DEVELOPMENT OF A MEDIUM-TERM STRATEGY FOR THE RA PUBLIC DEBT MANAGEMENT

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Introduction**.** Public debt management is defined as the process of creating and implementing a government's debt management strategy to raise the required amount of financing in the medium to long term at the lowest possible cost consistent with a reasonable degree of risk. It should also be consistent with any other public debt management objectives that the government may set, such as developing and maintaining an efficient market for government securities[WB, IMF, 2014]**.** For emerging market countries, it is usually cheaper to borrow in a low-coupon foreign currency than in a domestic currency. On the other hand, foreign currency borrowings usually increase portfolio risk (increased foreign currency exposure). Although short-term borrowing is cheaper in most cases than long-term borrowing, the risk is higher because short-term interest rates are more volatile and loans must be refinanced more often (increased interest rate exposure and refinancing risk). Taking into account the above-mentioned issues, there is a need to develop different debt management strategies and evaluate their consequences on debt portfolio and debt burden characterization indicators.

Methodology**.** The analysis of the debt management strategies of the RA government was carried out using the medium-term debt strategy analytical tool (MTDS) developed by the World Bank and the IMF, the results of which were presented in the form of graphs and tables. To use the MTDS tool, the steps for designing a debt management strategy are defined [Estevao, Savastano, 2019, 43] which are:

- Identification and definition of public debt management goals,
- Analysis of existing debt
- Identification and analysis of possible funding sources,
- The study of fiscal and monetary policies as well as external and market risks
- Evaluation and classification of alternative strategies

Literature review**.** The process of developing debt management strategy includes defining debt management objectives, examining the costs and risks of different strategies, and having a strong governance model in place, including ensuring that debt managers are competent to implement the strategy effectively [WB, 2017, 10].

Guidelines and tools developed by the IMF and the WB are often used to develop and evaluate debt management strategies, the most popular of which are:

- MAC DSA: is a deterministic model of debt sustainability of countries with market access, based on the debt accumulation formula and simulations of shocks to its individual elements, as well as the established debt burden thresholds [IMF, 2013]
- DeMPA - Debt Management Performance Assessment Tool, a methodology for assessing debt management performance through a comprehensive set of indicators, covering the entire range of government debt management functions [WB, 2021, 12]:
- MTDS - An analytical tool for medium-term debt strategies aimed at helping countries develop effective medium-term debt management strategies. It provides an opportunity to analyze several debt management strategies at once, applying economic shocks to them [Estevao, Savastano, 2019].

When evaluating strategies, it is necessary to assess interest rate, exchange rate, refixation, as well as liquidity, operational and credit risks [WB, 2017, 32-33]. It is important to take into account that the guidelines do not replace but complement each other and their simultaneous use is important.

***Scientific novelty*.** By studying the indicators of the debt of the RA government in the previous periods, 3 different debt management strategies were developed. Using the MTDS model, the risks of the debt portfolio and the debt burden were assessed for each of the strategies. Forecasting of some macroeconomic indicators was carried out for the evaluation of strategies. In the case of the first strategy, we continued to provide funding for the budget needs largely from internal sources, in the case of the second strategy, the satisfaction of the budget funding requirement at the expense of internal sources occurs faster and during the last projected year, it is about 85%, and in the case of the third strategy, new credit funds are attracted in such a way that the internal sources for financing the budget deficit do not exceed the share of domestic debt in the debt portfolio in 2022. The selected strategies are sustainable to exchange rate and interest rate shocks. Taking into account the obtained results and the goals of the RA government's debt management, the first strategy is a more preferable option in the case of a comparative analysis of the results/risks, so it is recommended to continue the increase of internal sources among the financing sources of the budget deficit.

***Analysis*.** For the development of debt management strategies of the RA government, taking into account the currency of existing loans, maturity, type of interest rate (fixed or floating), amount of interest rate, 12 types of loans were distinguished.

From international organizations:

1. Floating
2. Fixed
3. Floating/fixed

From foreign countries:

4. Fixed
5. Floating

From commercial banks

6. Fixed
7. Floating

Government bonds

8. Up to 1 year repayment period
9. 3-5 years repayment period
10. 10-30 years repayment period
11. Savings bonds

Stae Guarantees

To assess the government's debt management strategies, the following key macroeconomic projections were made

Table 1. Key assumptions underlying debt management strategies

	2023	2024	2025	2026	2027	2028
Nominal GDP (AMD)	9652.4	11007.2	11997.9	13197.7	14517.4	15969.2
GDP deflator growth (%)	6.4	4.2	4.0	4.0	4.0	4.0
Real GDP growth (%)	7.2	7.1	7.0	7.0	7.0	7.0

Source: author's calculations, Ministry of Finance, Central Bank

We pay particular attention to the typical risks of the debt portfolio over the past four years. Debt/GDP ratio due to epidemic and Artsakh war in 2020 had exceeded 60%, which was to be reduced over the next 5 years. 2021 it decreased to 60.3%, and in 2022 in the conditions of double-digit economic growth and exchange rate depreciation of about 20%, it decreased to 46.7%. We noticed that the benchmarks for the evaluation of the exchange rate risk in the 2023-25 [RA MoF, 2022] debt management strategy have been tightened, and the refixation risk benchmark has been reduced.

Table 2. 2023-2025 benchmarks of the government debt portfolio (2022 benchmarks)

	Benchmark	2019	2020	2021	2022
Nominal GDP		3278.7	3923.9	4209.8	3969.7
Debt/GDP	**50%**	50.0	63.5	60.3	46.7
Refinancing risk					
Average repayment period	**7-10 (8-11) years**	9.1 years	8.8 years	8.4 years	7.9 years
Proportion of GTB repaid next year in the volume of GTBs (the end of year)	**maximum 20%**	12.7%	11.5%	10.5%	12.9%
Interest rate risk					
The weight of the fixed interest rate debt in total debt	**at least 80%**	83.8%	80.4%	82.9%	82.9%
Exchange rate risk					
The share of domestic debt in total debt	**at least 30% (25%)**	22.5%	25.4%	29.4%	41.5%
The share of debt in AMD in total debt	**at least 30% (25%)**	20.8%	24.4%	28.8%	38.0%

Source: author's calculations, Ministry of Finance, Central Bank

Examining the indicators of the Debt Portfolio, it can be assumed that the risks inherent in the debt portfolio are decreasing in recent years. In particular, the benchmarks set for external debt and foreign currency debt were exceeded by about 20%. Three options were considered for developing the government's debt strategy.

1. *Strategy 1.* Taking into account the 2023 borrowing plan[RA MoF, 2022], according to which the share of domestic debt should be increased in the state debt, as well as studying the existing debt portfolio according to the credit instrument, we continued to provide financing for the budget needs largely at the expense of domestic sources. The share of domestic debt has slowly increased over the forecast years. The debt portfolio toolkit has not undergone significant changes. Among domestic sources, the share of medium-term and long-term bonds increased during the forecast period. 2025 new Eurobonds will be issued to redeem the issued Eurobonds in 2015.

2. *Strategy 2.* Satisfying budget financing requirement at the expense of internal sources occurs at a faster pace and during the last forecasted year it is about 85%. In order to finance the deficit through domestic sources, the share of short-term bonds has increased. It has also been assumed that Eurobonds will be issued in 2025 and 2027.

3. *Strategy 3.* Internal sources for financing the budget deficit do not exceed 2022. the proportion of domestic debt in the debt portfolio. The emerging debt toolkit is the same as in the second strategy.

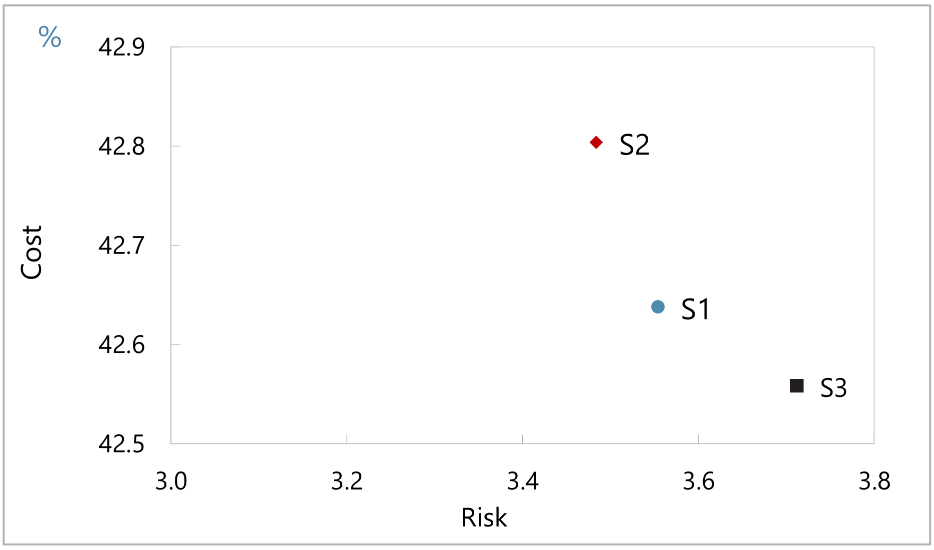
Table 3. Debt portfolio data of evaluated strategies

Risk Indicators		2022	As at end 2028		
		Current	S1	S2	S3
Nominal debt as percent of GDP		46.7	42.6	42.8	42.6
Present value debt as percent of GDP		63.2	77.7	89.2	64.4
Interest payment as percent of GDP		0.0	3.0	3.2	2.9
Implied interest rate (percent)		6.6	7.9	8.3	7.4
Refinancing risk	Debt maturing in 1yr (percent of total)	7.0	13.1	16.4	12.0
	Debt maturing in 1yr (% of GDP)	0.0003	5.6	7.0	5.1
	ATM External Portfolio (years)	7.4	7.1	6.3	7.7
	ATM Domestic Portfolio (years)	8.7	4.6	4.0	5.4
	ATM Total Portfolio (years)	7.9	6.3	5.3	7.1
Interest rate risk	ATR (years)	6.7	5.1	4.5	5.6
	Debt refixing in 1yr (percent of total)	23.6	30.7	28.5	35.3
	Fixed rate debt incl T-bills (percent of total)	82.9	81.5	87.1	75.7
FX risk	FX debt as % of total	62.0	56.6	44.7	69.3

Source: author's calculations, Ministry of Finance, Central Bank

Obtained results need to be evaluated. The debt-to-GDP ratio in the last forecast period is 42.5-43% for the three strategies, which is an estimate of debt sustainability. The relative weight of the debt to be repaid within one year has increased in the total, as the relative weight of long-term concessional external debts has decreased in recent years. The average time to maturity is the highest in the case of the third strategy, which is among the benchmarks of 2023-25s. Among the presented strategies, the debt involved in the second strategy has the highest present value. We also need to present the debt/GDP ratio and the riskiness according to the mentioned strategies. Thus, the second strategy contains the least risk, but the debt/GDP ratio is higher than the other strategies. The third strategy has the lowest debt-to-GDP ratio, but carries more risk. The first strategy is an averaged version of the previous two.

Figure 1. RA government debt/GDP ratio in 2028

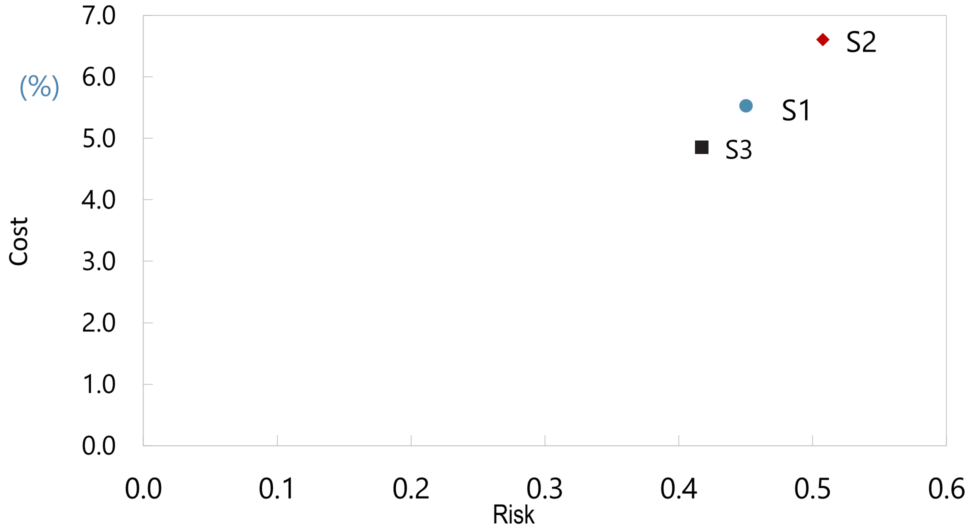


Source: author's calculations, Ministry of Finance, Central Bank

It is also essential to present the ratio of debt service payments to GDP for each Strategy. The third strategy has a debt service/GDP ratio of about 5%, which is lower than the other two strategies. As with the previous indicator, the first strategy is an averaged version of the two strategies.

Now we shall analyze the responses of the debt/GDP ratio to interest rate and exchange rate shocks for each strategy. Taking into account the more than 20% devaluation of the US dollar in 2022, the 15% and 30% devaluation of the AMD in the second forecasted year was considered as an exchange rate shock. An interest rate increase of 2 (weak shock), 4 (strong shock) percentage points in the forecasted years was considered as an interest rate shock.

Figure 2. RA government debt service/GDP ratio in 2028

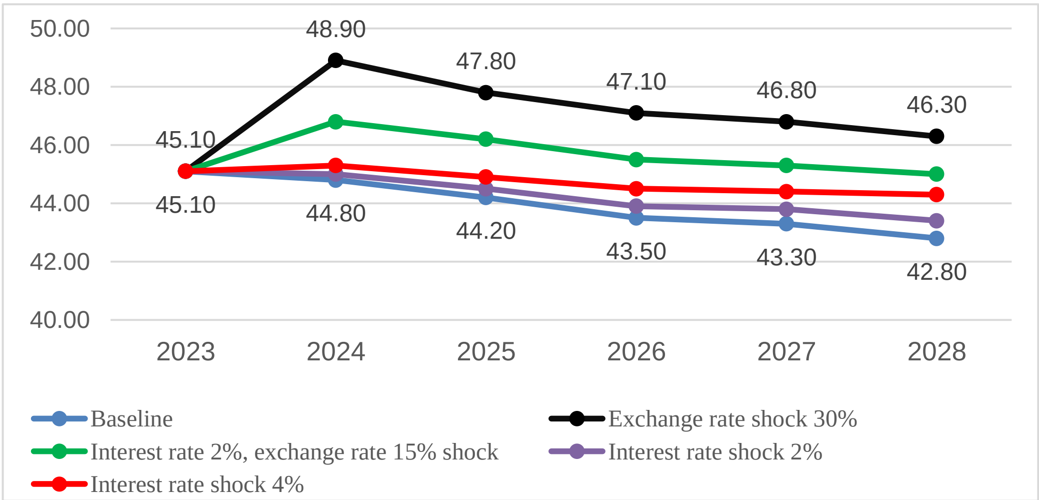


Source: author's calculations, Ministry of Finance, Central Bank

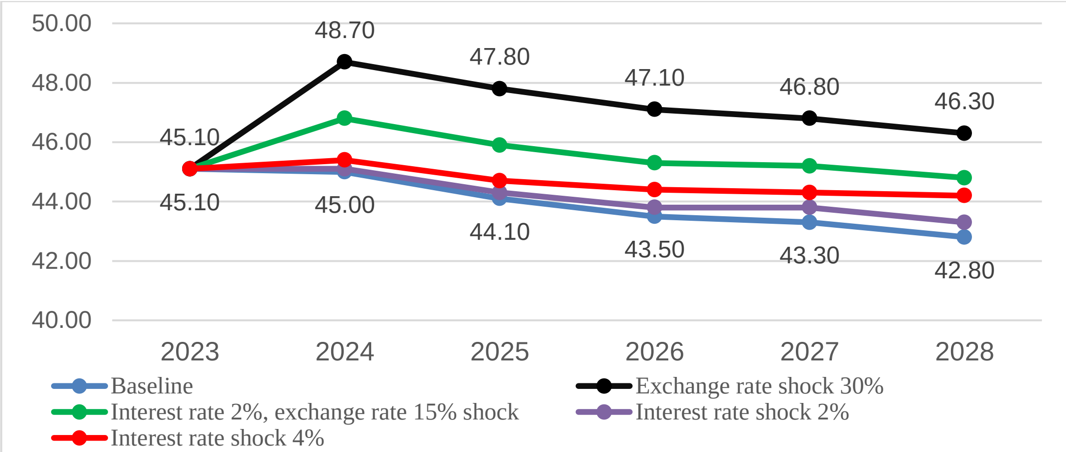
All three strategies respond more to exchange rate shocks than to interest rate shocks. The main reason for this is that the government's debt portfolio is dominated by fixed-rate loans. Taking into account the fact that in the case of the third strategy, the foreign currency debt in 2028 is 69.3%, the debt/GDP ratio reacts more sharply to economic shocks, exceeding 49%. In general, it can be concluded that the chosen strategies are sustainable to the above-mentioned shocks.

Figure 3. Government debt/GDP ratio during the interest rate and exchange rate shocks

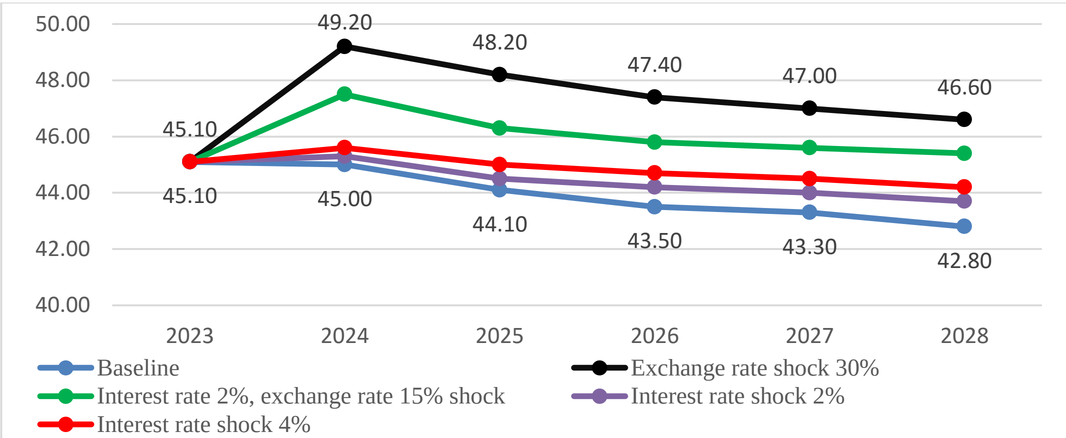
Strategy 1



Strategy 2



Strategy 3



Source: author's calculations, Ministry of Finance, Central Bank

Conclusion. Summing up, we can mention:

- In the case of the three developed strategies, the Debt/GDP ratio in the last forecast period is 42.5-43%, which is an estimate of debt sustainability.
- The relative weight of the annual debt to be repaid has increased in the total, as a relative weight of long-term foreign concessional debts has decreased in recent years.
- The indicator of the average time to maturity is the highest in the case of the third strategy, which is in the 2023-2025 benchmarks.
- Among the presented strategies, the debt involved in the second strategy has the highest present value.
- In case of the third strategy, the debt in foreign currency in 2028 is 69.3%, and as a result, the debt/GDP ratio reacts more sharply to economic shocks, exceeding 49%.
- Selected strategies are sustainable to exchange rate and interest rate shocks.

• Taking into account the results presented above and the goals of the RA government's debt management, the first strategy is a more preferable option in the case of a comparative analysis of the results/risks, so it is recommended to continue the increase of domestic sources among the financing sources of the budget deficit.

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