INTERNATIONAL MONETARY FUND

CENTRAL AFRICAN REPUBLIC

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REQUEST FOR A THREE-YEAR ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY—DEBT SUSTAINABILITY ANALYSIS

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Prepared by the staffs of the International Monetary Fund (IMF) and the International Development Association (IDA)[1]

Central African Republic Joint Bank-Fund Debt Sustainability Analysis	
Risk of external debt distress	High
Overall risk of debt distress	High
Granularity in the risk rating	Sustainable
Application of judgement	No

The Central African Republic (C.A.R.) remains at high risk of external debt distress and overall high risk of debt distress, unchanged from the last DSA.[2] Solvency indicators remain below their relevant thresholds, but liquidity indicators breach their thresholds under the baseline scenario. Sensitivity of debt indicators to standard stress tests, highly uncertain macroeconomic projections, a volatile security environment, and sizeable contingent liabilities are all considerations supporting the high-risk assessment. Staff recommendation is that the government should continue to rely heavily on grant financing to finance its most pressing spending needs, with limited room for concessional financing.[3]

[1] This DSA has been prepared jointly by the IMF and World Bank, following the revised LIC-DSF Framework and Guidance Note (2017) in effect as of July 1, 2018.

[2] Country Report No. 19/216, July 2019.

[3] With a score of 2.42, C.A.R.'s composite indicator signals a weak debt-carrying capacity (Text Table 3).

PUBLIC DEBT COVERAGE

1. **The coverage of public sector debt is in line with the previous DSA, exhibiting some gaps.** Information is available on the central government's contractual debt obligations. State and local governments do not borrow, there are no social security funds guaranteed by the public sector, and the government has not guaranteed other debt (Text Table 1).

2. **Compared to the last DSA, the end-2018 debt stock has been revised slightly upward, while some contingent liabilities appear less likely to materialize.** The debt stock revision, amounting to 0.9 and 1.5 percent of GDP at end-2017 and end-2018, respectively, stemmed from the previous misclassification as grants of loan disbursements under a project loan. While little information is still available on the financial situation and domestic debt and arrears of state-owned enterprises (SOEs), the recent audit of most of the potential government domestic arrears identified in the Spring appears to indicate that only a fraction will need to be repaid.

3. **The authorities are taking specific steps to improve financial oversight of SOEs, which should lead to better debt coverage going forward.** They submitted to parliament a new legal framework governing SOEs and have reorganized the Ministry of Finance. The debt unit is being strengthened through training and better IT systems supported by development partners.

4. **The contingent liabilities stress test assumes a shock of 15 percent of GDP for its tailored portion (Text Table 1).** This significant amount reflects the uncertainty about non-guaranteed SOE debt and arrears, potential additional domestic arrears, and financial market risks. The contingent liabilities shock from SOE debt is set at 5 percent of GDP (instead of 2 percent for its default value) to reflect heightened risks associated with non-guaranteed SOE debt and potential expenditure arrears. The shock from domestic arrears is set at 5 percent of GDP to factor in past and persisting shortcomings in the country's public expenditure management systems. The financial market risk shock is kept at the minimum default value of 5 percent of GDP given the small size and depth and relatively robust financial position of the financial sector in C.A.R.

Text Table 1. Central African Republic: Coverage of Public Sector Debt and Design of the Contingent Liability Stress Test

Subsectors of the public sector	Sub-sectors covered
Central government	X
State and local government	X
Other elements in the general government	
o/w: Social security fund	X
o/w: Extra budgetary funds (EBFs)	
Guarantees (to other entities in the public and private sector, including to SOEs)	X
Central bank (borrowed on behalf of the government)	X
Non-guaranteed SOE debt	

The country's coverage of public debt	The central, state, and local governments plus social security, central bank, government-guaranteed debt		
	Default	Used for the analysis	Reasons for deviations from the default setting
Other elements of the general government not captured above	0 percent of GDP	5	Possible domestic payment arrears not included in debt stock
SOEs' debt (guaranteed and not guaranteed by the government) 1/	2 percent of GDP	5	Limited information SOEs' financial position
PPP	35 percent of PPP stock	0	
Financial market (the default value of 5 percent of GDP is the minimum value)	5 percent of GDP	5	
Total (in percent of GDP)		15	

1/ The default shock of 2% of GDP will be triggered for countries whose government-guaranteed debt is not fully caputred under the coutnry's public debt definition. If it is already included in the goverenment debt and risks associated with SOE debt not guaranteed by the government is assessed to be neglibible, a country team may reduce this to 0%.

Source: IMF staff estimates and country authorities

BACKGROUND ON DEBT

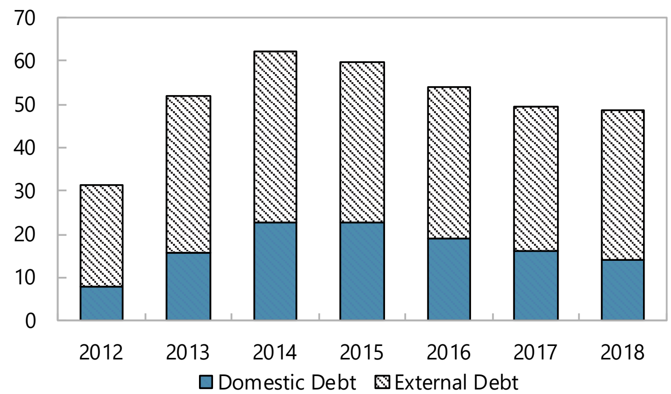
5. **C.A.R.'s public and publicly guaranteed (PPG) debt has continued to gradually decline.** It is now estimated at 50 percent of GDP at end-2018 (compared with 50.3 percent of GDP at end-2017), with external debt amounting to 36.1 percent of GDP (34.1 percent of GDP at end-2017).[4, 5] Debt indicators deteriorated significantly in the wake of the 2013 crisis when GDP collapsed, and domestic and external arrears accumulated. Conditions have improved since, supported by economic recovery, stronger revenue mobilization, arrears clearance, and limited new borrowing (Text Figure 1).

[4] External debt is defined on a residency basis with the exception of BEAC advances, which are considered domestic debt as in the last DSA for C.A.R. Mechanically, the CFAF-denominated debt held by the BEAC would weaken the external debt sustainability indicators if they were considered external debt, but the risk from this debt is lower than foreign currency denominated debt owing to the lack of currency risk, strong institutional ties, and the relative ease of rescheduling. All outstanding T-bills are held by domestic banks and included in domestic debt.

[5] These debt stocks include about 10 percent of GDP in arrears to non-Paris Club official creditors. These arrears are not expected to be repaid at better terms than those of the 2009 Paris Club agreement: no debt service on these loans is assumed in the DSA.

6. **The government has not contracted any new loan since the last DSA.** So far this year, disbursements have been limited to CFAF 3.6 billion under the afore-mentioned World Bank project loan, 2.4 billion from the Saudi Fund, 0.5 billion from the Arab Bank for Economic Development in Africa and CFAF 18.3 billion under the ECF-supported program.

Text Figure 1. Central African Republic: Evolution of Public Sector Debt, 2012–18 (percent of GDP)



Sources: IMF staff estimates and country authorities

7. **Pre-HIPC arrears and debt owed to multilateral creditors continue to account for the bulk of external debt.** Multilateral creditors, mainly the IMF and the World Bank, hold almost half of the external debt. Bilateral debt amounts to 7.2 percent of GDP, with India, China and Congo being the main creditors. Pre-HIPC arrears are owed to Non-Paris Club creditors (Argentina, Equatorial Guinea, Iraq, Libya, and Taiwan, Province of China). The average nominal interest rate stood at 0.6 percent for external debt, reflecting the preponderance of concessional borrowing. Half of the domestic debt consists of statutory and exceptional advances from the Central Bank, which have been consolidated into one loan to be repaid from 2022 onwards, in line with regional arrangements. The remainder mainly includes officially recognized arrears amounting to 4.7 percent of GDP.

UNDERLYING MACROECONOMIC ASSUMPTIONS

8. **Medium-term projections (up to 2024) have been slightly updated and are fully consistent with the new program scenario.**

- The current account balance is expected to improve over time thanks to a gradual decline of imports relatively to GDP from exceptionally high post-crisis levels.
- A very limited primary deficit is expected in the next five years amid substantial grant financing.
- A medium-term GDP growth rate of 5 percent reflects the assumption of further catch-up to the pre-crisis level of GDP.

Text Table 2. Central African Republic: Macroeconomic Assumptions

	DSA-19		DSA-update	
	2019-24 average	2025-2039 average	2019-24 average	2025-2039 average
	(% of GDP)		(% of GDP)	
GDP growth (percent)	4.9	3.4	4.9	3.4
GDP deflator (percent)	2.6	2.8	2.9	2.8
Non-interest current account balance	-4.8	-2.8	-5.3	-2.8
Exports	14.8	14.6	15.2	15.5
Primary balance	0.4	-1.0	-0.1	-1.0
Revenues and grants	18.2	16.6	18.1	16.5

Source: IMF staff calculations

9. **There has been no major changes to the long-term macroeconomic projections since the last DSA (Text Table 2).**

- External sector variables remain broadly unchanged. Current transfers are expected to decline and FDI to increase gradually from a low level. Overall, it is expected that the non-interest current account deficit will reach 3 percent of GDP in the long run.

- Domestic revenues are assumed to follow a gradual upward trend, reaching 14 percent of GDP at the end of the projection period. And the fiscal primary surplus is expected to turn into a deficit of 1 percent of GDP over the long run as grant financing gradually declines.

- After increasing sharply in the short run, budget grants are assumed to decline in the long run, from an average of 7.5 percent of GDP during 2019–24 to 2 percent of GDP by 2039.[6] The financing needs in the short run are covered by deposit withdrawals while it is assumed that 80 percent of longer-term needs would be covered through external concessional borrowing—with a gradually decreasing degree of concessionality—and the remaining 20 percent through domestic borrowing.

- In the long run (2025–39), a 3.4 percent growth is assumed—unchanged from the last DSA. This implies modest per-capita GDP growth as population growth is estimated at about 2.5 percent.

10. **The realism tools do not flag significant risks around the baseline scenario** (Figures 3 and 4). Both external and public PPG debt projections are in line with the previous DSA. Factors contributing to debt dynamics appear broadly in line with historical contributions. Unexpected changes in external and public debt are close to the median for all LICs. The envisaged fiscal path

[6] This assumption is consistent with multilateral development institutions providing support in the form of a mix of grants and concessional financing. Even if C.A.R.'s risk rating was to improve, a substantial share of financing would likely be provided in the form of grants.

is well in line with the historical performance and the experience in other LIC countries. It is also worth noting that, in the case of C.A.R., changes in the primary balance are not always a good indicator to gauge the impact of fiscal policy. While the primary balance is expected to improve substantially (owing to the significant increase in external grants, which will be only partly spent), fiscal policy is likely to prove expansionary (owing to the increase in spending).

Table 3. Central African Republic: Calculation of Composite Indicator and Thresholds

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	2.471	0.95	39%
Real growth rate (in percent)	2.719	3.272	0.09	4%
Import coverage of reserves (in percent)	4.052	32.644	1.32	55%
Import coverage of reserves^2 (in percent)	-3.990	10.657	-0.43	-18%
Remittances (in percent)	2.022	0.097	0.00	0%
World economic growth (in percent)	13.520	3.579	0.48	20%
CI Score			2.42	100%
CI rating			Weak	

EXTERNAL debt burden thresholds	Weak	Medium	Strong
PV of debt in % of			
Exports	140	180	240
GDP	30	40	55
Debt service in % of			
Exports	10	15	21
Revenue	14	18	23

TOTAL public debt benchmark	Weak	Medium	Strong
PV of total public debt in percent of GDP	35	55	70

Sources: IMF staff estimates, Word Bank *Country Policy and Institutional Assessment*, and country authorities

DEBT SUSTAINABILITY

A. External Debt Sustainability Analysis

11. **Solvency indicators of the external PPG debt remain below their thresholds under the baseline scenario** (Figure 1). Under this scenario, the present values (PV) of the debt-to-GDP and debt-to-exports ratios do not breach their thresholds and decline from their initial level over the projection period. The PV of the external debt-to-GDP ratio would breach the thresholds for three years under the most extreme standardized stress test (a combination of a shock to growth, the primary balance, exports, other non-debt creating flows, and depreciation). The standardized stress test of lower nominal export growth leads to a temporary breach of the PV of the external debt-to-exports ratio.[7] Setting key variables to their historical average would result in a clear upward trend of both debt ratios.

[7] The shock assumes nominal export growth of one standard deviation below its historical average in the second and third year of the projection period.

12. **Liquidity indicators of the external PPG debt breach their thresholds for five years under the baseline scenario** (Figure 1). The external debt service-to-exports ratio breaches the threshold from 2024–28, driven by a significant uptick of debt service during that period related to the end of the grace period of a loan as well as significant repayments to the Fund. The trajectory of the external debt service-to-revenue ratio is similar, even if the breach is shorter and of a lesser magnitude. Both breaches are larger than in the previous DSA, owing mainly to the projected disbursements under the proposed new ECF arrangement. Significant and persistent breaches of the external debt service-to-exports ratio and the external debt service-to-revenue ratio would happen under the historical scenario and the most extreme standardized stress test (standardized shocks to exports and a combination of shocks respectively).

B. Public Debt Sustainability Analysis

13. **The total PPG debt indicator remains well below its benchmark under the baseline scenario** (Figure 2). In addition, the PV of the debt-to-revenue ratio is declining over the projection period. The debt-service-to-revenue and grants ratio is set to rise until 2025 reflecting the start of repayments of exceptional and statutory advances to BEAC and higher external debt service payments. A standardized shock to growth would trigger a breach of the treshold for the PV of the debt-to-GDP ratio and lead to a significant increase of the PV of the debt-to-revenue ratio.[8] It is also worth noting that public debt indicators could worsen owing to contingent liabilities. An important stock of unverified arrears may lead to additional payment obligations. Adding domestic debt to the analysis does not change the overall risk of debt distress.

CONCLUSION

14. **C.A.R remains at high risk of external debt distress and overall high risk of debt distress.** The solvency indicators for both external PPG debt ratios stay below their respective thresholds. However, C.A.R.'s capacity to service debt is severly constrained by its low revenue mobilization and weak export base, with the external debt service-to-export and external debt service-to-revenue ratios breaching their respective thresholds under the baseline scenario.

15. **A number of other considerations support the high-risk assessment.** Macroeconomic projections are highly uncertain given the still volatile security environment. Standardized stress tests also underline the sensitivity of the debt indicators to assumptions. Lower export or real GDP growth would trigger a significant deterioration of debt sustainability indicators with multiple threshold breaches. In addition, sizeable contingent liabilities, notably related to the limited financial information available on SOEs, could materialize.

16. **The authorities broadly agreed with this assessment.** They shared the view that C.A.R.'s capacity to service debt is limited and are committed to mobilizing grant financing to cover their financing needs to the largest extent possible. At the same time, they emphasized that the overall public debt is on a declining trend but agreed that there is a need to strengthen debt monitoring, especially by broadening the coverage to SOEs and clarifing the status of unverified domestic arrears.

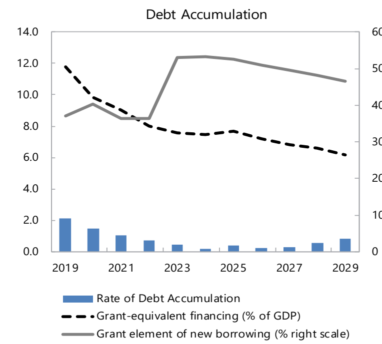
[8] The shock assumes real GDP growth of one standard deviation below its historical average in the second and third year of the projection period.

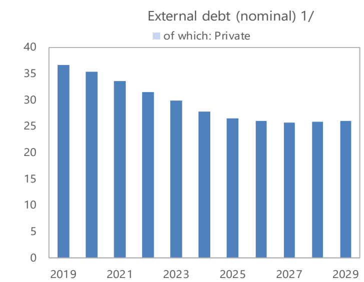
Table 1. Central African Republic: External Debt Sustainability Framework, Baseline Scenario, 2016–39

(Percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projections
External debt (nominal) 1/	**35.1**	**35.4**	**37.2**	**36.7**	**35.4**	**33.5**	**31.5**	**29.8**	**27.8**	**26.0**	**25.7**	**25.8**	**29.5**
of which: public and publicly guaranteed (PPG)	**35.1**	**35.4**	**37.2**	**36.7**	**35.4**	**33.5**	**31.5**	**29.8**	**27.8**	**26.0**	**25.7**	**25.8**	**29.5**
Change in external debt	-1.8	0.4	1.8	-0.5	-1.3	-1.9	-2.0	-1.7	-2.0	0.2	0.0		
Identified net debt-creating flows	**...**	**2.9**	**3.9**	**2.8**	**3.1**	**2.2**	**2.3**	**2.7**	**2.6**	**0.5**	**0.0**	**3.4**	**1.7**
Non-interest current account deficit	**5.0**	**7.7**	**7.8**	**5.4**	**6.0**	**5.0**	**5.1**	**5.3**	**5.1**	**2.8**	**2.7**	**7.5**	**4.2**
Deficit in balance of goods and services	16.4	16.5	17.8	17.7	16.1	15.0	14.4	13.8	13.3	8.5	8.5	**14.3**	**12.1**
Exports	18.0	15.9	15.9	15.1	15.2	15.1	15.1	15.2	15.2	15.5	15.5		
Imports	34.4	32.4	33.7	32.9	31.4	30.1	29.4	29.1	28.5	24.0	24.0		
Net current transfers (negative = inflow)	-11.4	-8.8	-10.0	-12.4	-10.2	-10.0	-9.2	-8.4	-8.0	-7.4	-5.8	**-6.8**	**-8.8**
of which: official	-5.0	-3.2	-4.4	-7.2	-5.1	-5.0	-4.3	-3.6	-3.5	-3.9	-2.9		
Other current account flows (negative = net inflow)	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	1.8	0.0	**-0.1**	**0.9**
Net FDI (negative = inflow)	**-0.4**	**-0.8**	**-0.8**	**-1.1**	**-1.3**	**-1.4**	**-1.4**	**-1.3**	**-1.3**	**-1.7**	**-2.2**	**-1.4**	**-1.4**
Endogenous debt dynamics 2/	**...**	**-4.0**	**-3.1**	**-1.4**	**-1.5**	**-1.4**	**-1.4**	**-1.3**	**-1.2**	**-0.6**	**-0.5**		
Contribution from nominal interest rate	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
Contribution from real GDP growth	-1.6	-1.4	-1.2	-1.6	-1.7	-1.6	-1.5	-1.5	-1.4	-0.8	-0.8		
Contribution from price and exchange rate changes	...	-2.8	-2.0	...	...	...	...	...	...	...	...		
Residual 3/	**...**	**-2.5**	**-2.1**	**-3.4**	**-4.4**	**-4.0**	**-4.3**	**-4.5**	**-4.6**	**-0.3**	**0.0**	**-2.3**	**-2.7**
of which: exceptional financing	...	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	**...**	**...**	**18.5**	**19.8**	**19.6**	**19.1**	**18.3**	**17.3**	**15.9**	**13.4**	**16.2**		
PV of PPG external debt-to-exports ratio	**...**	**...**	**116.1**	**131.0**	**128.8**	**126.8**	**121.6**	**114.0**	**104.8**	**86.0**	**104.3**		
PPG debt service-to-exports ratio	**6.0**	**1.8**	**3.8**	**4.8**	**6.3**	**6.7**	**8.0**	**8.4**	**10.3**	**8.3**	**5.9**		
PPG debt service-to-revenue ratio	**14.6**	**3.7**	**6.8**	**8.3**	**9.9**	**10.1**	**11.6**	**12.1**	**14.6**	**10.8**	**6.5**		
Gross external financing need (Million of U.S. dollars)	104.2	148.9	173.2	118.7	144.4	129.5	148.2	173.1	192.7	121.0	129.7		
Key macroeconomic assumptions													
Real GDP growth (in percent)	4.7	4.5	3.8	4.5	5.0	5.0	5.0	5.0	5.0	3.4	3.4	**-0.2**	**4.2**
GDP deflator in US dollar terms (change in percent)	2.7	8.6	6.0	-0.5	3.6	3.1	3.2	3.0	4.7	2.5	2.5	**2.6**	**3.2**
Effective interest rate (percent) 4/	0.9	0.4	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.8	1.2	**1.1**	**0.6**
Growth of exports of G&S (US dollar terms, in percent)	13.8	0.3	10.2	-1.2	9.5	7.1	8.3	9.2	9.9	6.0	6.0	**6.0**	**7.3**
Growth of imports of G&S (US dollar terms, in percent)	2.7	6.8	14.6	1.4	3.8	3.8	6.0	6.8	7.8	6.0	6.0	**7.6**	**4.3**
Grant element of new public sector borrowing (in percent)	...	...	...	37.0	40.3	36.3	36.3	53.1	53.2	46.6	31.9	**...**	**45.8**
Government revenues (excluding grants, in percent of GDP)	7.4	7.8	8.9	8.7	9.7	10.0	10.3	10.6	10.8	11.8	14.0	**8.1**	**10.6**
Aid flows (in Million of US dollars) 5/	5205.0	14434.2	24576.9	272.7	254.9	246.7	237.1	228.1	240.8	247.9	180.6		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	11.8	9.8	9.0	8.0	7.6	7.4	6.2	2.7	**...**	**8.0**
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	86.3	87.3	89.3	88.8	90.1	88.7	80.9	65.6	**...**	**85.8**
Nominal GDP (Million of US dollars)	1,825	2,071	2,280	2,371	2,579	2,792	3,026	3,271	3,596	5,049	9,029		
Nominal dollar GDP growth	7.6	13.5	10.1	4.0	8.8	8.2	8.4	8.1	10.0	6.0	6.0	**2.2**	**7.5**
Memorandum items:													
PV of external debt 7/	...	...	18.5	19.8	19.6	19.1	18.3	17.3	15.9	13.4	16.2		
In percent of exports	...	...	116.1	131.0	128.8	126.8	121.6	114.0	104.8	86.0	104.3		
Total external debt service-to-exports ratio	6.0	1.8	3.8	4.8	6.3	6.7	8.0	8.4	10.3	8.3	5.9		
PV of PPG external debt (in Million of US dollars)			421.9	470.4	506.1	533.5	554.3	567.5	573.5	674.8	1460.0		
(PVt-PVt-1)/GDPt-1 (in percent)				2.1	1.5	1.1	0.7	0.4	0.2	0.8	1.3		
Non-interest current account deficit that stabilizes debt ratio	6.9	7.3	6.0	5.9	7.2	6.8	7.1	7.1	7.1	2.6	2.7		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**No**





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g) + Εα (1+r)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, ρ = growth rate of GDP deflator in U.S. dollar terms, Ε=nominal appreciation of the local currency, and α= share of local currency-denominated external debt in total external debt.

3/ Includes valuation adjustments. For projections also includes contribution from price and exchange rate changes. High value of the residual is related to capital grants which are not captured in this presentation.

4/ Current-year interest payments divided by previous period debt stock.

5/ Defined as grants, concessional loans, and debt relief.

6/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

7/ Assumes that PV of private sector debt is equivalent to its face value.

8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

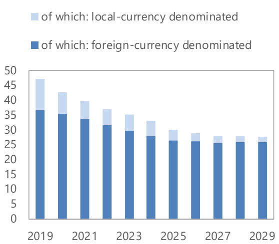
Table 2. Central African Republic: Public Sector Debt Sustainability Framework, Baseline Scenario 2016–39

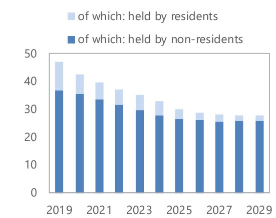
(Percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projections
Public sector debt 1/	53.9	50.3	50.0	47.1	42.6	39.8	37.1	35.1	33.0	27.7	27.0	41.9	34.3
of which: external debt	35.1	35.4	37.2	36.7	35.4	33.5	31.5	29.8	27.8	26.0	25.7	25.8	29.5
Change in public sector debt	-5.9	-3.6	-0.3	-2.9	-4.5	-2.8	-2.7	-2.0	-2.2	-0.2	0.0		
Identified debt-creating flows	-4.3	-7.9	-0.1	-3.8	-4.6	-2.8	-2.7	-1.9	-2.1	-0.2	0.0	0.8	-2.1
Primary deficit	-1.6	0.7	0.6	-2.1	0.1	-0.5	0.3	1.0	1.2	1.1	1.2	0.8	0.3
Revenue and grants	13.2	12.8	16.6	19.4	18.6	18.4	17.8	17.2	17.1	16.7	16.0	13.6	17.5
of which: grants	5.8	5.0	7.8	10.7	8.9	8.4	7.5	6.6	6.4	4.9	2.0		
Primary (noninterest) expenditure	11.6	13.5	17.2	17.2	18.7	18.0	18.1	18.2	18.3	17.9	17.2	14.4	17.8
Automatic debt dynamics	-2.7	-8.6	-0.8	-3.5	-3.3	-2.9	-2.7	-2.5	-2.7	-1.3	-1.1		
Contribution from interest rate/growth differential	-3.8	-5.2	-2.2	-3.1	-3.0	-2.7	-2.5	-2.3	-2.1	-1.3	-1.2		
of which: contribution from average real interest rate	-1.1	-2.8	-0.3	-1.0	-0.8	-0.7	-0.6	-0.6	-0.5	-0.4	-0.3		
of which: contribution from real GDP growth	-2.7	-2.3	-1.9	-2.1	-2.2	-2.0	-1.9	-1.8	-1.7	-0.9	-0.9		
Contribution from real exchange rate depreciation	1.1	-3.5	1.3	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	0.0	0.0	0.2	1.8	-1.4	0.5	-0.3	-0.5	-0.7	0.0	0.0	0.0	0.0
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Recognition of contingent liabilities (e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Debt relief (HIPC and other)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Change in deposits	...	...	0.2	1.8	-1.4	0.5	-0.3	-0.5	-0.7	0.0	0.0		
Residual	-1.6	4.3	-0.2	0.5	-0.2	-0.2	-0.2	-0.2	-0.5	0.0	0.0	0.7	-0.2
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	32.1	30.2	26.8	25.3	23.8	22.6	21.1	15.1	17.4		
PV of public debt-to-revenue and grants ratio	...	...	192.8	156.0	144.3	137.2	134.0	131.6	123.1	90.1	109.0		
Debt service-to-revenue and grants ratio 3/	14.0	9.2	18.6	13.1	20.7	10.5	12.4	14.4	18.9	13.9	8.8		
Gross financing need 4/	-0.3	1.7	3.7	0.4	3.9	1.5	2.4	3.4	4.4	3.4	2.6		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	4.7	4.5	3.8	4.5	5.0	5.0	5.0	5.0	5.0	3.4	3.4	-0.2	4.2
Average nominal interest rate on external debt (in percent)	0.9	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.8	1.2	1.1	0.6
Average real interest rate on domestic debt (in percent)	-2.0	-5.3	-0.4	-1.1	-0.7	-0.1	0.0	0.3	0.8	2.7	5.8	-1.0	0.3
Real exchange rate depreciation (in percent, + indicates depreciation)	3.2	-10.9	4.0	...	...	...	...	...	...	...	...	2.3	...
Inflation rate (GDP deflator, in percent)	3.0	6.4	1.3	2.8	2.5	2.5	2.6	2.5	2.5	2.5	2.5	4.6	3.0
Growth of real primary spending (deflated by GDP deflator, in percent)	-9.8	22.4	31.8	4.7	13.6	1.1	5.6	5.6	5.8	3.0	3.0	3.8	4.6
Primary deficit that stabilizes the debt-to-GDP ratio 5/	4.3	4.3	0.8	0.8	4.6	2.3	3.0	3.0	3.4	1.3	1.1	3.2	2.3
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**No**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central, state, and local governments plus social security, central bank, government-guaranteed debt. Definition of external debt is Residency-based.

2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.

3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

4/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period and other debt creating/reducing flows.

5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio ((-): a primary surplus), which would stabilizes the debt ratio only in the year in question.

6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 3. Central African Republic: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2019–29

	Projections										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	PV of debt-to GDP ratio										
Baseline	**19.8**	**19.6**	**19.1**	**18.3**	**17.3**	**15.9**	**14.8**	**14.1**	**13.5**	**13.3**	**13.4**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	19.8	21.6	23.5	25.1	26.2	27.1	29.4	31.7	34.0	36.7	39.7
A2. Alternative Scenario : 6th Review	17.0	15.8	15.5	14.9	13.9	12.8	11.5	10.8	10.5	10.6	10.9
B. Bound Tests											
B1. Real GDP growth	19.8	24.1	28.9	27.7	26.3	24.1	22.3	21.3	20.5	20.2	20.2
B2. Primary balance	19.8	20.2	21.5	20.8	19.7	17.9	16.6	15.9	15.3	15.0	14.9
B3. Exports	19.8	21.0	22.7	21.8	20.7	19.1	17.8	17.0	16.4	16.0	15.8
B4. Other flows 2/	19.8	23.6	26.9	25.8	24.6	22.8	21.2	20.4	19.6	18.9	18.5
B5. One-time 30 percent nominal depreciation	19.8	24.6	20.4	19.6	18.5	16.9	15.6	14.8	14.1	14.1	14.3
B6. Combination of B1-B5	19.8	30.3	35.9	34.4	32.7	30.3	28.1	27.0	25.8	25.0	24.7
C. Tailored Tests											
C1. Combined contingent liabilities	19.8	25.2	25.6	25.0	23.7	21.7	20.2	19.4	18.8	18.6	18.5
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**
	PV of debt-to-exports ratio										
Baseline	**131.0**	**128.8**	**126.8**	**121.6**	**114.0**	**104.8**	**94.9**	**90.6**	**87.1**	**85.7**	**86.0**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	131.0	141.7	155.8	166.5	172.0	178.2	189.3	203.8	218.8	236.0	255.5
A2. Alternative Scenario : 6th Review	109.7	103.7	102.8	101.0	97.4	92.7	83.3	77.7	74.6	74.7	76.5
B. Bound Tests											
B1. Real GDP growth	131.0	128.8	126.8	121.6	114.0	104.8	94.9	90.6	87.1	85.7	86.0
B2. Primary balance	131.0	132.8	142.5	138.0	129.5	117.8	106.8	102.1	98.3	96.4	96.2
B3. Exports	131.0	161.6	202.8	194.7	183.0	169.1	153.6	147.2	141.6	138.0	136.8
B4. Other flows 2/	131.0	155.1	178.5	171.4	161.6	150.0	136.6	131.5	126.2	121.8	119.3
B5. One-time 30 percent nominal depreciation	131.0	128.8	108.2	103.7	96.9	88.6	79.9	75.8	72.6	72.3	73.7
B6. Combination of B1-B5	131.0	172.9	155.9	177.9	167.3	154.8	140.7	135.0	128.9	125.4	123.9
C. Tailored Tests											
C1. Combined contingent liabilities	131.0	165.6	169.7	165.7	155.9	143.0	130.0	125.0	121.1	119.4	119.4
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**	**140.0**
	Debt service-to-exports ratio										
Baseline	**4.8**	**6.3**	**6.7**	**8.0**	**8.4**	**10.3**	**11.9**	**11.9**	**11.4**	**10.4**	**8.3**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	4.8	6.7	7.6	9.7	10.9	14.3	17.7	18.7	19.1	18.8	16.6
A2. Alternative Scenario : 6th Review	6.9	5.4	5.4	7.0	7.8	10.9	11.8	10.6	8.9	7.0	4.7
B. Bound Tests											
B1. Real GDP growth	4.8	6.3	6.7	8.0	8.4	10.3	11.9	11.9	11.4	10.4	8.3
B2. Primary balance	4.8	6.3	6.8	8.3	8.7	10.6	12.0	12.3	12.0	11.5	9.4
B3. Exports	4.8	7.4	9.3	11.3	11.8	14.4	16.5	16.5	16.4	15.8	12.8
B4. Other flows 2/	4.8	6.3	7.1	8.7	9.0	10.9	12.4	12.4	13.1	13.2	10.9
B5. One-time 30 percent nominal depreciation	4.8	6.3	6.7	7.7	8.2	10.1	11.7	11.7	11.3	9.3	7.3
B6. Combination of B1-B5	4.8	6.9	8.4	9.9	10.4	12.7	14.4	14.5	15.5	14.2	11.6
C. Tailored Tests											
C1. Combined contingent liabilities	4.8	6.3	7.3	8.6	9.0	10.9	12.3	12.3	11.9	10.8	8.6
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**
	Debt service-to-revenue ratio										
Baseline	**8.3**	**9.9**	**10.1**	**11.6**	**12.1**	**14.6**	**16.8**	**16.5**	**15.6**	**13.9**	**10.8**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	8.3	10.5	11.4	14.1	15.6	20.3	25.1	26.0	26.1	25.1	21.7
A2. Alternative Scenario : 6th Review	10.8	8.1	7.8	9.6	10.2	13.4	14.2	12.7	10.6	8.3	5.5
B. Bound Tests	10.8	8.1	7.8	9.6	10.2	13.4	14.2	12.7	10.6	8.3	5.5
B1. Real GDP growth	8.3	12.2	15.3	17.6	18.4	22.1	25.4	25.0	23.6	21.0	16.4
B2. Primary balance	8.3	10.0	10.3	12.0	12.5	15.0	17.1	17.1	16.4	15.4	12.3
B3. Exports	8.3	10.0	10.4	12.2	12.7	15.2	17.4	17.1	16.6	15.7	12.5
B4. Other flows 2/	8.3	9.9	10.6	12.6	13.0	15.4	17.5	17.2	17.9	17.7	14.3
B5. One-time 30 percent nominal depreciation	8.3	12.4	12.7	14.1	14.8	18.0	20.7	20.4	19.3	15.7	12.0
B6. Combination of B1-B5	8.3	12.5	16.3	18.6	19.3	23.0	26.3	25.8	27.1	24.4	19.5
C. Tailored Tests											
C1. Combined contingent liabilities	8.3	10.0	10.9	12.5	13.0	15.4	17.5	17.1	16.2	14.4	11.3
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**	**14.0**

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Includes official and private transfers and FDI.

Table 4. Central African Republic: Sensitivity Analysis for Key Indicators of Public Debt, 2019–29

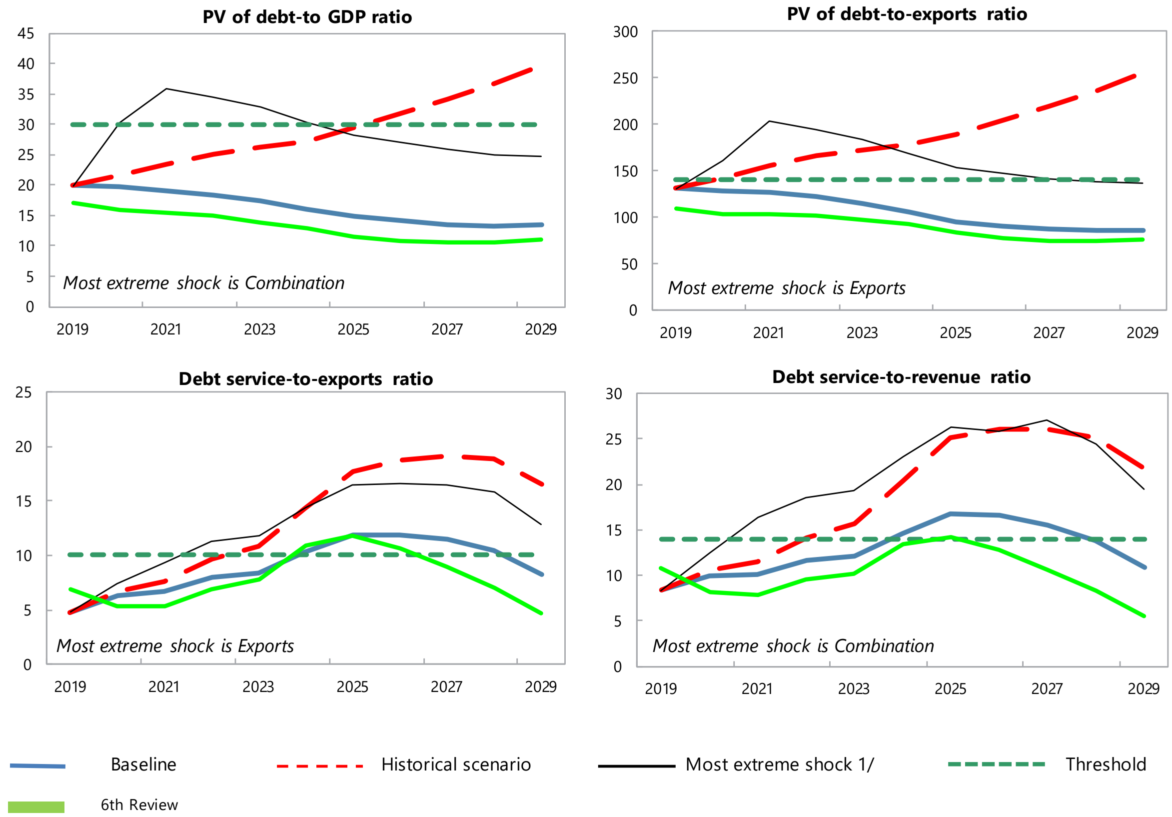
	Projections										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	PV of Debt-to-GDP Ratio										
Baseline	**30.2**	**26.8**	**25.3**	**23.8**	**22.6**	**21.1**	**18.3**	**16.9**	**15.9**	**15.4**	**15.1**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	30.2	28.1	27.7	27.4	26.9	25.9	24.3	23.1	22.2	21.4	20.9
A2. Alternative Scenario : 6th Review	27.1	23.6	22.4	20.8	18.9	17.1	14.9	13.8	13.0	12.8	12.8
B. Bound Tests											
B1. Real GDP growth	30.2	63.6	77.7	77.5	77.5	76.7	73.2	73.4	74.4	76.1	78.0
B2. Primary balance	30.2	27.8	28.1	26.4	25.1	23.7	20.7	19.2	18.2	17.5	17.1
B3. Exports	30.2	28.0	28.6	27.0	25.6	24.0	21.1	19.6	18.5	17.8	17.3
B4. Other flows 2/	30.2	30.8	33.1	31.3	29.8	28.0	24.8	23.3	22.0	21.0	20.3
B5. One-time 30 percent nominal depreciation	30.2	63.2	59.5	56.5	53.6	50.2	44.7	41.7	39.4	37.6	36.1
B6. Combination of B1-B5	30.2	29.2	33.2	31.0	29.9	28.5	25.9	24.2	23.1	22.5	22.1
C. Tailored Tests											
C1. Combined contingent liabilities	30.2	35.4	32.6	30.6	29.2	27.5	24.4	22.8	21.7	21.1	20.6
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Public debt benchmark	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**	**35.0**
	PV of Debt-to-Revenue Ratio										
Baseline	**156.0**	**144.3**	**137.2**	**134.0**	**131.6**	**123.1**	**107.5**	**99.6**	**94.3**	**91.7**	**90.1**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	156.0	149.1	146.0	147.8	148.9	142.4	131.5	125.0	120.2	116.5	113.9
A2. Alternative Scenario : 6th Review	19.7	14.4	8.7	11.3	12.0	14.5	15.0	13.5	12.2	10.7	9.2
B. Bound Tests											
B1. Real GDP growth	156.0	308.6	341.0	358.0	376.6	376.0	363.0	367.8	377.1	390.1	404.6
B2. Primary balance	156.0	149.7	152.2	148.2	146.1	138.3	121.7	113.3	107.5	104.2	101.8
B3. Exports	156.0	150.9	154.9	151.7	149.3	140.0	123.5	115.3	109.6	105.9	103.2
B4. Other flows 2/	156.0	165.9	179.3	176.0	173.7	163.2	145.5	137.0	130.2	125.0	121.0
B5. One-time 30 percent nominal depreciation	156.0	354.4	335.1	328.5	322.4	302.0	269.7	252.4	239.3	229.0	220.9
B6. Combination of B1-B5	156.0	152.0	164.1	160.2	161.2	154.5	141.1	133.2	128.0	125.5	124.1
C. Tailored Tests											
C1. Combined contingent liabilities	156.0	190.5	177.0	171.9	169.8	160.8	143.1	134.4	128.5	125.4	123.2
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Debt Service-to-Revenue Ratio										
Baseline	**13.1**	**20.7**	**10.5**	**12.4**	**14.4**	**18.9**	**22.7**	**18.9**	**16.7**	**15.5**	**13.9**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2039 1/	13.1	21.2	11.6	13.2	15.6	20.8	25.9	22.2	19.8	19.0	17.3
A2. Alternative Scenario : 6th Review	19.7	14.4	8.7	11.3	12.0	14.5	15.0	13.5	12.2	10.7	9.2
B. Bound Tests											
B1. Real GDP growth	13.1	23.1	14.2	20.0	24.6	30.7	36.0	32.5	30.8	30.7	29.9
B2. Primary balance	13.1	20.9	12.4	16.6	16.7	19.3	22.3	19.1	17.3	16.7	15.2
B3. Exports	13.1	20.7	10.6	12.6	14.6	19.1	22.9	19.1	17.3	16.6	15.0
B4. Other flows 2/	13.1	20.7	10.8	13.0	14.9	19.4	23.1	19.4	18.3	18.1	16.4
B5. One-time 30 percent nominal depreciation	13.1	21.0	12.9	14.8	16.8	21.7	25.8	22.6	19.9	18.4	15.9
B6. Combination of B1-B5	13.1	21.6	12.4	16.2	19.1	23.7	27.9	24.3	22.3	21.2	19.6
C. Tailored Tests											
C1. Combined contingent liabilities	13.1	20.9	22.0	20.2	16.9	19.8	22.7	19.2	17.2	16.0	14.4
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.

2/ Includes official and private transfers and FDI.

Figure 1. Central African Republic: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2019–29



Customization of Default Settings		
	Size	Interactions
Standardized Tests	Yes	
Tailored Tests		
Combined CLs	Yes	
Natural Disasters	n.a.	n.a.
Commodity Prices 2/	n.a.	n.a.
Market Financing	n.a.	n.a.

Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing Assumptions for Stress Tests*		
	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	0.7%	0.7%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	6	6

* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2029. Stress tests with one-off breaches are also presented (if any), while these one-off breaches are deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.
2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

Figure 2. Central African Republic: Indicators of Public Debt Under Alternative Scenarios, 2019–29

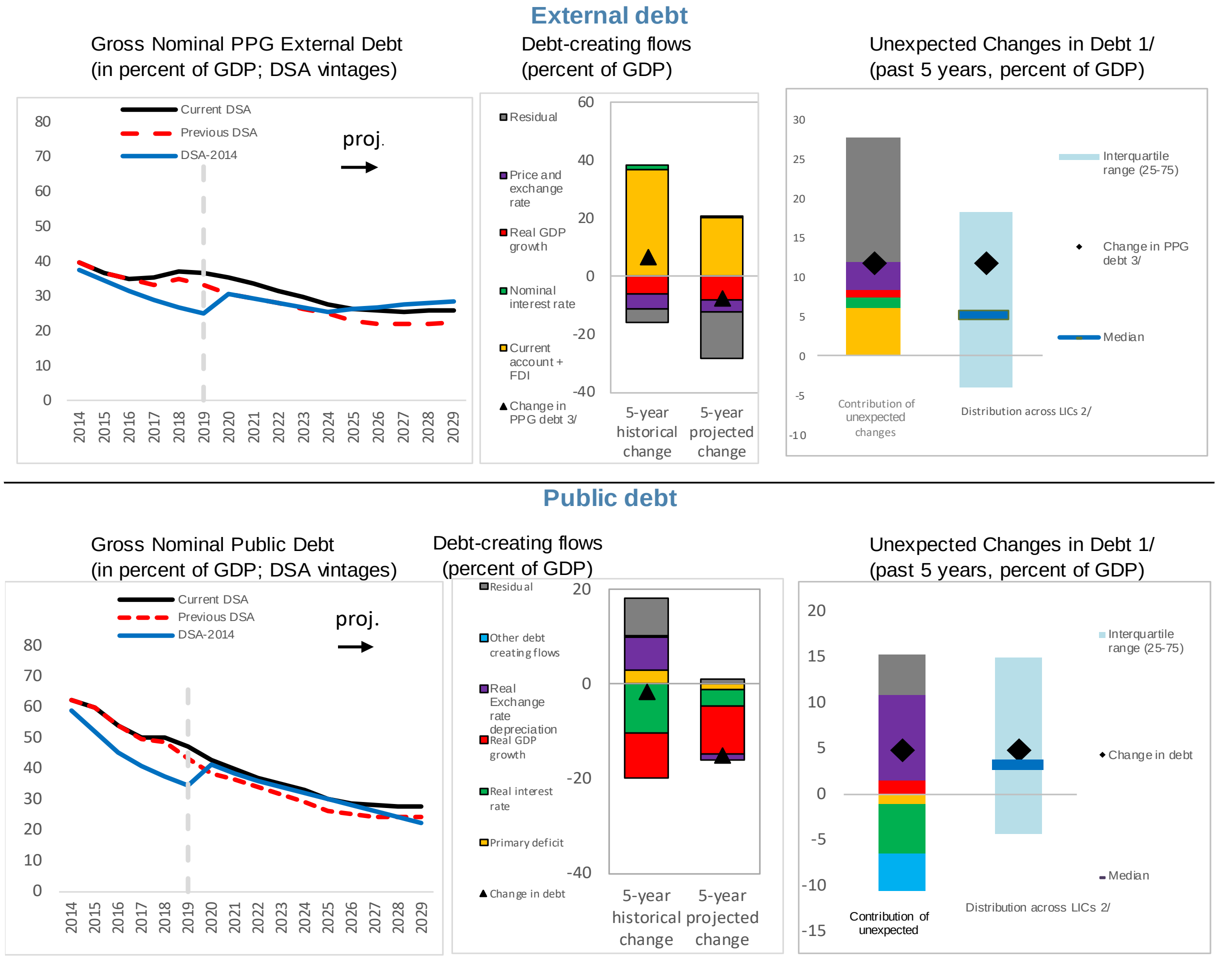
Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	79%	79%
Domestic medium and long-term	7%	7%
Domestic short-term	14%	14%
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	0.7%	0.7%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	6	6
Domestic MLT debt		
Avg. real interest rate on new borrowing	5.2%	5.2%
Avg. maturity (incl. grace period)	2	2
Avg. grace period	1	1
Domestic short-term debt		
Avg. real interest rate	1%	2.0%

* Note: The public DSA allows for domestic financing to cover the additional financing needs generated by the shocks under the stress tests in the public DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2029. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

Figure 3. Central African Republic: Drivers of Debt Dynamics - Baseline Scenario



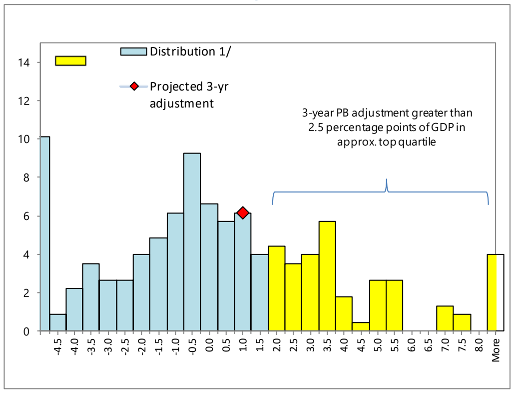
1/ Difference between anticipated and actual contributions on debt ratios.

2/ Distribution across LICs for which LIC DSAs were produced.

3/ Given the relatively low private external debt for average low-income countries, a ppt change in PPG external debt should be largely explained by the drivers of the external debt dynamics equation.

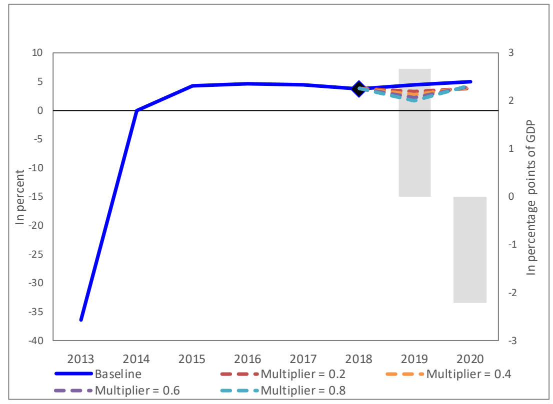
Figure 4. Central African Republic: Realism Tools

3-Year Adjustment in Primary Balance
(Percentage points of GDP)



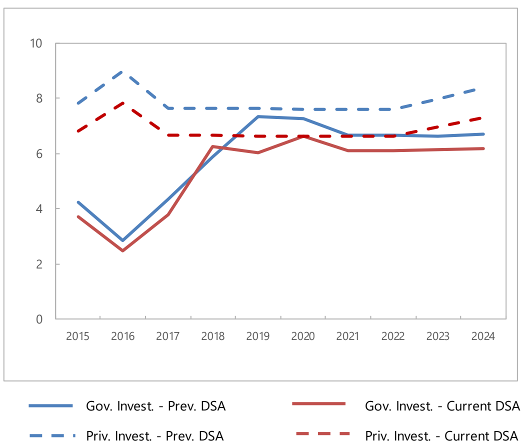
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/



1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

Public and Private Investment Rates
(% of GDP)



Contribution to Real GDP growth
(percent, 5-year average)