exposure to physical climate risk increases sovereign spreads. Other work looks at the impact of broader ESG factors. Margaretic and Pouget (2018), Crifo, Diaye and Oueghlissi (2017), and Capelle-Blancard et al. (2019) find evidence of the importance of social and governance measures for sovereign spreads, while the results for environmental factors are mixed.

In a similar vein, Pineau, Le and Estran (2022) show that ESG factors impact sovereign ratings for advanced economies, but less so for EMDEs, especially since the global financial crisis. Our work aims to analyze the relationship between country-specific and global factors and spreads while building upon the existing literature by assessing the effects of arrears and ESG performance on sovereign costs of borrowing.

Appendix I. Data, Variables, Correlation Matrix, Additional Results

Appendix I. Table 1. Gabon: Variables and Data Sources		
VARIABLE	**DEFINITION**	**DATA SOURCE**
Spread		J.P. Morgan Markets, EMBI Spread
Gross Debt	Gross general government debt as a share of GDP	IMF World Economic Outlook
Real GDP Growth	Annual percentage change in real GDP	IMF World Economic Outlook
Primary Balance to GDP	Difference between general government revenues and expenditures, excluding interest payments, as a share of GDP	IMF World Economic Outlook
Trade Openness	Total imports and exports as a share of GDP	IMF World Economic Outlook
VIX	Market measure of expected volatility over the upcoming 30 days	Chicago Board Options Exchange's CBOE Volatility Index via Haver Analytics
Worldwide Governance Indicators – Government Effectiveness	Aggregate measure of (i) quality of public services; (ii) quality of civil service and independence from political pressures; (iii) quality of policy formula; and (iv) government commitment to policies	World Bank Worldwide Governance Indicators
Worldwide Governance Indicators – Regulatory Quality	Aggregate measure of government's ability to develop and execute sounds policies and regulations that enable and promote private sector development	World Bank Worldwide Governance Indicators
Human Development Index	Composite measure of health, education, and standards of living	United Nations Development Programme
Total Arrears to GDP	Principal and interest payments due but not yet paid on long-term debt as a share of GDP	World Bank International Debt Statistics
ND-GAIN Index – Adaptive Capacity	Measure of country's ability to adjust to climate change impacts and disruptions	Notre Dame Global Adaptation Initiative

Appendix I. Table 2. Gabon: List of Sample Countries

Angola	Jamaica
Argentina	Jordan
Armenia	Kazakhstan
Azerbaijan	Kenya
Belarus	Mexico
Belize	Mongolia
Bolivia	Morocco
Brazil	Mozambique
Bulgaria	Nigeria
Cameroon	Pakistan
Colombia	Papua New Guinea
Costa Rica	Paraguay
Côte d'Ivoire	Peru
Dominican Republic	Philippines
Ecuador	Russia
El Salvador	Senegal
Ethiopia	Serbia
Gabon	South Africa
Georgia	Sri Lanka
Ghana	Tajikistan
Guatemala	Tanzania
Honduras	Tunisia
India	Ukraine
Indonesia	Uzbekistan
Iraq	Vietnam

Appendix I. Table 3. Gabon: Correlation Matrix

Variables	Spreads	Debt to GDP	Real GDP Growth	Primary Balance to GDP	Trade Openness	VIX	WGI - Effectiveness	WGI – Regulatory Quality	HDI	Total Arrears to GDP	ND-GAIN, Adaptive Capacity
Spreads	1.000										
Debt to GDP	0.366	1.000									
Real GDP Growth	-0.284	-0.344	1.000								
Primary Balance to GDP	-0.193	0.009	0.202	1.000							
Trade Openness	0.100	0.115	-0.019	0.162	1.000						
VIX	0.159	0.086	-0.362	-0.199	-0.039	1.000					
WGI – Effectiveness	-0.440	0.112	-0.018	0.058	0.027	0.013	1.000				
WGI – Regulatory Quality	-0.469	-0.013	0.004	0.107	0.018	0.016	0.735	1.000			
HDI	-0.257	-0.093	-0.215	0.103	0.184	0.020	0.514	0.393	1.000		
Total Arrears to GDP	0.223	0.180	-0.116	0.067	0.195	-0.006	-0.011	-0.004	0.065	1.000	
ND-GAIN, Adaptive Capacity	0.162	0.143	0.184	-0.041	-0.164	-0.031	-0.370	-0.257	-0.740	-0.102	1.000

Appendix I Table 4. Gabon: Determinants of Sovereign Spreads

Variable	(1) Spread	(2) Spread	(3) Spread	(4) Spread	(5) Spread	(6) Spread	(7) Spread	(8) Spread	(9) Spread	(10) Spread
Debt to GDP	0.0100*** (0.00128)	0.00728*** (0.00160)	0.00719*** (0.00158)	0.00720*** (0.00159)	0.00678*** (0.00160)	0.00691*** (0.00139)	0.00624*** (0.00147)	0.00933*** (0.00158)	0.00824*** (0.00151)	0.00758*** (0.00160)
Real GDP Growth		-0.0195*** (0.00505)	-0.0161*** (0.00525)	-0.0147*** (0.00537)	-0.0122** (0.00542)	-0.0131** (0.00529)	-0.0130** (0.00512)	-0.0153*** (0.00505)	-0.0112** (0.00530)	-0.0157** (0.00713)
Primary Balance to GDP			-0.0137** (0.00629)	-0.0116* (0.00614)	-0.00880 (0.00629)	-0.00687 (0.00585)	-0.00710 (0.00588)	-0.00715 (0.00558)	-0.0118* (0.00614)	-0.0125** (0.00598)
Trade Openness				-0.304 (0.357)	-0.319 (0.350)	-0.375 (0.322)	-0.334 (0.312)	-0.422 (0.292)	-0.515* (0.295)	-0.363 (0.274)
VIX					0.158*** (0.0544)	0.140** (0.0539)	0.152*** (0.0509)	0.0590 (0.0653)	0.129** (0.0611)	0.122** (0.0565)
WGI – Effectiveness						-0.584*** (0.126)	-0.376*** (0.138)	-0.244* (0.142)	-0.324** (0.124)	-0.275** (0.118)
WGI – Regulatory Quality							-0.468*** (0.174)	-0.521*** (0.168)	-0.696*** (0.120)	-0.701*** (0.122)
HDI								-4.310*** (1.493)	-2.243** (0.973)	-2.080** (1.013)
Total Arrears to GDP									0.00614** (0.00291)	0.00625** (0.00282)
ND-GAIN, Adaptive Capacity										0.798 (0.881)
Constant	5.221*** (0.0664)	5.425*** (0.0936)	5.397*** (0.0908)	5.629*** (0.307)	5.209*** (0.342)	5.238*** (0.331)	5.198*** (0.318)	3.945*** (0.406)	4.383*** (0.367)	4.921*** (0.726)
Observations	720	720	720	718	718	718	718	710	534	482
R-squared	0.114	0.150	0.160	0.167	0.179	0.246	0.269	0.332	0.453	0.476
Number of countries	76	76	76	76	76	76	76	75	54	52

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

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A FISCAL FRAMEWORK FOR GABON[1]

This paper proposes a framework that could guide policies in restoring and maintaining debt sustainability in Gabon, considering oil price uncertainty. It revisits the existing regional fiscal rules to determine whether they could serve as operational rules for fiscal policy. It finds that the existing rules serve well as ceilings on the debt and deficits but would not be effective as operational rules guiding fiscal policies to below these ceilings. It then proposes an alternative framework, based on a debt anchor and deficit rules to achieve those anchors. We discuss two options for designing the debt anchor, and their advantages and disadvantages: (i) anchoring policies around the traditional debt-to-GDP ratio, which may turn out not to be credible as it fluctuates with oil prices, and (ii) anchoring policies around the debt-to-nonoil GDP ratio, which is less distorted by oil price fluctuations. We also discuss two deficit rules to reach these anchors: a constant nonoil primary balance target operationalized through an expenditure rule, and the current CEMAC deficit rule, which could be effective once debt is low enough.

A. Outlook for Fiscal Sustainability Under Current Policies

1.   Gabon's fiscal position has long been impacted by oil price fluctuations. First, higher oil revenues—to the extent they are saved—improve the overall balance and can help reduce debt. For example, higher oil revenues over the period 2000–12 led to fiscal surpluses, which also led to a decline in the debt ratio. Second, high oil prices increase the GDP deflator and with it nominal GDP, reducing the debt-to-GDP ratio by virtue of the change in oil prices (Figure 1, left panel). For example, nominal debt at end-2024 would be at 68 percent of GDP if oil prices reached $100 per barrel and at 83 percent of GDP if oil prices fell to $50 per barrel, i.e., a variation of 15 percent of GDP due to changes in oil prices alone. Finally, nonoil deficits have also widened pro-cyclically with higher oil prices, with a correlation of around 0.3 over the period 2001–23 (Figure 1, right panel).
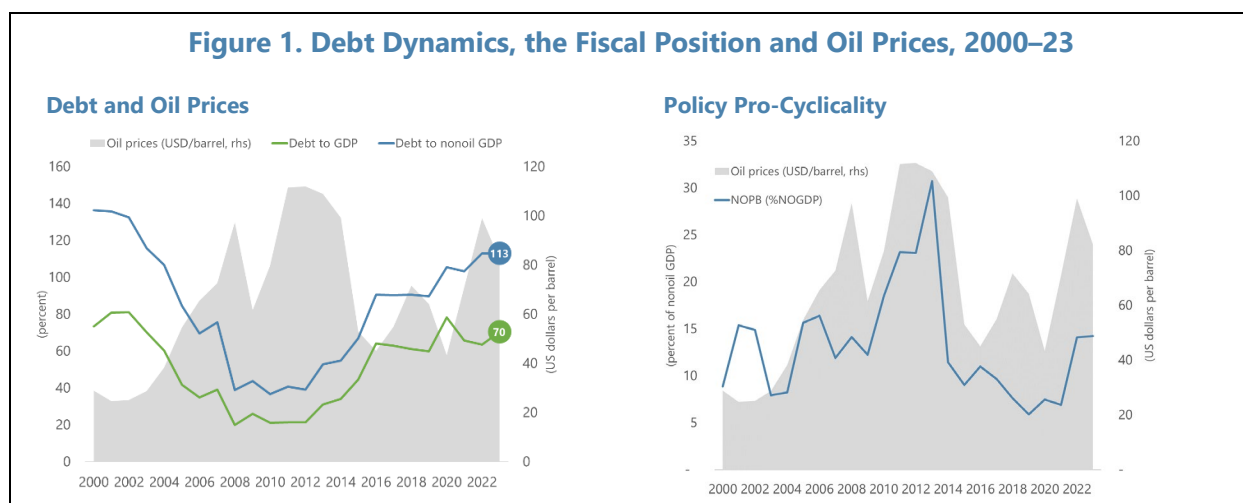
Figure 1. Debt Dynamics, the Fiscal Position and Oil Prices, 2000–23

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2.   Overall, the procyclical and expansionary policies resulted in little saving of the oil wealth and a high debt level by end-2023. Under unchanged policies, nonoil primary deficits would remain broadly at the levels of 2022–23 (14 percent of nonoil GDP), with oil revenues increasingly falling short of covering spending levels because oil production and prices are projected to decline (Figure 2). Debt will be trending up with a high probability, increasing rapidly from 70½ percent of GDP in 2023 to over 100 percent of GDP by 2029 under the current oil price projections (Figure 2). Gross financing needs will also remain very high, creating liquidity pressures under the current tight global financial conditions.

Figure 2. Debt Dynamics and Gross Financing Needs Under the Current Policy
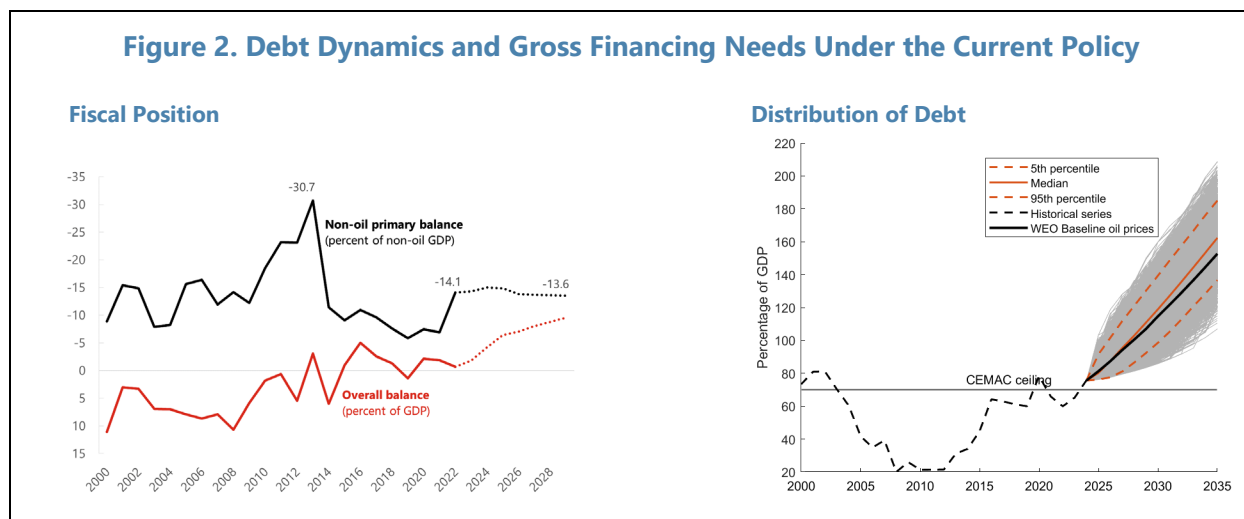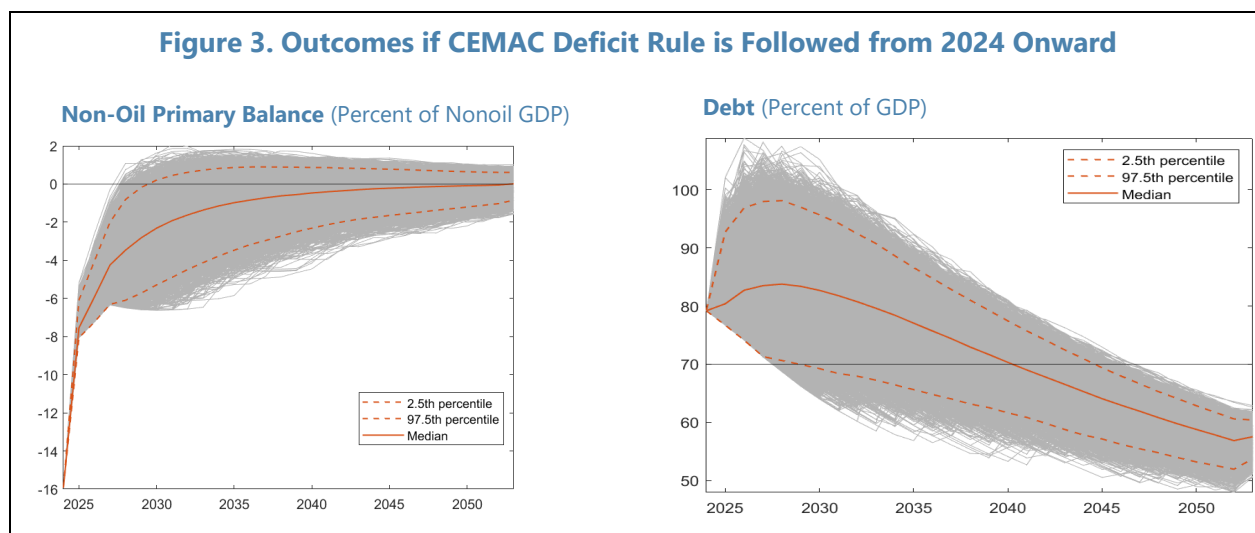
B.   Restoring Fiscal Sustainability

3.   Restoring fiscal sustainability will clearly require a large consolidation effort, as discussed in the staff report, but it is important to place this effort into the broader context of long-term sustainability. This section discusses first whether the existing CEMAC rules or the Permanent Income Hypothesis (which is the workhorse framework for determining a sustainable fiscal position in a resource rich country) can serve as frameworks for fiscal policies in the near or long term. It then proposes alternative, more operational, frameworks that can anchor policies.

CEMAC Rules for Fiscal Policies

4.   The current fiscal position is not consistent with the CEMAC rules. CEMAC has two main fiscal criteria that countries should respect: (i) public debt below 70 percent of GDP and (ii) an adjusted measure of the overall balance (the "structural balance") above -1.5 percent of GDP.[2] As of end-2023, public debt is estimated to have already breached the 70 percent ceiling. The nonoil primary deficit (NOPD), estimated for 2023 at 14.2 percent of nonoil GDP is also higher than implied by the CEMAC-rule structural deficit of 8.2 percent of nonoil GDP.

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[2] The CEMAC structural balance is the overall balance minus a portion of the average oil revenue over the previous three years.

5. **In addition, following the CEMAC deficit rule from 2025 onwards would imply a relatively slow adjustment because of the recent high oil prices.** In the near term, the implied adjustment of only 3 percentage points of GDP over the next 3 years would both keep financing needs high and imply an estimated 80 percent probability of debt remaining on an upward path or breaching the CEMAC debt ceiling (Figure 3). In the long term, however, debt would eventually fall as the adjustment under the CEMAC deficit rule continues, with the debt level following the exhaustion of oil resources ("post-oil" henceforth) remaining above 55 percent of GDP with a 95 percent probability.

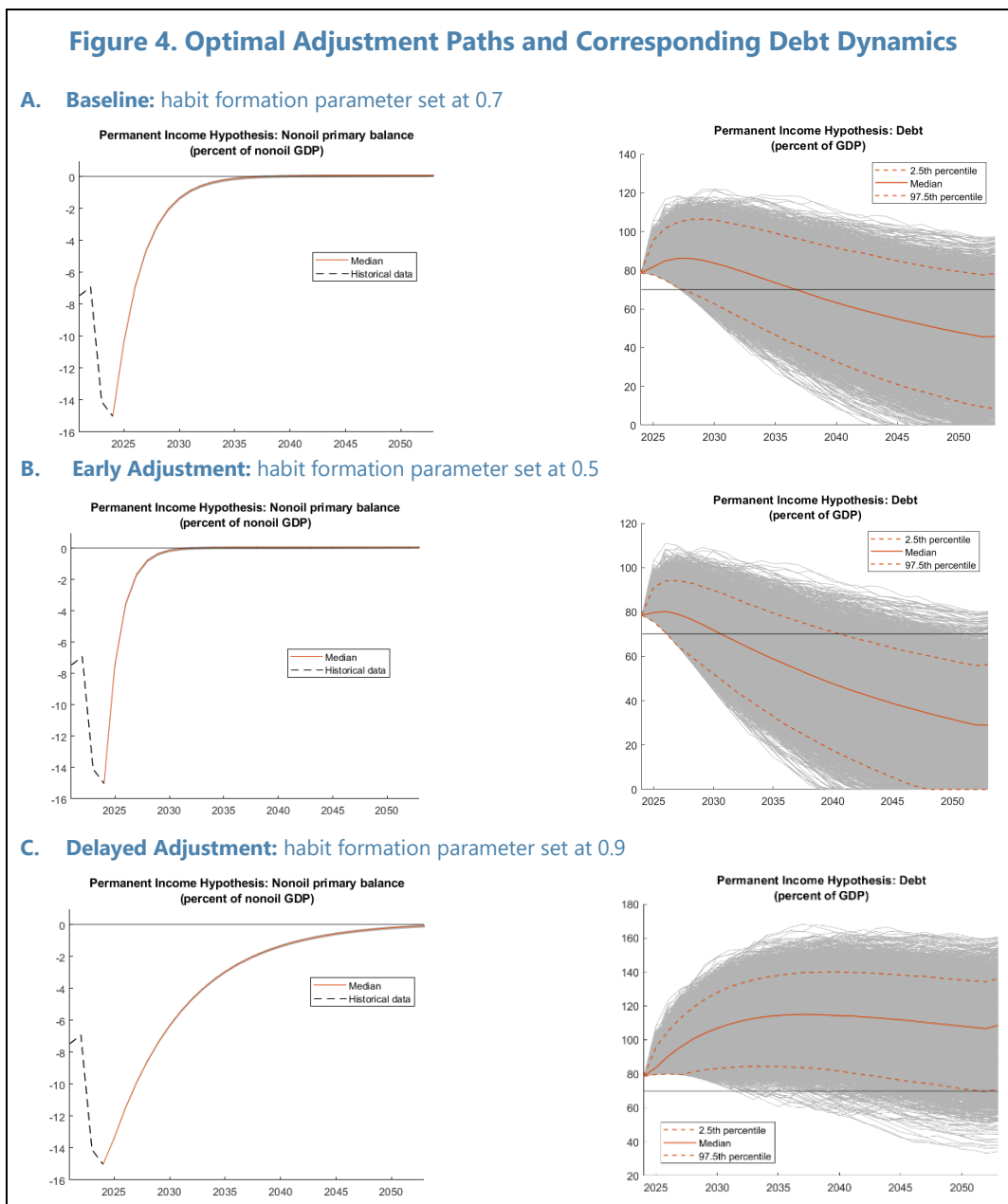**Figure 3. Outcomes if CEMAC Deficit Rule is Followed from 2024 Onward**

6. **Overall, the CEMAC rules play a useful role in setting the upper bounds of debt and deficits that should not be breached but may be less useful in guiding fiscal policies on an annual basis towards debt sustainability.** On the debt side, anchoring debt to around the CEMAC ceiling of 70 percent of GDP risks significant upward breaches, with debt potentially reaching excessive levels of 80-90 percent of GDP under very low oil prices. The debt anchor therefore needs to be safely below this level, if set as a share of GDP, or should be set more stably as a share of the nonoil economy. The CEMAC framework also does not have operational targets that aim at getting fiscal policies to the anchor or keeping it there, i.e., it does not have automatic corrections in case of sustained deviations from the anchor.

The Permanent Income Hypothesis Framework

7. **To start the discussion on a more operational fiscal framework, we examine the deficit and debt paths implied by the Permanent Income Hypothesis (PIH).** The PIH is the workhorse framework for determining the sustainable fiscal position in a resource rich country. The PIH suggests that in the long term the nonoil primary balance should be near zero due to the depletion of oil reserves. The speed of the adjustment—i.e., the time required for the deficit to approach zero—could lie between 7 and 14 years for reasonable assumptions about authorities' "habit strength" in spending, which determines how quickly the government can change the level of

spending.[3] Delaying the adjustment will keep the debt level high both in the short term and the long term (Figure 4C). In the baseline scenario with a moderate level of habit formation in government spending, the near-term fiscal policies should aim for a nonoil primary deficit of about 2 percent of nonoil GDP by 2027 in line with the consolidation advice in the staff report (Figure 4A). Under an even faster adjustment to bring the nonoil primary deficit to zero, debt is expected to fall below 56 percent of GDP with a 95 percent probability (Figure 4B).

Figure 4. Optimal Adjustment Paths and Corresponding Debt Dynamics

A.   Baseline: habit formation parameter set at 0.7

B.   Early Adjustment: habit formation parameter set at 0.5

C.   Delayed Adjustment: habit formation parameter set at 0.9

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[3] The theoretical framework used here adds habit formation to the basic PIH, suggested by Leigh and Olters (2006), as a means of capturing political or institutional constraints on government spending cuts. The stronger the habit, the slower the optimal adjustment of spending levels (see Annex 2 for a presentation of the model).

8.   The PIH is becoming increasingly less relevant as the oil wealth horizon shortens, leaving little time to increase savings sufficiently to stabilize spending out of the permanent wealth, even though past fiscal advice in Gabon has relied on this framework (see, for example, Leigh and Olters, 2006). In addition, the permanent income hypothesis was frequently found to be inadequate as it does not consider returns on higher investment (IMF, 2012) and suffers from other practical limitations (Eyraud and others, 2023).

C. A New Fiscal Framework for Gabon

9.   In light of the weaknesses of the two frameworks discussed above, we propose a more operational framework that could guide annual fiscal policies towards their long-term anchor. This framework will include three main elements: (i) a long-term anchor for the debt to be inherited by post-oil generations; (ii) interim debt anchors while oil production continues, if needed; and (iii) operational rules to achieve these anchors.

Debt Anchors

10.   In designing the framework, we start with the selection of a safe debt level which the country can tolerate once the oil wealth is depleted. Given Gabon's dependence on primary and nonrenewable commodities (especially oil), the debt anchor is set to correspond to the terminal condition for fiscal policy, i.e., the *post-oil debt level*. We find that a debt anchor of at most **50 percent of GDP** is appropriate (although lower levels may be preferred) by combining two approaches developed by Comelli et al. (2023) and Eyraud and others (2018) as further described in Appendix D. The first approach by Comelli et al. (2023) suggests an operational debt target that reduces the debt ceiling by a buffer commensurate with the volatility of the primary balance due to fluctuations in oil revenues. In the case of Gabon, we estimate that with a buffer of 20 percent of GDP needed to account for the impact of oil price fluctuations, an appropriate operational debt target would range between 41 and 50 percent of GDP. The second approach (Eyraud and others, 2018) uses stochastic simulations to set an operational debt target such that debt remains below the maximum debt limit (in Gabon's case the 70 percent CEMAC ceiling) with a 90 percent probability over the medium term, suggesting an appropriate debt target of about 45 percent of GDP. Since both approaches lead to a debt target of 41-50 percent of GDP, staff advice is to target a ratio of at most 50 percent of GDP.[4] We should keep in mind that in this post-oil world—which in staff's baseline scenario would start around 2050—50 percent is a ratio to both GDP and nonoil GDP as oil GDP would no longer be relevant.

11.   In the interim, while oil wealth still affects fiscal outcomes, the choice of a debt anchor is more complex. One option is to follow the traditional practice of anchoring debt to overall GDP, and another is to follow best practice of anchoring debt to nonoil GDP to ensure that the anchor is not too volatile (Eyraud and others, 2023). Under either option: (i) intermediate debt anchors will be

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[4] This level is also consistent with the median debt level of countries with BBB (excluding Italy, Greece, and Cyprus) or AA credit ratings in 2022, i.e., middle income "investment grade" countries.

needed until debt is reduced to its long-term post-oil target; and (ii) deviations from the anchor by more than 5 percentage points (or another tolerance level) would trigger an automatic adjustment effort until the anchor is reached again.

Option D1. Traditional Anchor: Debt-to-GDP Ratio

12.   Under this option, the intermediate debt targets will continue to be anchored to overall GDP. For example, given that the debt-to-GDP ratio is already above 70 percent of GDP and headed higher, the near-term debt anchor could be set to 70 percent until the consolidation effort brings debt to below this level, followed by 60 percent over a 5–10-year period after the initial consolidation and 50 percent thereafter (Figure 5). This anchor has the advantage of using a familiar metric, but there are also disadvantages, the most prominent being the volatility of the anchor and hence lack of clarity on how to gauge policy compliance when the same policy stance could deliver a broad range of results.

Figure 5. Stable Debt Anchor: Ratio of GDP
(indicative targets and timing, percent)
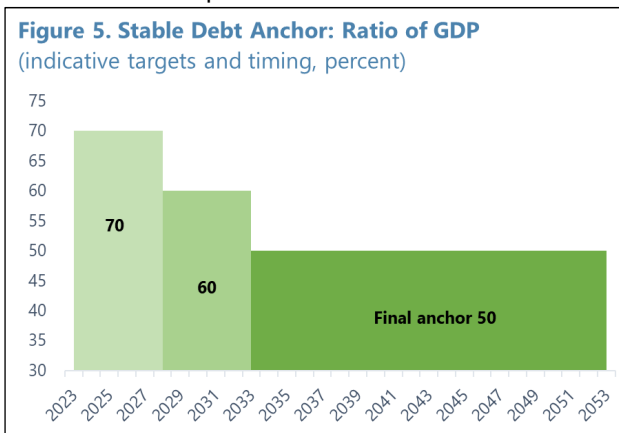
Option D2. A More Stable Anchor: Debt to Nonoil GDP

13.   Under this option the debt anchor would be set relative to the nonoil economy, to ensure stability and the ability to gauge fiscal outcomes relative to the anchor. It is worth noting that the nonoil economy currently accounts for 60–70 percent of total GDP and therefore provides a meaningful benchmark against which to measure the debt burden. To decide on the level of the debt anchor, we start with the terminal post-oil target debt ratio of 50 percent of nonoil GDP. As a transition to this terminal point, the debt anchor could, for example, be reduced gradually by 5–10 percentage points at the turn of every decade. This means that by 2030 the objective would be to reduce debt to 90 percent of nonoil GDP—from 115 percent currently—followed by 80, 70, 60 and finally 50 percent of nonoil GDP (Figure 6). The precise anchors and the timing to achieve them would need to be calibrated at the time of the adoption of these rules.

Figure 6. Stable Debt Anchor: Ratio of Nonoil GDP
(Indicative targets and timing, percent)
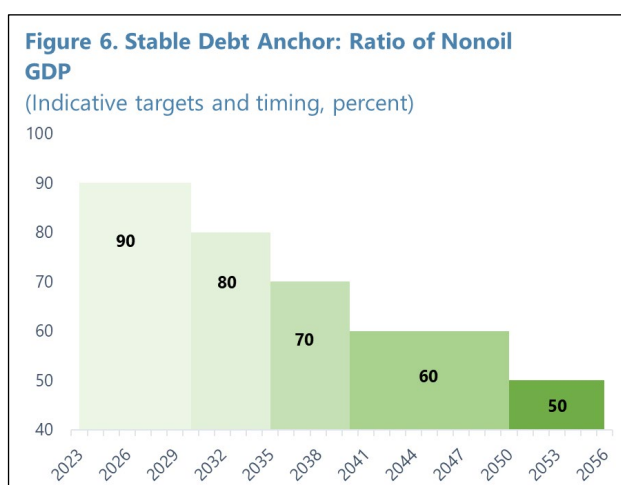
14.   An advantage of this anchor is that the ratio of debt-to-nonoil GDP would not fluctuate significantly with oil prices relative to the anchor, would reflect authorities' efforts and would allow accountability in meeting the target. As a result, triggers for policy adjustments can be clearly defined since they would not depend significantly on the randomness of oil prices. Finally, pre-determined step adjustments of this anchor are consistent with bringing debt back to the long-term target of 50 percent of GDP. While it may seem that the public's potential lack of familiarity with this metric is a disadvantage, fiscal targets have long been set as a share of nonoil GDP (e.g., nonoil primary balances, which were the fiscal targets in Gabon's programs with the IMF),[5] and it is therefore not a significant conceptual change to also report debt as a share of nonoil GDP.

15.   Irrespective of the choice of debt target, a "*stock correction"* would be triggered when the debt ratio is 5-10 percentage points above its target, at which time the deficit would be reduced sufficiently to return debt to the anchor within five years. The stock corrections would come into effect once the initial adjustment period has ended and the debt target has been reached; before this, the scheduled adjustment effort should be maintained.

Operational Deficit Targets

16.   Operationally, annual deficit targets will be needed to guide policies towards the debt anchors. In the near term, we suggest the authorities focus on bringing the nonoil primary deficit from 14–15 percent of nonoil GDP to around 2 percent of nonoil GDP by 2027–28—in line with advice discussed in the staff report—by way of stabilizing and then reverting the debt trajectory.[6] The nonoil primary deficit of 2 percent of nonoil GDP is also consistent with the optimal policy path derived from the permanent income hypothesis for these years. Once the desired nonoil primary balance is achieved, the authorities can:

Maintain the nonoil primary deficit at this level until the debt anchor is reached.
The advantages of this approach are that (i) fiscal policy would be insulated from oil price fluctuations; (ii) with the stock adjustments, fiscal policy can be automatically adjusted to declining oil wealth if there are persistent deviations from the debt anchor; and that (iii) the rule can be operationalized through a simple expenditure growth rule (as in the case of the Grenada fiscal responsibility legislation, for example).[7] The disadvantages of this approach are that (i) if the debt-

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[5] For resources-rich developing countries with short reserve horizons, the key fiscal indicator to assess the fiscal stance is the non-resource primary fiscal balance, as discussed for example in the policy paper "*Macroeconomic Policy Frameworks for Resource-Rich Developing Countries*" (IMF, 2012).

[6] In Gabon's recent history, it has made a fiscal adjustment of 19.3 percent of non-oil GDP in 2014 and 5.1 percent of non-oil GDP over the period 2017–19.

[7] Once the desired primary balance is achieved, this balance can be maintained over the cycle through a simple expenditure rule: primary spending would grow in line with potential GDP (e.g., 5 percent nominal terms or 3 percent in real terms), while allowing revenues to fluctuate with economic activity. As a result, the actual primary balance will fluctuate around its target (e.g., -2 percent of nonoil GDP) with economic activity, but over a period of 5-10 years it would average the targeted -2 percent. The advantages of operationalizing the rule through an expenditure rule are that: (i) it is easy to implement in the budget process and to understand; (ii) allows revenues to adjust to economic circumstances to provide space for automatic countercyclical fiscal policy; (iii) it mimics a structural balance target but without the measurement complications that accompany such targets.

to-GDP ratio is used as an anchor, the link to an unstable anchor will make it harder to determine whether adjustments are being triggered by true policy deviations or by random movements in oil prices; and (ii) an operational rule that does not allow any increase in spending in response to oil prices may not ultimately be sustainable.

Switch to the CEMAC structural balance rule after the fiscal adjustment effort brings debt to the anchor (Figure 8). Since the CEMAC rule would automatically and gradually tighten the nonoil primary balance in response to declining oil revenues, the advantages of this option are that: (i) debt targets would be reached automatically as oil production declines, i.e., no modification of the rule would be required going forward; (ii) the rule is already embedded in the existing CEMAC framework; and (iii) the rule allows the authorities to take advantage of high oil prices to increase spending and meet the growth and developmental needs, hence it may have a higher probability of being sustained. The disadvantage of this rule is that fiscal policies (spending) would absorb most of the oil price fluctuations. With this option, the debt-to-nonoil GDP ratio would be below 70 (60) percent by 2040 (2050) with a 93 (97) percent probability.
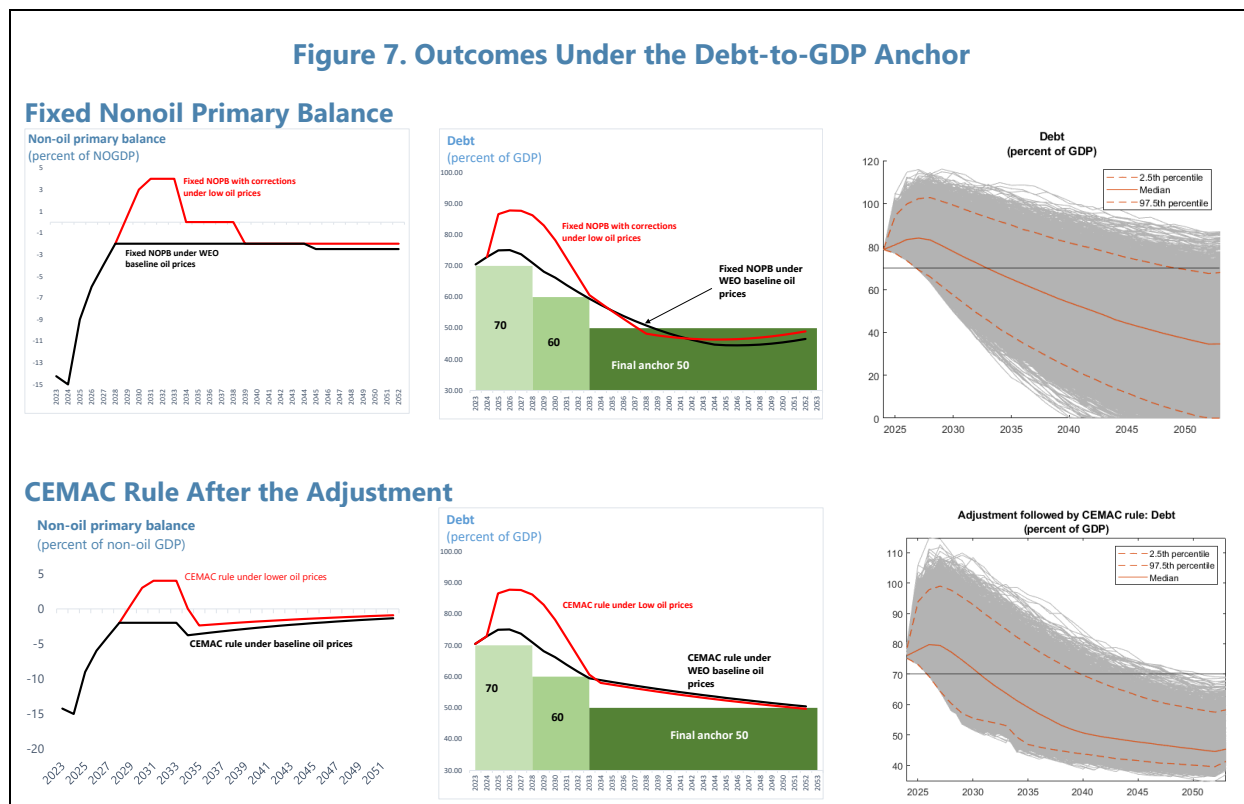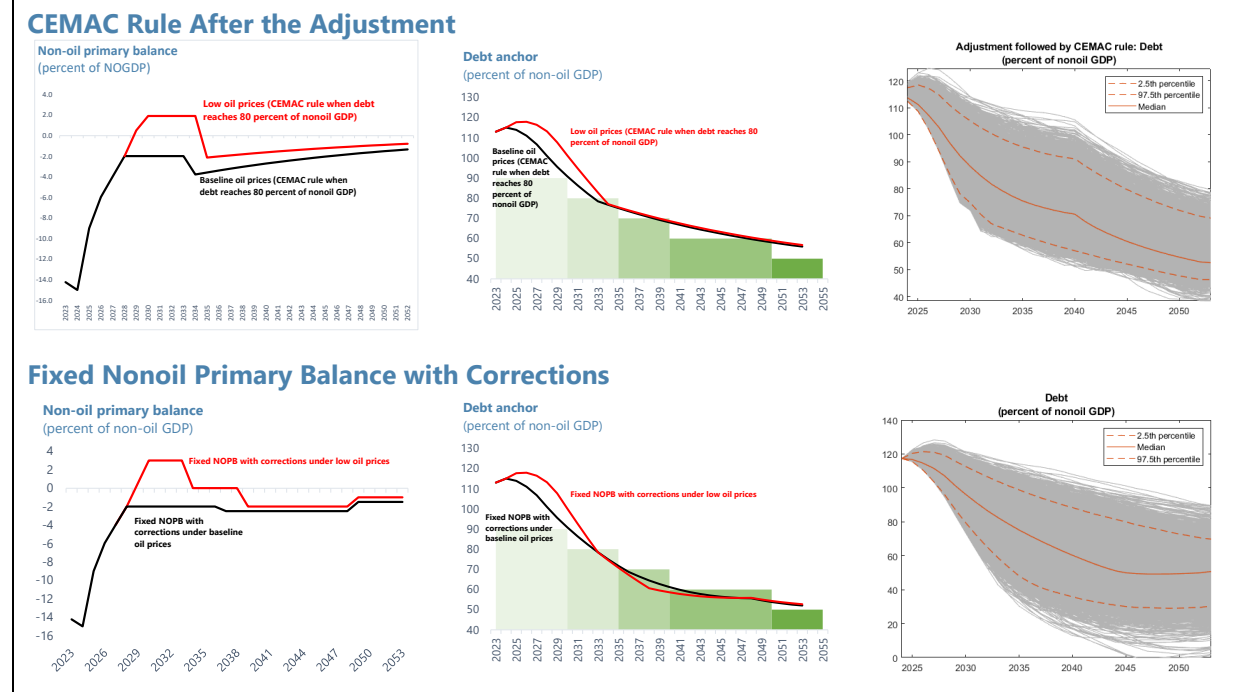
Figure 7. Outcomes Under the Debt-to-GDP Anchor

Fixed Nonoil Primary Balance

CEMAC Rule After the Adjustment

Figure 8. Outcomes under Nonoil GDP Debt Anchor

17. **Overall, all options, if correctly designed, could deliver fiscal policies in support of the anchor, and each has advantages and disadvantages.** The ultimate choice of the rule should meet four important criteria to ensure that it can be implemented:

- the rule should be fully objective, i.e., not have room for subjective interpretation and political haggling, or depend on projections;

- all phase transitions (e.g., triggers for policy adjustments) should be clearly defined and definable (for example, Option 1, where the anchor is the debt-to-GDP ratio, does not yet meet this criterion given the instability of the anchor);

- the rule should work for all states of the world (with high or no oil reserves, with high or low oil prices, etc.), hence the parameters underlying the rule (e.g., potential growth) should be reviewed at regular intervals; and

- any policy changes that the government introduces need to be deficit-neutral, so that policies do not create permanent deviations from the rule.

Implementing more transparent, accurate and timely fiscal reporting, as well as credible budgeting and expenditure execution frameworks would also be important ahead of the introduction of the rules. Finally, the decision on which rule is most likely to be feasible in Gabon's environment, combined with simplicity and efficiency in delivering the debt anchor, would best be taken closer to the point of adoption of the legislation and ideally with targeted technical assistance from the Fiscal Affairs Department.

18.   The final rule must consider stock and flow corrections to be triggered after reaching the anchor, as well as escape clauses for exceptional circumstances. As discussed earlier, a ***stock correction*** would be triggered when the debt ratio is 5-10 percentage points above its target, at which time the nonoil primary deficit would be reduced sufficiently to return debt to the anchor within five years. A ***flow correction* should** occur if the cumulative deviations from the primary balance target are above 3 percentage points of (nonoil) GDP. These corrections can be carried out over a period not exceeding three years to avoid fiscal fatigue. In addition, the rule should set forth ***escape clauses***, which are specific conditions and procedures under which the rules-based framework can be temporarily and exceptionally suspended in response to large exogenous shocks.

Appendix I. Methodology

A. Oil Price Simulation

1.   Oil prices (P_t) are assumed to follow a first-order autoregressive logarithmic process as follows:

$$\log(P_t) = \mu + \rho \log(P_{t-1}) + \varepsilon_t \tag{1}$$

where ε_t is a normally distributed random term with mean zero and variance σ. The parameters μ, ρ, σ are estimated using historical data over the period 1975–2023.

2.   To generate the oil price simulation, we first simulate an $N \times T$ matrix of random numbers ($\hat{\varepsilon}_t$) from the normal distribution $\mathcal{N}(0, \hat{\sigma})$, where N is the number of simulations and T is the time left until oil exhaustion. Then, to prevent oil prices from being too high relative to the historical distribution, we windsorize random numbers using 1.5 times[1] the estimated standard deviation $\hat{\sigma}$. In other words, the maximum value of the random numbers is fixed at 1.5 times the standard deviation, so any random number above this maximum is replaced by this value. Winsorization is not applied to lower values of the distribution, given that the energy transition will most likely push oil prices onto a downward trajectory[2]. Boer et al. (2023) show that if emission reduction is driven by demand-side policies, prices would decline to around 25 USD per barrel in 2030. However, when oil production cuts are driven by supply-side measures, prices could rise to around $130 per barrel. Our strategy allows oil prices to hit $120 per barrel, which is lower than the estimates by Boer et al. (2023), but higher than historical annual average oil prices since 1960. Next, we estimate the 2023 price level using the WEO projected price with a slight perturbation to account for uncertainty. Finally, we set 2024 as the starting period and generate the oil price series using equation 1.

B. Theoretical Model

3.   The framework used in this paper is based on intertemporal optimization with habit formation as suggested by Leigh and Olters (2006). It assumes that oil reserves are finite and uses the permanent income hypothesis to analyze fiscal sustainability. In this framework, the government chooses a spending path that smoothes (government) consumption over time and is consistent with its intertemporal budget constraint. To find this optimal path, we assume that the government maximizes its utility — which depends solely on primary spending — subject to budget constraints. The government's problem is as follows:

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[1] This cutoff is set analogously to the IQR (interquartile range) method for identifying outliers, which uses $1.5 \times IQR$.

[2] We acknowledge that current geopolitical tensions and OPEC+ decisions have managed to keep prices at a high level since the end of the Covid-19 pandemic.

$$\max E_t \sum_{s=t}^{\infty} \beta^{s-t} u(G_s - \alpha G_{s-1})$$

$$s.t. \ D_t = (1 + r_t)D_{t-1} + G_t - (Y_t^n + Z_t)$$

$$\lim_{s \to \infty} D_{t+s} = 0$$

(2)

where D_t is government debt at the end of period t, r_t is the gross interest rate, G_t is government primary expenditure, Y_t^n is nonoil revenue, Z_t is oil revenue, β is the discount factor, $0 \leq \alpha < 1$ determines the strength of the government spending habit which can reflect institutional and political adjustment costs faced by policymakers (e.g., it might be unfeasible to cut public sector wages abruptly). In the model, the habit formation parameter helps to assess the speed at which fiscal policy can adjust to macroeconomic shocks. We separate oil and nonoil revenue to account for the volatility of oil revenues due to oil prices fluctuations and oil depletion. Moreover, we can define the nonoil primary balance $(Y_t^n - G_t)$, which is one of the policy anchors of our framework. The last condition of the system — the transversality condition — describes the level that debt must satisfy at the end of the time horizon.

4. The model can be solved in nominal terms, but we express all variables relative to nonoil GDP to work with ratios. Rewriting the budget constraint in terms of NOGDP (with all variables as ratios of NOGDP) yields:

$$d_t = \frac{1 + r_t}{1 + \gamma} d_{t-1} + g_t - \left(y_t^n + z_t(p_t^o) \right)$$

(3)

where γ is nonoil growth (assumed constant) and p_t^o is the oil price. Utility is also expressed in terms of nonoil GDP.

5. Assuming a constant gross interest rate $(r_t = r, \forall t)$ and $\beta(1 + r) = 1$, the solution of the model is as follows:

$$g_t = \left(1 - \frac{\alpha}{1+r}\right) \left[\frac{r - \gamma}{1 + r} \sum_{s=t}^{H} \left(\frac{1 + \gamma}{1 + r}\right)^{s-t} E_t\left(y_s^n + z_s(p_s^o)\right) - \frac{r - \gamma}{1 + \gamma} d_{t-1} \right] + \frac{\alpha}{1+r} g_{t-1}$$

(4)

where H is the horizon for oil depletion.

6. In the analysis, we assume that the effective interest rate is higher than the nonoil growth rate $(r > \gamma)$, which makes the sustainability issue binding. When rate $(r < \gamma)$, it is not necessary to run primary fiscal surpluses to reduce the debt-to-GDP to zero.

7. Equation (4) shows that current government primary spending depends on permanent income and the last period's level of spending. If the previous period's spending exceeds the current permanent income, the current spending gradually adjusts to the permanent income. Without habits $(\alpha = 0)$, the optimal spending path depends on the permanent income and the adjustment is immediate. The adjustment toward the permanent income level is slow when α is high $(\alpha \to 1)$ and fast when α is low $(\alpha \to 0)$.

C. Assumptions

8.   Table 1 summarizes the assumptions, and the following paragraphs provide background information.

<div align="center">

Appendix Table 1. Gabon: Assumptions Used in The Analysis

Parameters	Values
Nonoil GDP growth (γ)	4.3 percent
Nonoil revenue to nonoil GDP (y_s^n)	16.1 percent
Oil revenue to oil GDP	23.1 percent
Interest rate (r)	4.4 percent
Habit parameter (α)	0.7 (0.5 and 0.9)
Time to oil depletion (T)	30 years
Number of simulations (N)	10,000

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- *Nonoil GDP growth* is set to the average nominal growth rate over the period 2014–23.

- *Nonoil revenues* increase with nonoil GDP, so that y_t^n is constant over time and equals our medium-term nonoil revenue estimates. It is approximately in line with the average nonoil revenue to nonoil GDP ratio over the period 2015–23, which is 16.3.

- *Oil GDP* depends on oil production and prices. We assume that Gabon has 2,000 million barrels of proven crude oil reserves in 2022 (as reported by OPEC) and that production declines by one percent each year from 2026 onwards. Oil production follows the authorities' projections between 2024 and 2025. With these assumptions, oil will run out in 30 years. The generation of the oil price distribution is described above.

- *Oil revenues* are a constant share of oil GDP. Given the significant decline in oil revenues—from 46.5 percent of oil GDP in 2000 to 19.2 percent in 2022—this constant share is estimated as the average over the 2014–23 period.

- *Interest rate* is constant and estimated as the average effective interest rate over the 2019–23 period.

- *Habit formation* parameter is initially set at 0.7, as in Leigh and Olters (2006). We also use lower (0.5) and higher (0.9) values for robustness checks. Using a meta-analysis, Havranek et al. (2017) show that the median value of habit parameters reported by macro studies is 0.7, but this can vary considerably.

- *Exchange rate* is the October 2023 WEO forecast up to 2029. From 2030 onwards, we assume a constant exchange rate equal to its 2029 value.

D. Debt Anchor

9.   In designing a fiscal rule for Gabon, one of the key challenges is selecting a target debt level which is feasible, sustainable, and safe. This objective is further complicated by Gabon's dependence

on primary commodities (especially oil), through which changes in international commodity prices can cause large swings in the primary balance and the debt-to-GDP ratio, unrelated to fiscal effort (see Figure 1a). Moreover, any debt anchor should be robust to the structural decline of oil production in Gabon. Several approaches have been proposed in the literature for calibrating debt targets. We use two approaches discussed below.

D.1. Calibration Based on Comelli and Others (2023)

10.   In recent work, Comelli and others (2023) proposed a debt ceiling based on a threshold for debt service-to-revenue ratios, with a separate operational debt target which includes a buffer based on the volatility of the primary balance. The design of this buffer is well suited to addressing the fluctuations in Gabon's oil revenues, although it does less to rectify the large movements in the debt-to-GDP ratio via nominal oil GDP. Based on their work we could calibrate Gabon's debt target as:

$$d = \frac{\tau \times Rev}{i} - FB \qquad (5)$$

where τ is the threshold for interest expense to revenues set at 19 percent[3], Rev is the fiscal revenue-to-GDP ratio, i is the effective interest rate on public debt, and FB is the fiscal buffer set at 20 percent of GDP based on the volatility of Gabon's primary balance. Using the medium-term projections for Gabon 2025–29, this approach gives us a debt target of **approximately 43 percent of GDP on average, with values ranging from 41 to 50.**

### D.2. Calibration Based on Eyraud and Others (2018)

11.   The paper by Eyraud and others (2018) presents two methods for calibrating the debt ceiling. We use a technique which assumes that the maximum debt limit is known, which is more appropriate for economies with more limited market access. The implementation of the method follows three steps.

- The *first step* is to identify the maximum debt limit, which is set to 70 percent of GDP in line the CEMAC ceiling.

- The *second step* is to perform stochastic simulations to gauge the potential impact of macroeconomic and fiscal shocks on debt over the medium term, by using the joint distribution of macroeconomic variables. In this paper we use real GDP (level and growth rate), the primary balance to GDP, debt to GDP, effective interest rates on foreign and domestic debt, the real exchange rate, the terms of trade, foreign loan disbursements to GDP and the stock-flow adjustment calculated from the debt accumulation equation.

- The *third step* is to calibrate the debt rule ceiling. This is done by choosing an initial debt level such that debt remains below the maximum debt limit with a 90 percent probability

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[3] This threshold for interest expense is based on a regression analysis of episodes of fiscal stress, such as sovereign debt defaults, restructuring or IMF assistance.

over the medium term despite the occurrence of negative shocks. The debt ceiling is thus found to be about **45 percent of GDP** (Figure B1).

Appendix Figure 1. Gabon: Public Debt Fan Chart
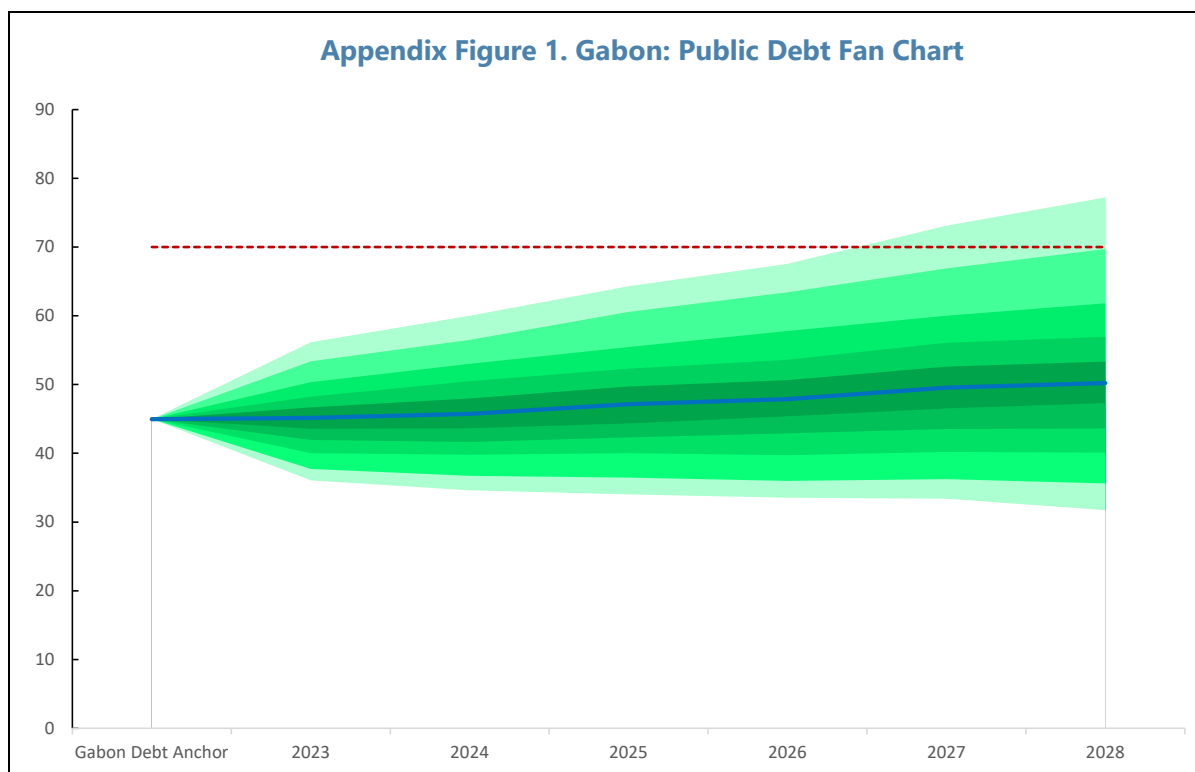
D.3. Final Assessment

12.   Based on the two approaches, the debt anchor should be 41–50 percent of GDP, hence staff advice is to set a ceiling of at most 50 percent of GDP (also equivalent to 50 percent of nonoil GDP in the post-oil era). This value is consistent with the median debt of countries with BBB (excluding Italy, Greece, and Cyprus) or AA ratings[4] in 2022 and in line with the literature on debt intolerance and the link between debt and growth.

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[4] Countries with a BBB or AA rating are used here as these represent middle income "investment grade" countries. Currently, Gabon is not classified as an "investment grade" sovereign and has been most recently rated Caa1 by Moody's and B- by Fitch.

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GABON'S DIVERSIFICATION JOURNEY: WHAT IS MISSING?[1]

Gabon's dependence on the oil sector exposes the economy to fluctuations in the oil price in the short term, and to declining production and the global energy transition in the long run. Despite some progress in increasing exports of wood and manganese, the economy still faces obstacles to diversification stemming from a weak business environment, pro-cyclical macroeconomic policies, high barriers to trade, and insufficient data quality. Improvements in governance and fiscal policy, as well as a more cautious approach to industrial policy, will play a significant role in addressing these challenges.

A. Introduction: Why Does Gabon Need to Diversify?

1.   The Gabonese economy is highly dependent on the hydrocarbon sector, which makes it vulnerable to terms of trade shocks and the energy transition. Oil accounts for about ⅓ of nominal GDP and 40 percent of government revenues, and more than ⅔ of merchandise exports. Gabon's dependence on hydrocarbons extends beyond its impact on the fiscal and external balances, spilling over to nonoil GDP through supply chain linkages and debt sustainability (Text Figure 1). This exposure to the oil cycle has been illustrated several times in the last two decades: during the 2008/2009 global financial crisis (GFC), the 2014-2016 commodity crisis, and the 2020 COVID-19 pandemic with especially severe impacts on the country's international reserves and public debt ratios when oil prices collapsed. The energy transition, and the ensuing decline in oil demand and prices add to Gabon's vulnerabilities especially on the fiscal and external fronts.
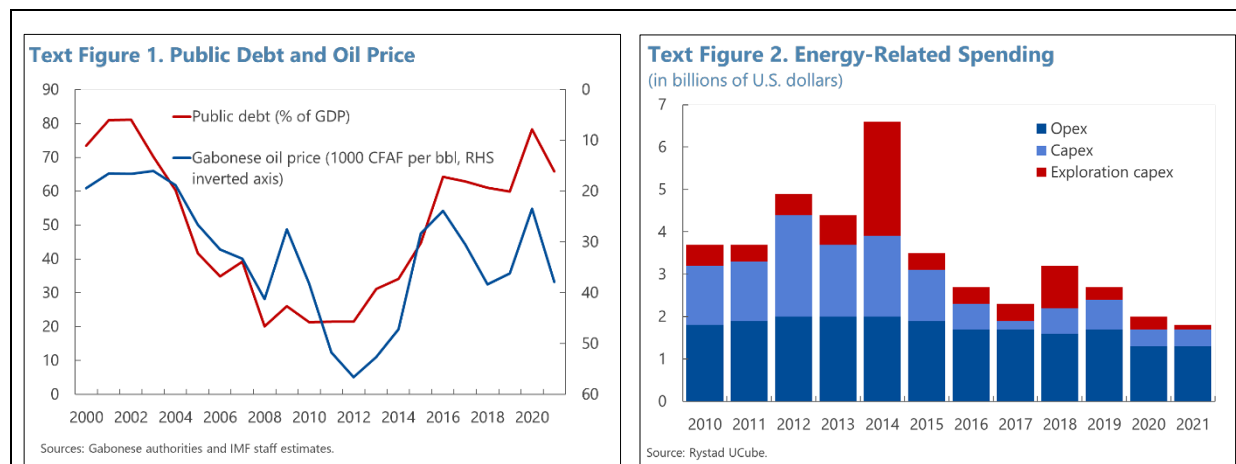
2.   Oil production is on a declining trend, and it is unlikely that this trend will reverse. Gabon's oil fields are maturing, with oil production starting in the late 1950s and peaking in 1997. Since then, Gabon's oil production has been on a declining trend due to the maturing oil fields, dwindling oil reserves, and limited investment in exploration activities.[2] Private investment in the oil sector reached its peak in 2014 (Text Figure 2) due to a sharp increase in capital expenditure related to exploration. But the oil shocks that followed have affected prospects heavily and no significant rise in exploration investment has been recorded since. The weak outlook for production is also marred by the energy transition, and global efforts to limit further investments in hydrocarbons and lessen fossil fuel demand.

3.   Export diversification will be key to enhancing macroeconomic performance. With a population of about 2.3 million, Gabon is a relatively small economy with limited domestic markets and as such, foreign demand is important in raising GDP. The case for export diversification as a

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[1] Prepared by Carmen Lucila Avila-Yiptong, Mahamoud Islam, Chima Simpson-Bell (all African Department) and Ayah Said (Strategy, Policy, and Review Department).

[2] Proven oil reserves are estimated at 2 billion barrels which is equivalent to a decade of production and exports at the current level.
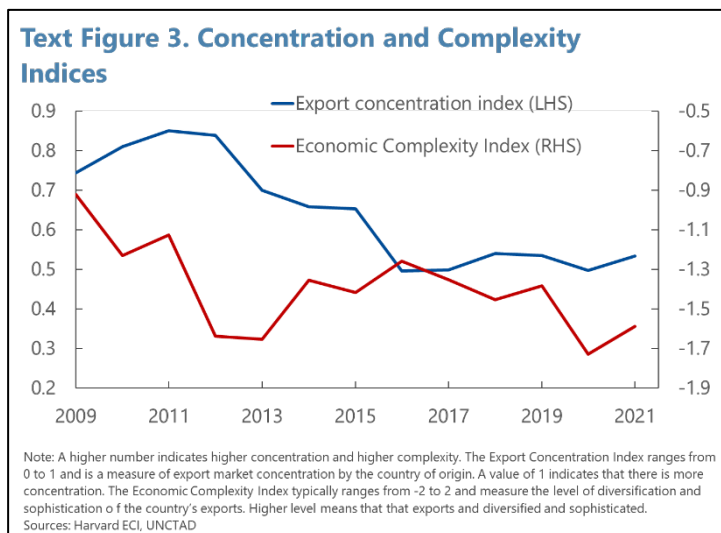
driver for economic growth and macroeconomic stability has been highly documented in the economic literature (Greenaway, 1999; Hesse, 2008; Haddad, Lim, Pancaro, & Saborowski, 2012).

Text Figure 1. Public Debt and Oil Price

Text Figure 2. Energy-Related Spending
(in billions of U.S. dollars)

Sources: Gabonese authorities and IMF staff estimates.

Source: Rystad UCube.

4.   This Selected Issues Paper discusses measures for enhancing economic diversification in Gabon by synthesizing insights from the economic literature, international experience, and consultations with government and business stakeholders in Gabon. It addresses three questions: (i) what has Gabon achieved thus far? (ii) what gaps exist? and (iii) what steps should be taken next? The overall takeaways are that while Gabon has made significant progress in diversifying its product offerings, the economy remains heavily reliant on primary commodities; that the main obstacle to further diversification is the presence of a weak business environment, particularly as a result of challenges related to governance, infrastructure, and financing conditions; and that addressing these challenges should be the primary policy focus.

B.   What Has Gabon Achieved Thus Far?

5.   Gabon has already initiated reforms to diversify its economy and the results were broadly successful in terms of product diversification. In the last decade, Gabon intensified its diversification efforts with a strategy centered mainly on the development of the wood and mining industries, using fiscal tools (e.g., tax incentives) and regulatory measures (e.g., exports ban for logs), including the creation

Text Figure 3. Concentration and Complexity Indices

Note: A higher number indicates higher concentration and higher complexity. The Export Concentration Index ranges from 0 to 1 and is a measure of export market concentration by the country of origin. A value of 1 indicates that there is more concentration. The Economic Complexity Index typically ranges from -2 to 2 and measure the level of diversification and sophistication o f the country's exports. Higher level means that that exports and diversified and sophisticated.
Sources: Harvard ECI, UNCTAD

of the special economic zone.[3,4] The impact of this strategy has been mixed so far. On the one hand, exports of wood and manganese increased, and the country is among the more diversified oil exporters in the region in terms of exported products. On the other hand, the sophistication of the export basket, which has been shown to be a strong predictor of economic development, has decreased with most exports concentrated on low value-added products (Text Figure 3). [5] Progress on partner diversification has also been mixed. Gabon decreased its dependence on its traditional partners, the US, and the EU, but has massively increased its dependence on China, making it more vulnerable to business cycle swings in the mainland (Text Figure 4).

6.   **The transitional government unveiled a strategy focused on the expansion of the hydrocarbon, mining, agriculture, wood and tourism industries, along with the enhancement of infrastructure.** The overall strategy is expected to rely on horizontal policies, primarily focusing on elements of Gabon's infrastructure such as roads and the transport system, improving education across the territory and strengthening governance especially through international cooperation. [6] On vertical policies, promotion of specific sectors will be supported by improved governance and regulation, human capital, funding, public support, and nationalization. For instance, in the hydrocarbon industry, the authorities intend to foster and increase control of national production, including through the purchase of large operators and development of local capacity. This consolidation could potentially increase the capacity to bear the risk associated with exploration of more costly sources of oil, such as deep offshore sites. Their priorities for the mining and forestry industries include improving the regulatory framework to combat illegal activity (thereby safeguarding environmental and conservation commitments), acquiring the necessary knowledge to accurately assess the country's mining potential, and starting the production of iron. For agriculture and farming, the authorities plan to support the modernization of production, sales, and distribution, encourage the creation of production clusters to foster agglomeration externalities despite weak transport infrastructure, and reduce dependence on imports. The authorities plan to create a dedicated fund and specific ecotourist zones to attract investment along with the launch of a new airline company to increase tourist traffic.

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[3] After the 2008–09 global financial crisis, the government unveiled a multiyear strategy aiming at transforming the country to an emerging market by 2025: the *Plan Stratégique Gabon Émergent 2011–16* (PSGE) which has been modified twice to respond to the oil shock (*Plan de Relance Économique 2016–19*) and COVID-19 (*Plan d'Acceleration de la Transformation 2021–23)*. The strategy aimed at reducing the country's reliance on crude oil (share of oil GDP below 15 percent by 2025, from about ⅓ in 2021), with (i) a strengthening of the manganese and the wood industry, (ii) the development of new sources of growth including gold, iron ore, agriculture, and gas. It was supposed to be supported by measures to improve the business environment (improved regulatory framework and transparency for gas, manganese, and wood), fiscal incentives (for iron ore, e.g.), and increased infrastructure spending to support the growth of new sectors.

[4] The implementation of Gabon's Special Economic Zone (SEZ) has been pivotal, particularly in leveraging the country's comparative advantage in the wood industry. The SEZ has successfully established a cluster for wood exports and facilitated expansion into higher value-added activities such as veneer and plywood exports (International Monetary Fund, 2019).

[5] See The Atlas of Economic Complexity: Mapping Paths to Prosperity by Ricardo Hausmann, Cesar Hidalgo, et al. (2014) for more details.

[6] These initiatives include implementing reforms based on Gabon's membership in initiatives like the Extractive Industries Transparency Initiative and adherence to the United Nations Convention against Corruption.

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Text Figure 4. Progress in Export Diversification

Gabon's export diversification has improved markedly over the past decade with the development of the manganese and the wood industry.
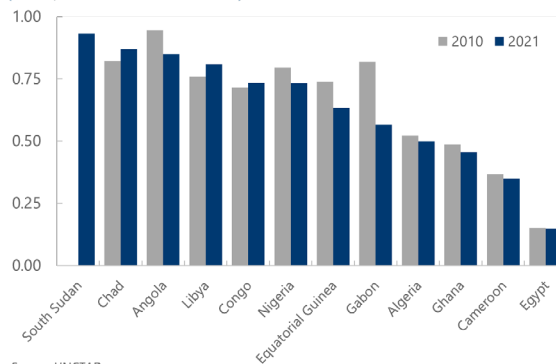
Components of Merchandise Exports ■ Oil ■ Manganese
(in percent of total merchandise exports) ■ Wood ■ Other
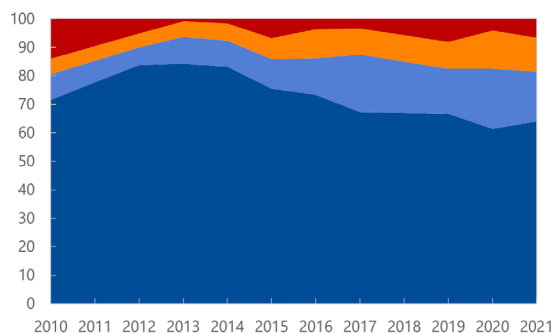
Sources: BEAC; and IMF staff calculations and estimates

Product export concentration fell significantly compared to regional peers.
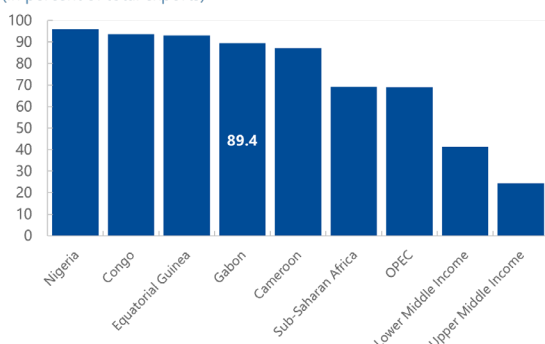
Export Concentration of Largest African Oil Exporters
(index, 1 = most concentrated)

Source: UNCTAD

Despite this progress, Gabon's exports remain dependent on primary, low value-added, commodities compared to other countries.

Primary Commodity Exports
(in percent of total exports)

Source: UNCTAD

Gabon's trade is also dependent on a small number of partners, with China largely replacing US as the main trade partner, but the concentration has nevertheless improved over the last decade.

Exports by Trading Partners ■ US ■ China
(in percent of total exports) ■ Euro Area ■ Rest of Asia-Pacific
 ■ Africa ■ Other
 ■ India
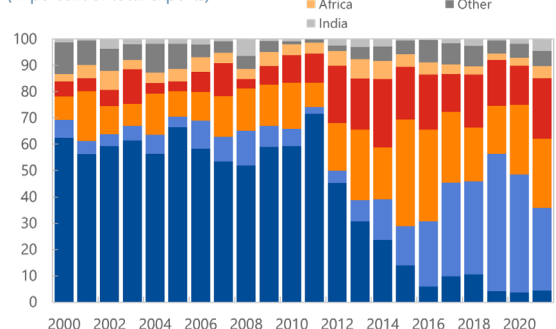
Sources: IMF Direction of Trade Statistics; and IMF staff calculations.

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C. What Are the Main Obstacles to Diversification in Gabon?

7.   To assess Gabon's readiness for diversification, staff constructed a diversification readiness index—a benchmarking index based on previous research and the experience from countries which successfully diversified. The literature and international experience on diversification highlight several important determinants of successful diversification efforts, including the business environment, macroeconomic policies, barriers to trade and data availability (Box 1). Based on these, staff constructed a diversification readiness index (DRI) that summarizes an economy's ability to diversify by combining measures of (i) the business environment, including governance, infrastructure, access to finance, and human capital, (ii) macroeconomic policies,

(iii) trade policy and performance, (iv) data quality, and (v) manufacturing performance.[7] We observe a strong correlation between the DRI and the Economic Complexity Index suggesting that the greater the readiness of the country, the greater the ability to diversify into higher value-added activities (Text Figure 5). The DRI indicates that Gabon's current capacity to diversify is weak compared to regional and middle-income peers, mostly due to a weak business environment.

8.   Based on the readiness factors identified above, the following factors appear to be the main obstacles to diversification in Gabon:

- **A weak business environment: *Governance indicators*** point to significant shortcomings in regulatory quality, government effectiveness, the rule of law and corruption control (Text Figure 6). The legal and regulatory landscape generally lacks transparency for businesses, provides limited investor protection, and is inefficient in resolving disputes (IMF, 2019).

- **A weak business environment: *Access to finance*** is challenging and costly. Gabon's level of domestic credit is low compared to its peers and financing costs are high (Text Figure 7). Banks are reluctant to lend due to elevated credit risk perceptions underpinned by the lack of credit information on companies, weak payment culture, and low recovery in case of default. These are exacerbated by government

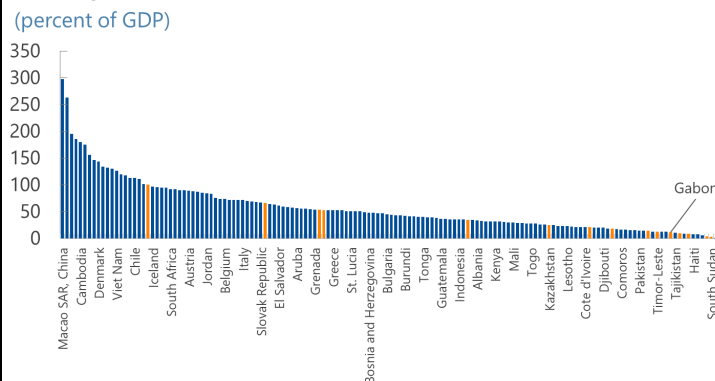**Text Figure 5. Diversification Readiness and Economic Complexity**
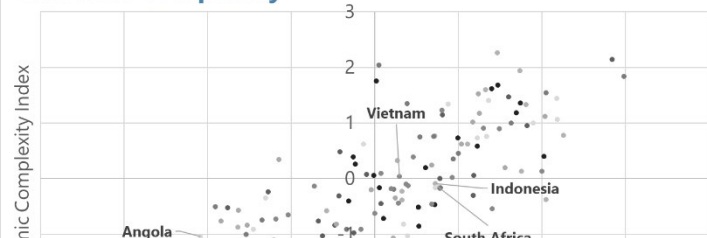
Text Figure 6. Worldwide Governance Indicators, 2022
(percentile rank)
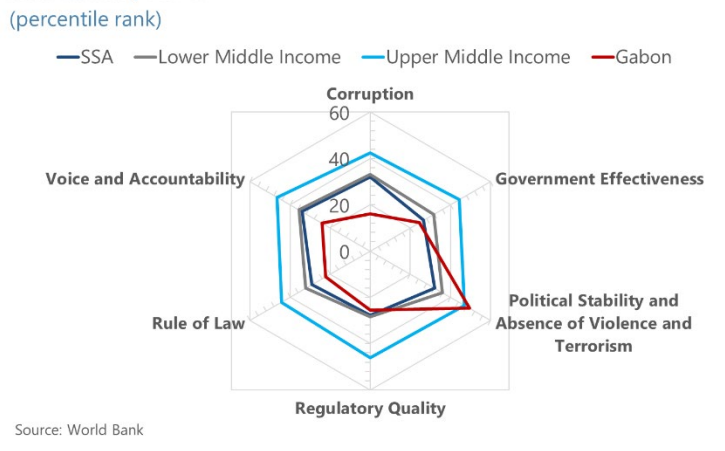
Source: World Bank

Text Figure 7. Domestic Credit to the Private Sector, 2022
(percent of GDP)

Note: Oil exporters, as classified in the IMF World Economic Outlook and IMF Direction of Trade Statistics database, are marked in orange.
Source: World Bank World Development Indicators.

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[7] The indicator is an index constructed by averaging the z-score related to indicators in the 5 categories mentioned above. The indicators used in each category are listed in Box 1.

reliance on domestic arrears as a source of financing, which threatens the liquidity and solvency of its suppliers. The credit market is also distorted, with strong incentives to lend to the government rather than the private sector, including automatic repayments from the central bank for certain government securities and credit enhancements for the government (e.g., zero risk weighting of assets). In addition, banks' ability to lend is constrained by the limited amount of savings collected with banks' deposits only accounting for about 22 percent of GDP. Externally, private sector's access to finance is mainly in the form of FDI but highly concentrated on primary commodities.

- ***A weak business environment: Infrastructure is unreliable, unevenly distributed, and expensive for users***. On infrastructure, the World Bank's Logistic Performance Index shows that Gabon ranks higher than its regional peers but much lower than its upper middle-income peers. The World Bank survey indicates significant shortcomings in soft infrastructure, especially

Text Figure 8. Logistic Performance Index 2023

Note: The Logistics Performance Index provides benchmarks related to countries' trade logistics and performance. The index ranges from 1 (low performance) to 5 (high performance).
Source: World Bank

customs performance and logistic competence.[8] Access to electricity and the internet is uneven and expensive.[9] The domestic transportation infrastructure is underdeveloped. Though Libreville, the capital city, is reasonably well equipped, other key cities suffer from poor connectivity and production disruptions caused by transportation-related bottlenecks. The vulnerability of the transport infrastructure was clearly illustrated in 2023 when two railway stoppages affected the transportation of manganese and wood to the ports for export. Currently, the expansion of the recently initiated iron production is also delayed by the limited railway transportation capacity.

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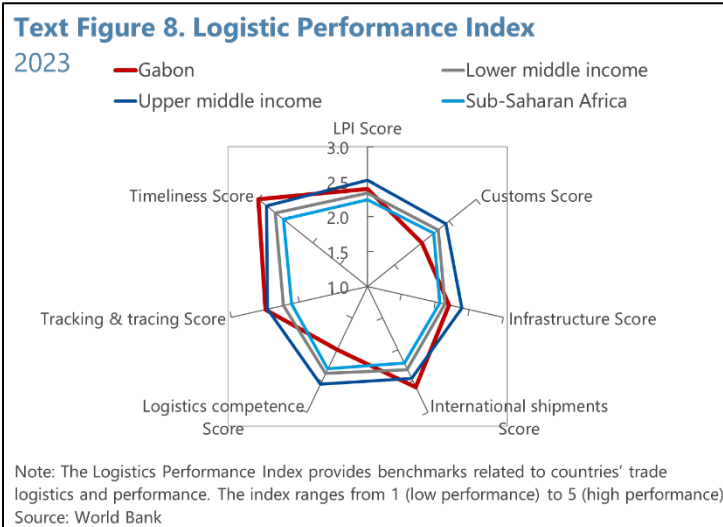
[8] "Hard" infrastructure relates to tangible infrastructure such as roads, ports, highways, telecommunications while "soft" infrastructure can be linked to transparency, customs management, the business environment, and other institutional aspects that are intangible.

[9] Gabon access rate for electricity is about 92 percent which is much higher than the average in sub-Saharan Africa (51 percent) but there is large gap between urban areas (99 percent) and rural areas (about 30 percent) where promising sectors such as the wood and the mining industries are developing. The cost is high: Global petrol prices ranks Gabon 104 out of 148 countries in terms of electricity cost. Access to internet is also widespread with about 72 percent of the population using the internet against 36 percent on average in SSA. However, internet comparison site Cable shows that Gabon also has one of the costliest internet packages, ranking 153rd out of 187 countries.

- **A weak business environment:** *Qualified labor is scarce and costly*. Outcomes in the health and the education systems are better than the average for SSA but weaker than those of Gabon's middle-income peers (Text Figure 9). Primary and secondary education are widely available, and the country has several universities and higher education institutions. But public schools and universities face longstanding challenges of funding, insufficient classrooms, scarcity of professors and extended strikes -especially at the public universities - which prevent the completion of the annual curriculum. In addition, the education system is predominantly traditional, with room for improvement by incorporating more practical skills and vocational training to better align with business needs. Moreover, in addition to the difficulty of finding skilled labor, companies reported during discussions with staff that labor costs are high compared to neighboring countries. Aware of these needs, the authorities have already launched key

Text Figure 9. Human Capital Index (2020)
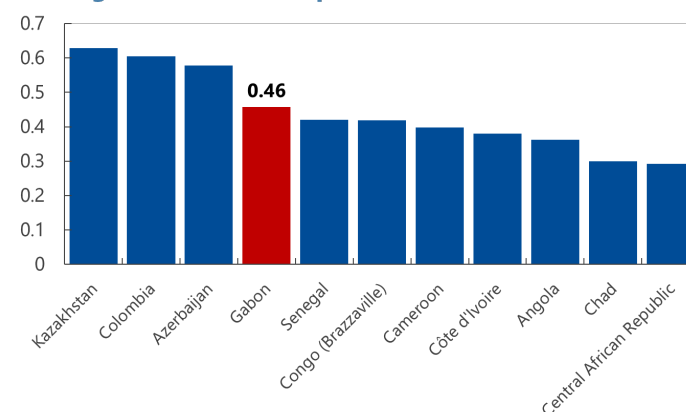
Note: The Human Capital Index (HCI) measures the contributions of health and education on productivity. A higher HCI indicates more human capital.
Source: World Bank

  initiatives such as the creation of an International Multisectoral Centre for Vocational Education and Training in the Nkok zone to foster the development of needed competencies.[10]

- **Weak macroeconomic policies.** High public debt and small but recurring external debt arrears raise borrowing costs and are an important determinant in Gabon's poor credit rating (see the SIP: "*Determinants of sovereign spreads in emerging markets: implications for Gabon*") (Text Figure 10). Large domestic arrears also undermine the liquidity and solvency of businesses given the large footprint of the public sector. In terms of monetary and

Text Figure 10. Public Debt and Interest Expenditures: Sub-Saharan Africa
(Average 2020-22)
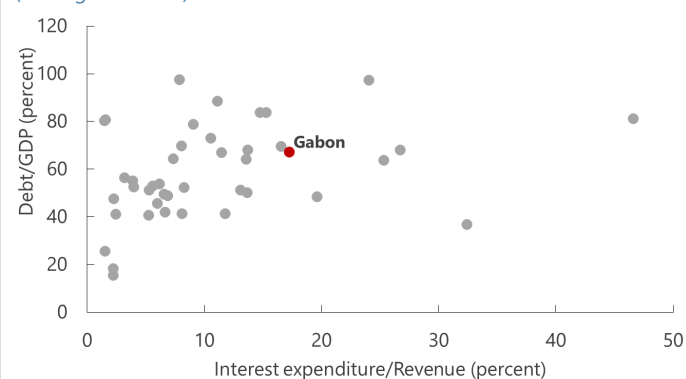
Source: World Economic Outlook

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[10] The Nkok special economic zone was established in 2011 and started operation in 2014, the result of a PPP between Olam International, an agri-business firm based in Singapore, and Gabon. The site includes single window business services for participating companies and preferential access to utilities. It has emerged as a wood cluster, with most of its clients engaged in the processing of locally sourced logs.

exchange rate policy, membership of CEMAC has delivered exchange rate stability and relatively low and stable inflation. However, the monetary union has not yet accumulated large reserve buffers given procyclical spending during periods of high commodity prices and weak repatriation of oil and mining export receipts. The new tightening of the CEMAC foreign exchange regulation on repatriation of oil receipts has helped support reserve accumulation, but also increased the regulatory burden associated with international payments, notably imports.

• **High trade barriers and limited trade partnerships.** Gabon's WTO data suggest that Gabon applies high import tariffs compared to other SSA countries (Text Figure 11). Moreover, considerable nontariff barriers add to trade costs. For example, in 2022 Gabon ranked in the bottom 10 percent of countries based on the OECD's Trade Facilitation Indicators, which measure the effectiveness of border procedures linked to trade. The opportunities for exporters to capitalize on trade partnerships are also limited. Gabon's status as an upper middle-income country means that while its exports benefit from preferential market access in several advanced economies (including the USA, Australia and New Zealand), it is ineligible for the Generalized System of Preferences in one of its main export markets – the European Union.[11] As a member of CEMAC, Gabon has signed the Economic Partnership Agreement (EPA) with the EU but has not yet ratified it. Furthermore, Gabon has recently been excluded from the list of beneficiaries of the US African Growth and Opportunity Act (AGOA), a trade deal aimed at strengthening partnerships with African countries. The signing in 2018 of the African Continental Free Trade Area (AfCFTA) is welcome news, as it envisages the reduction of tariffs and nontariff measures between participating countries and is expected to provide new outlets for Gabonese exporters.

Text Figure 11. Import Tariffs and Trade Facilitation

Sub-Saharan Africa, Import Tariffs
2022

Note: The import tariffs presented here are simple averages of the Most Favored Nation (MFN) tariffs. These are the most restrictive tariffs applied to other WTO members.
Source: World Trade Organization.

Trade Facilitation Index
2022

Source: OECD.

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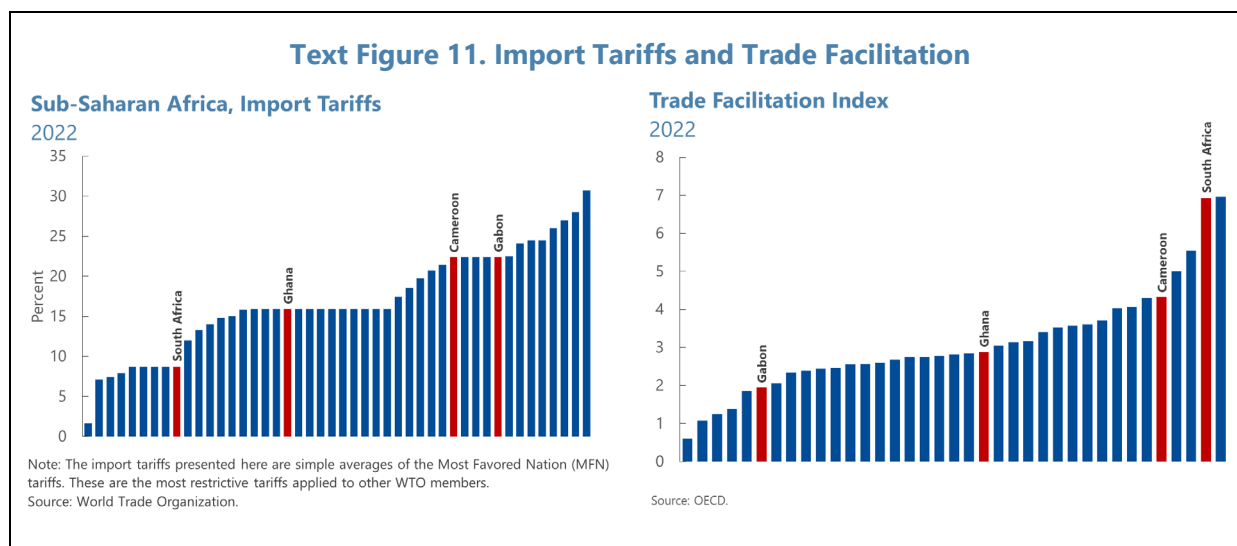
[11] The Generalized System of Preferences is a system of preferential tariffs through which developed economies voluntarily provide advantageous tariff treatment to the imports of developing economies. Gabon benefits from preferential market access provisions with ten WTO members, including the United States of America's Generalized System of Preferences.

- **Weak data quality** has made it difficult to assess Gabon's progress on diversification, provide accurate information to external stakeholders, and develop a well-informed strategy on how to proceed next.

- **Gabon's industrial policy** has had mixed economic and fiscal outcomes. It has focused on supporting the development of the manganese and wood industries through tax incentives and regulatory measures (e.g., bans on log exports). This strategy has successfully expanded the local processing of wood, especially through the Nkok economic zone, and made some inroads in the production of higher value-added wood products. However, the reliance on extended tax exemptions (in some cases offered for decades) to attract new producers into the country has elevated the fiscal cost of the initiatives. For example, the wood sector accounts for only 0.4 percent of total fiscal revenues, despite producing 2.3 percent of nominal GDP in 2022. Large tax incentives resulted in forgone revenues, much needed to alleviate the public goods constraints to diversification such as energy, transport, and communication infrastructure. Total tax expenditures in Gabon have been estimated at between 4 and 5 percent of GDP (International Monetary Fund, 2019).
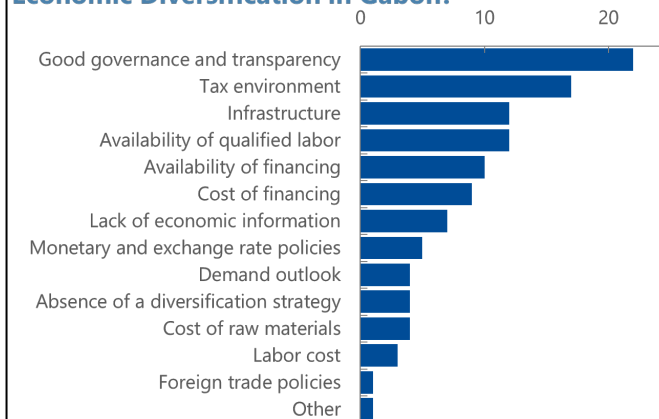
9.   The results of a staff survey of businesses corroborate the findings of the readiness index. During the Article IV discussions, staff conducted a survey of 37 companies on the main constraints to doing business and diversification[12]. Companies highlighted a weak business environment as the main obstacle (Text Figure 12). Specifically, this includes:

- *Weak governance and transparency, and an unpredictable tax environment.* Companies particularly emphasized weaknesses in the rule of law, including corporate rights and equal treatment before the law, as well as government effectiveness, such as the quality of public services. Additionally, they highlighted the lack of clarity and uncertainty related to the tax environment, which includes numerous parafiscal charges and uneven implementation.

Text Figure 12. What are the Three Main Obstacles to Economic Diversification in Gabon?

Source: IMF Survey of 37 Gabonese companies.

- *Poor infrastructure.* Companies cited poor roads, limited access to electricity, and high usage costs as major constraints. They also noted frequent intranational-trade disruptions, especially due to poor infrastructure.

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[12] The survey consisted of one question to 37 companies "What are the three main obstacles to economic diversification?" with a menu of options to choose from. The questionnaire also included an opportunity to comment on responses.

- *Access to finance and human capital.* The impact of government arrears on liquidity was a significant concern for companies. Access to human capital was also highlighted as challenging due to high costs and a lack of adequate skills.

D. Enhancing the Diversification Framework

10.   The above discussion on the obstacles to diversification suggests the following policy priorities:

- *Governance reforms and increased transparency are essential for enhancing the business environment, bolstering private sector' confidence, and fostering growth.* After years of weak governance practices, there is significant space for improvement in all areas related to governance and transparency, as evidenced by the third party indicators discussed above, discussions with the private sector and the analytical work on the determinants of borrowing costs in the accompanying Selected Issues Papers. These include transparency with regard to the fiscal position, improved management of public finances to ensure transparency, accountability and efficiency, and broad anti-corruption measures.

- *Improving financing conditions for companies is crucial.* In the near term, the priorities should be accelerating the repayment of government domestic arrears and initiating decisive fiscal consolidation to prevent further accumulation and reduce overall borrowing costs. The establishment of a comprehensive credit bureau would increase information available to banks and boost their ability to assess and underwrite credit. The regulatory framework for debt recovery could also be refined by strengthening the judicial system, making it more effective in resolving financial disputes including with the establishment of a commercial court. In the medium term, strengthening financial deepening through the promotion of financial inclusion will also be pivotal.[13] This would not only draw more individuals into the formal financial sector but would also contribute to increasing the domestic savings, thus amplifying the pool of available funds for banks to finance the economy.

- *Strengthening the fiscal position would reassure investors and generate needed resources for diversification.* Efforts to reduce public debt and permanently clear external arrears could help improve Gabon's external borrowing costs and reassure international investors. For instance, reducing public debt to 55 percent of GDP and clearing arrears could bring about 0.1 percent of GDP in interest savings. On the revenue side, the government could consider alternatives to fiscal incentives to attract foreign companies into the special economic zone (see accompanying SIP "*A Menu of Fiscal Adjustment Options*").

- *Trade policy should focus on removing trade barriers and facilitating expansion into new markets.* The implementation of the import tariffs, mostly agreed at the CEMAC level, could be simplified by avoiding exemptions for specific products or sectors and "safeguard" measures introduced to deal with temporary issues, such as the high cost of living. This would encourage competition, and support investment through more transparency and

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[13] Financial inclusion, for example, measured by account ownership at financial institutions is relatively low in Gabon (66 percent) compared to the average for middle-income countries (72 percent).

business predictability. In the medium to long term, working at a regional level to gradually reduce tariffs could help lower import costs[14]. In addition, nontariff fiscal measures (taxes or subsidies) which encourage local production should be used carefully to avoid excessive distortions in terms of cost and investment inflows and be consistent with the WTO principle of national treatment (e.g., VAT and excise taxes for imported products and local products should be aligned). This would improve the tax environment for companies operating internationally without necessitating an overhaul of the CEMAC common external tariff. Other non-tariff barriers such as national preference in hiring should also be used carefully to avoid discouraging investors. Trade diplomacy should be reinforced through, for example, efforts to regain access to the AGOA and strengthen trade integration with the European Union.

- *Strengthening statistical capacity and improving communication* would provide a more solid foundation for Gabon's strategy and allow more effective policymaking and monitoring of progress.

- *Reducing the costs and market distortions related to industrial policy would be critical.* As support for specific industries could entail significant fiscal costs in the form of subsidies and foregone tax revenues, a more cost-effective approach should be given priority. This approach should focus on improvements in institutional functioning, such as fast delivery of secured land titles and stronger governance and transparency. Improving transport networks and access to electricity around key production sites could also be a low risk, high return investment to support specific industries.

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[14] The last WTO CEMAC review noted that "the tariff structure and the relatively high rates are not conducive to promoting the growth of the manufacturing sector as they push up the costs of imported components/inputs and, consequently, hinder the sector's integration into global value chains". s445_sum_e.pdf (wto.org)

Box 1. Some International Lessons on Diversification and a Diversification Readiness Index

The literature suggests the importance of a conducive business environment to help support private sector growth, investment, and innovation. Good governance, adequate infrastructure, access to finance and a skilled workforce are key to support export diversification ((Salinas, 2021) (Rahul Giri, 2019)). Singapore and the UAE are good examples of the catalytic effects of a conducive business environment— with the development of business-friendly regulations, a favorable tax environment for businesses and best in class trade infrastructure - on a country's diversification progress.

Earlier diversification efforts also highlight the importance of solid fiscal and monetary frameworks to attract investors and increase financing. A key challenge is finding the right balance between providing fiscal incentives and building sufficient fiscal resources. Through prudent fiscal management, countries such as the UAE, Chile and Malaysia have been able to attract investors, accumulate needed financial resources that were used to support their diversification efforts, including through their sovereign wealth funds. On the monetary front, having a stable monetary framework that ensures price and financial stability, fosters orderly capital flows and limits exchange rate distortions can help to secure financing by reassuring foreign investors.

Trade related policies and reforms that expand market access and reduce trade costs are key to fostering diversification. Trade-related policies include lowering trade barriers (tariff or non-tariff measures), spatial policies to create local export champions (e.g., growth poles, special economic zones) and the development of new trade partnerships (Paul Brenton, 2019). In the last three decades, China has provided a good example of successful development of special economic zones that have become diversification hubs. A trade partnership with the US as part of NAFTA has also been pivotal in supporting the diversification strategy of Mexico (Ayhan Kose, 2004).

Having a credible and well-promoted diversification strategy is crucial. Key elements enhancing credibility are accurate statistics providing needed evidence for effective policy making, a correct assessment of the state of the economy, and a good track record of reform implementation. A credible strategy helps policymakers adopt realistic and appropriate policies. It also helps improve investors' confidence by providing them needed information to make their decisions. Examples from South Korea, Singapore, and Malaysia illustrate how statistical data was used to identify key sectors, make informed policy decisions, and achieve successful diversification outcomes. Marketing and broad communication of the strategy are also key, especially when countries lack domestic financial resources to support their strategy and need to attract foreign investors. The text of the strategy could then be simplified and translated into multiple languages to ensure outreach.

History also illustrates the importance of careful use of industrial policies. The use of industrial policies, understood as "targeted efforts to change the production structure of an economy in order to accelerate economic development" (Wade, 2015), gained traction lately. IMF (2022) specifies externalities (e.g., knowledge spillovers) that would justify targeted sectoral interventions, as well as the potential government failures that could undermine these interventions. In that context, governments could potentially use a broad range of tools including tax incentives, targeted financing, and eased regulation for specifically identified sectors. However, this targeting should be used prudently to avoid creating market distortions, for example, by supporting sectors as opposed to individual firms. Financial support, in the form of tax incentives, targeted financing or credit guarantees should be avoided if they entail excessive fiscal costs or contingent liabilities.

Based on these insights, staff developed a Diversification Readiness Index (DRI) which combines the following measures into a single score:

- **Business climate:** World Governance Indicators; Logistics performance index; Access to electricity (% urban population); Access to electricity (% rural population); Domestic credit to the private sector (% GDP); Gross enrollment in secondary education

Box 1. Some International Lessons on Diversification and a Diversification Readiness Index(concluded)

- **Macroeconomic policies:** Public debt to GDP; Government interest expense to revenue; Net international investment position (percent GDP)

- **Trade policy and performance:** Trade openness; Simple average of MFN/applied import tariffs; Trade facilitation index

- **Data quality:** Statistical capacity score

- **Manufacturing performance:** Manufacturing share of GDP; Medium- and high-tech exports (share of manufactured imports).

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