GOVERNMENT OF THE REPUBLIC OF NORTH MACEDONIA

2022-2024 PUBLIC DEBT MANAGEMENT STRATEGY OF THE REPUBLIC OF NORTH MACEDONIA
(with 2026 prospects)

Skopje, May 2021

CONTENTS

Pursuant to paragraph (5), Article 7 of the Law on Public Debt ("Official Gazette of the Republic of Macedonia", nos. 62/05, 88/08, 35/11 and 139/14 and "Official Gazette of the Republic of North Macedonia", no. 98/19), the Government, at its session held on ______ 2021, adopted the 2022-2024 Public Debt Management Strategy of the Republic of North Macedonia (with 2026 prospects):

1. Introduction

Article 7 of the Law on Public Debt ("Official Gazette of the Republic of Macedonia", nos. 62/05, 88/08, 35/11 and 139/14 and "Official Gazette of the Republic of North Macedonia", no. 98/19) sets out the preparation and the implementation of a medium-term Public Debt Management Strategy, which covers a period of three years and is adopted by the Government of the Republic of North Macedonia. Despite the legal obligation for three-year projections for the debt level and the debt structure, Ministry of Finance increases the transparency when managing public finances by including two additional years, i.e. projections for public debt trend in the period 2022-2026. Projections on debt stock and structure are in line with the projections in the 2022-2024 Fiscal Strategy (with 2026 prospects).

Pursuant to the Law on Public Debt, Public Debt Management Strategy sets out the amount of public debt in the medium term, the maximum amount of net borrowing in the first year covered by the Strategy, the maximum amount of newly issued sovereign guarantees in the first year covered by the Strategy, as well as the debt structure.

Public Debt Management Strategy sets the framework for the Government of the Republic of North Macedonia to act towards prudent public debt management in the medium term. Objectives of public debt management policy set in the Law on Public Debt ("Official Gazette", no. 145/2014) are the following:

- financing the needs of the government with the lowest cost possible, in the medium and the long run, with sustainable level of risk;
- identifying, monitoring and managing the risks which public debt portfolio is susceptible to; and
- developing and maintaining efficient domestic financial market.

Above-mentioned objectives will be attained by defining short- and medium-term limits of certain debt portfolio indicators.

2. Public Debt of the Republic of North Macedonia

Main principles taken into account when managing public debt portfolio, i.e. when preparing and implementing the Public Debt Management Strategy, are the following:

- determining the optimal structure of debt portfolio;
- aligning the debt portfolio-related costs with the costs set in the state Budget for each year separately and in the medium term;
- limiting and eliminating the effect of the risks on public debt sustainability in both the medium and the long run, and
- ensuring transparency in the process of debt incurrence.

Despite the upward trend registered in the period 2008-2016, public debt stabilized following 2016 by end-2019. At the beginning of 2020, escalation of COVID-19 pandemic resulted in contracted economic activity globally, the effects of which were also felt in the Macedonian economy. It also led to increase of both the budget deficit and the public debt respectively. Thus, at the end of 2020, general government debt amounted to EUR 5,516.0 million, i.e. 51.2% of GDP, while public debt amounted to EUR 6,483.3 million, i.e. 60.2% of GDP.

At the beginning of 2021, Macedonian economy still felt the impact of the pandemic. In order to uninterruptedly finance the budget needs, in March 2021, Republic of North Macedonia **issued the eight Eurobond in the amount of EUR 700 million**. Maturity of the Eurobond is 7 years, with coupon interest rate of 1.625%, being the lowest interest on the Eurobonds issued so far. In the course of Q1 2021, second tranche in the amount of EUR 80 million under the macro-financial support from the European Union is expected to be disbursed.
At the end of Q1 2021, general government debt of the Republic of North Macedonia[1] amounted to EUR 6,207.8 million, i.e. 54.5% of the projected GDP. Total public debt[2], which includes the general government debt and the debt of public enterprises established by the state or by the municipalities, the municipalities in the City of Skopje and the City of Skopje, amounted to EUR 7,173.6 million at the end of Q1 2021, accounting for 62.5% of the projected GDP. Pursuant to the Law on Modifications and Amendments to the Law on Public Debt ("Official Gazette of the Republic of North Macedonia", no. 98/19, dated 17th May 2019), national definition of public debt is expanded, also covering the non-guaranteed debt of public enterprises established by the state or the municipalities, the municipalities in the City of Skopje and the City of Skopje. Thus, starting Q2 2019, public debt stock also includes non-guaranteed debt of the public enterprises.

[1]General government debt comprises financial liabilities incurred on the basis of borrowing by the Republic of North Macedonia, the public institutions established by the Republic of North Macedonia and the municipalities, the municipalities within the City of Skopje and the City of Skopje.

[2]Public debt comprises the general government debt and the debt of public enterprises and joint stock companies established by the state or by the municipalities, the municipalities in the City of Skopje and the City of Skopje.

Table I: Public Debt Trend

	2013	2014	2015	2016	2017	2018	2019	2020	Q1 2021
ДРЖАВЕН ДОЛГ	2.771,6	3.262,5	3.453,3	3.851,5	3.958,5	4.344,4	4.556,8	5.516,0	6.207,8
General government debt	34,0	38,1	38,1	39,9	39,4	40,4	40,7	51,2	54,1
Guaranteed public debt	509,8	658,9	774,0	859,9	828,4	857,7	942,2	929,5	927,5
Non-guaranteed public debt	N/A	N/A	N/A	N/A	N/A	N/A	41,9	37,8	38,3
Total public debt (general government debt +	3.281,4	3.921,3	4.227,2	4.711,4	4.786,9	5.202,2	5.540,9	6.483,3	7.173,6
External public debt	2.078,7	2.725,1	2.847,5	3.286,0	3.187,5	3.537,8	3.709,3	4.323,7	5.026,5
Domestic public debt	1.202,7	1.196,2	1.379,7	1.425,4	1.599,4	1.664,4	1.831,6	2.159,6	2.147,1
Total public debt as % of GDP	40,3	45,8	46,6	48,8	47,7	48,4	49,4	60,2	62,5

*) As of 2018 inclusive, total public debt is a sum of government and guaranteed debt. In 2019 (starting from Q2), public debt also includes non-guaranteed debt of public enterprises and joint stock companies established by the state or the municipalities.

Source: Ministry of Finance and NBRNM

From the point of view of interest structure, fixed-variable interest rate ratio was 80.4:19.6 respectively at the end of the first quarter in 2021. As regards currency composition of general government debt, debt denominated in domestic currency accounts for 21.2%, while share of foreign currency denominated debt is 78.8%. Euro-denominated debt accounts for the most with 72.6% of the total general government debt, share of SDR is 5.6%, Japanese yen-denominated debt accounts for 0.5% and US dollar-denominated debt accounts for 0.1%.

Transparency of public debt data has improved with the latest amendments to the Law on Public Debt, including the non-guaranteed debt in the public debt definition. In addition, starting June 2017, detailed data on general government debt, its interest and currency structure, debt repayment, guaranteed public debt, interest rates on government securities, their auctions and stock, are published on regular basis within the statistical review of the Ministry of Finance[3]. In line with the strong commitment of the Ministry of Finance to fiscal transparency, new transparency tool Fiscal Counter has been introduced on Ministry of Finance website, showing the general government debt on monthly basis.

3. Public Debt Risk Management

Risk management policy is of crucial importance for public debt management, being the main link between the proposing, designing, adopting and implementing the public debt management policy. Development of this policy is a challenge for the debt managers and it comprises identifying, measuring and managing the risks, taking into account risk-cost trade-off.

Main objective of public debt management is to ensure that government financing needs and liabilities are covered with the lowest costs in the medium and long run with an acceptable risk level. From the point of view of the risks the debt portfolio of the general government debt of the Republic of North Macedonia faces, certain improvement in measuring the re-financing risk and the interest rate risk indicators can be observed. In fact, as a result of the commitment of the Ministry of Finance to develop the domestic government securities market, process of restructuring the government securities portfolio has commenced since 2012, when securities with longer maturity have been issued, while issue of short-term instruments has been gradually reduced. Such strategy resulted in significant improvement in terms of re-financing risk and interest rate risk regarding the domestic debt portfolio. As regards the other risks, debt management in the medium term will be focused on maintaining the lowest cost possible under optimal level of risk.

[3] http://finance.gov.mk/mk/node/6449

Following appear as main risks identified at managing the debt portfolio of the Republic of North Macedonia:

1. re-financing risk;
2. market risk, involving the following risks:
   - interest rate risk and
   - exchange rate risk.
3. risk associated with the contingent liabilities and
4. operational risk.

1. Refinancing risk is managed by preventing major part of the liabilities to fall due at once at any time and providing evenly distributed maturity of debt-related liabilities. Exposure of public debt portfolio to re–financing risk is measured by the debt repayment profile and the "average time to maturity" indicator. The greater the value of this indicator, the lesser the uncertainty, i.e. the re-financing risk.

In the period 2022-2026, average time to maturity of central government debt is expected to slightly decrease as a result of amortising the loans under concessional terms, while most of new borrowing is under commercial terms. With respect to domestic debt, significant advancement in deepening the domestic securities market and extended maturity thereto was observed in the past years. In fact, special emphasis was put on increased issuance of long-term securities, as well as extending the maturity and increasing the volume of the existing government securities portfolio.

Table 2. Average Time to Maturity - ATM (years)

	2021	2022	2023	2024	2025	2026
Central government debt	6,0	5,4	5,5	5,0	5,1	5,3
Domestic debt	8,1	7,3	7,2	6,8	6,7	6,4
External debt	4,7	4,2	4,4	3,6	3,8	4,3

Source : Simulations of the Ministry of Finance

2. Market risk is determined by the exposure of debt portfolio to economic variables, especially the variation of interest rates on the domestic and the international capital market and the trends in foreign exchange rates. Identifying and managing market risks in the Republic of North Macedonia is crucial for the public debt portfolio since these risks are determined mainly by external factors, i.e. variations in interest rates on the international financial market where, due to their constant oscillations, medium- and long-term trend is very difficult to project.

Measuring and managing interest rate risk is especially important in the countries in which domestic financial markets are underdeveloped and the financing needs are covered from external sources under non-concessional terms, whereby exposure to interest rate risk is greater. Variation of interest rates on both the domestic and the international markets affects the debt-related costs, especially when fixed interest rate debt should be refinanced or when the interest is re-set for variable interest rate debt. Hence, close connection between the interest rate risk and the debt re-financing risk is evident.

ATR (average time to re-fixing) indicator measures the average time to re-fixing. Higher value of this indicator shows that larger portion of the debt portfolio will not be subject to significant interest rate re-fixing and such portfolio is a lower-risk portfolio. In the period 2022-2026, moderate level of interest rate risk is expected, with ATR indicator of around 5 years. These projections point out that average time to re-fixing in the period 2022-2026 is significantly above the set limit on the minimum threshold for 2021, which is 3 years.

Table 3. Average Time to Re-Fixing (years)

	2021	2022	2023	2024	2025	2026
Central government debt	5,5	4,9	5,1	4,5	4,7	4,9
Domestic debt	8,1	7,3	7,2	6,8	6,7	6,4
External debt	3,9	3,4	3,7	2,9	3,1	3,6

Source : Simulations of the Ministry of Finance

Exchange rate risk refers to debt indexed or denominated in foreign currency. Major portion of the debt denominated in foreign currency points out to higher exchange rate risk. This risk is crucial for the developing countries in which external debt is fully indexed and major portion of the domestic debt is denominated in foreign currency.

Changes in the foreign exchange rate may largely affect, i.e. increase, the envisaged costs for repayment of public debt denominated in foreign currency. However, taking into account the fact that the Republic of North Macedonia applies de facto fixed exchange rate of the denar in relation to the euro, the exposure to such risk would be also measured as a share of the euro in the total general government debt portfolio which, according to the latest data for Q1 2021, was actually prevalent currency with 72.6% share in the total debt structure.

3. Risk related to contingent liabilities - for the purpose of ensuring more favourable financing terms and conditions by the creditors, the government issues a sovereign guarantee.

In order for the Budget of the Republic of North Macedonia not to be exposed to a risk of calling-up guarantees, process of issuance of new guarantees is strictly regulated and is subject to certain criteria the claimants of guarantees should fulfill. According to the latest amendments to the Law on Public Debt, management of contingent liabilities will be improved by strengthening the capacities as regards issuance of borrowing consents. This activity will be realized in cooperation with the World Bank under the Government Debt and Risk Management Program. In fact, Ministry of Finance will perform credit analysis and assess the creditworthiness of public debt issuers when issuing sovereign guarantee in line with the prescribed assessment methodology. Such approach provides for harmonization with the international practice on issuance of sovereign guarantees.

4. Operational risk includes the settlement risk and the error risk. Settlement risk occurs if numerous non-automated activities are used during data processing, while error risk is closely related to the manner of segregating the tasks related to execution of transactions and their settlement across the units within the institution in charge of debt management. Public debt management is carried out by an IT system and adequate software platform, thus significantly reducing the risk of human errors. Measures to apply the “four eyes” principle are being undertaken in a timely manner, so as to avoid the risk from untimely performance of the tasks in case the responsible person is prevented from fulfilling the working tasks due to whatever reason.

4. Development of Government Securities Market

One of the main objectives of public debt management is to provide for development of the domestic government securities market, thus creating conditions for reducing the re-financing risk, ensuring resistance to external shocks and long-term sustainability of debt.

To the end of more efficient financing of the budget needs, Ministry of Finance will continue to regularly issue government securities (GS) in the coming period as well, thus ensuring additional financing under favourable terms, depending on the interest of the market participants.

The purpose is to issue, on regular basis, treasury bills and government bonds with medium- and long-term maturities depending on the market conditions.

Taking into account the so-far experience in issuance of GS, frequency of issuance of securities corresponds to the market needs. To that end, Ministry of Finance will continue the so-far pace of issuance of GS set by the market.

In line with the Denarization Strategy, Ministry of Finance will focus on issuance of denar government securities in the coming period.

Possibility to transit to other modern auction platform for primary issue of GS will be considered in the period to come, so as for the Ministry of Finance to keep pace with the global practice. Thus, the existing investors' base will be expanded, while GS would be issued by using the most contemporary trading platform, reaping the benefits of all advantages, data and analytical possibilities it offers.

At the same time, Ministry of Finance will also continue with promotional activities for expanding the base of investors in GS by carrying out marketing campaign before different target groups of investors and by maintaining regular dialogue with all participants in the government securities market.

4.1. Development Bonds

For the purpose of more efficient development of the financial markets, the ultimate goal being to improve the GS market, new instrument, so-called "development bonds", is envisaged to be introduced in the medium term, which will be inflation-linked bonds, thus stimulating financing of development projects in the country, at the same time providing for revival of the financial markets in the Republic of North Macedonia. This type of financial instrument, to be inflation linked, will bear a certain coupon and will be initially intended for the individuals, with a possibility to be also available to the banks, the pension funds and other participants in the financial markets.

Moreover, introduction of this instrument is in line with the Denarization Strategy, with the investors being given a new possibility to manage their portfolio and risk protection.

4.2. Green Bonds

To the end of continuously improving and developing the GS market, one more financial instrument, so-called "green bonds", is envisaged to be introduced in the medium term in addition to the development bonds. These bonds are intended to stimulate and support environment improvement and protection projects, designed specifically to support eco projects.

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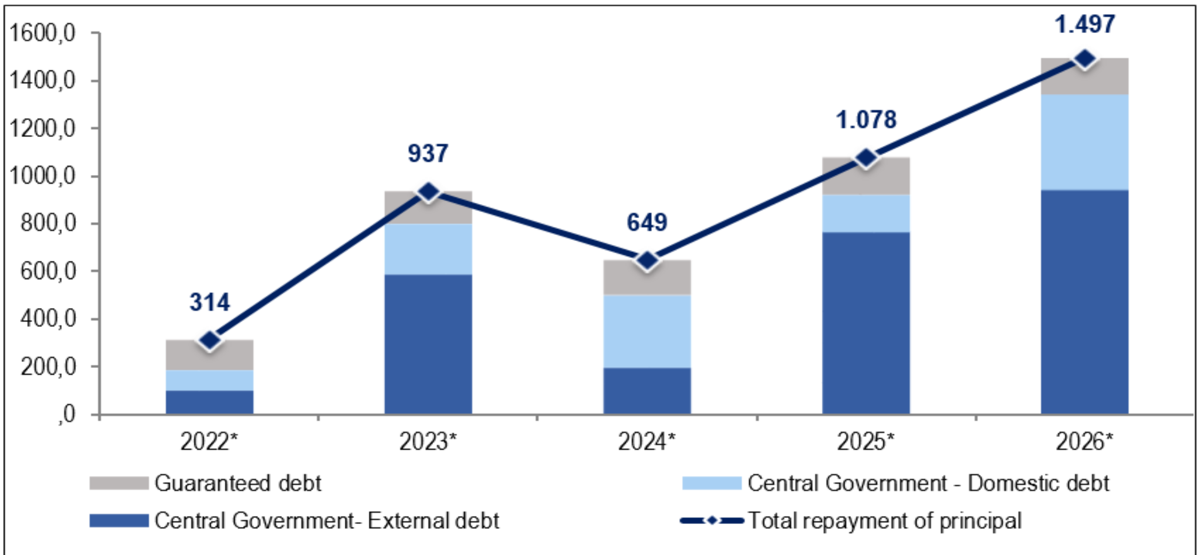
5. Public Debt Limits

Limits on debt amount and structure can serve as prudent fiscal policy anchor to ensure fiscal sustainability.

Public debt level is considered sustainable if it provides for timely servicing of debt liabilities in the longer run, which depends on several factors, as follows: level of development of the domestic financial market, liquidity of the international capital market, rate of economic growth, inflation rate, level of budget deficit/surplus, etc.

In the period 2022-2026, implementation of projects, commenced in the previous period by the public debt issuers, is expected to continue, with a strong commitment not to disrupt the long-term sustainability of the country's indebtedness level. In addition, part of the borrowing is determined to be used for covering the budget deficits, i.e. uninterrupted payments from the Budget, while part of the borrowing will be intended for refinancing previous debts as they fall due in the coming period. In fact, larger repayment amounts fall due in the coming medium-term period, EUR 500 million in July 2021 for the Eurobond issued in 2014, EUR 450 million in 2023 for the Eurobond issued in 2016, EUR 500 million to be provided in 2025 for refinancing the Eurobond issued in 2018, as well as EUR 700 million falling due in 2026 on the basis of the Eurobond issued in 2020. In order to ensure sources of financing the needs of the government with the lowest costs in the medium and the long run, as well as sustainable level of risk, public debt management policy defines several medium-term limits and short-term limits, in line with the Law on Public Debt.

Chart 1. Repayment Profile of Central Government Debt and Guaranteed Debt (EUR million)



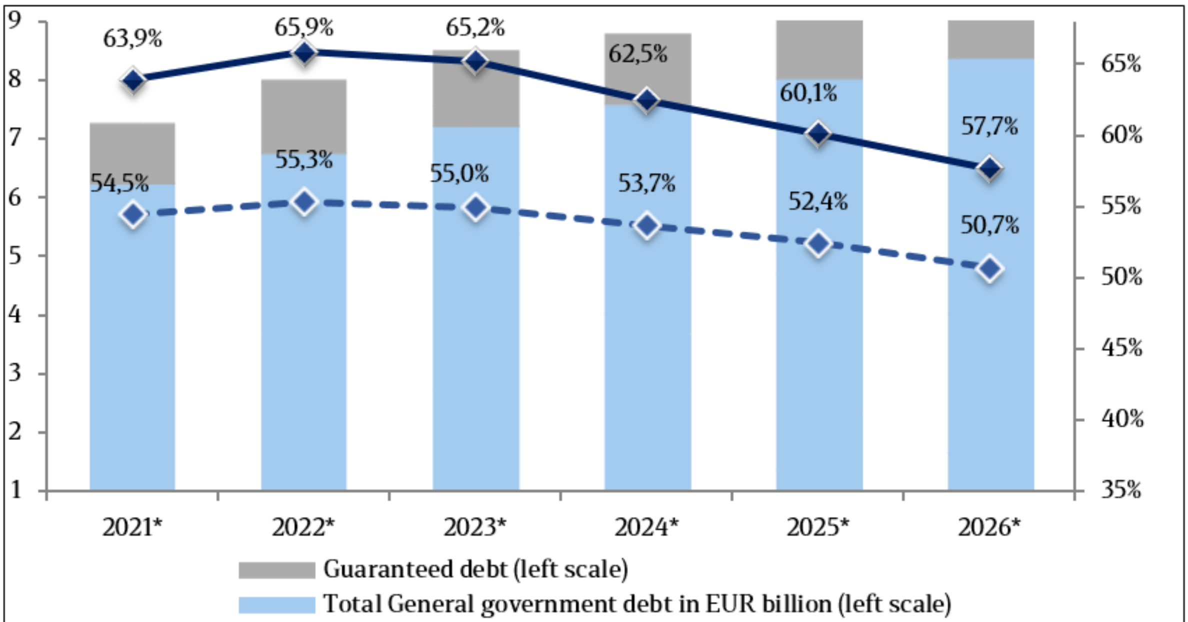
Source : Ministry of Finance and projection of Ministry of Finance (*)

5.1. Limits on Public Debt and Guaranteed Debt Amounts

Medium-term limits are used to compile the framework for the trends of public debt in the period 2022–2026. Such limits define the maximum sustainable level of total public debt in relation to GDP and the level of guaranteed public debt in relation to GDP. In addition, in order to reduce the risk factors affecting the total public debt portfolio, medium-term limits on currency and interest structure of the general government debt are also determined.

In order to keep sustainable level of public debt, without thereby disrupting the fiscal sustainability, **limit on the total public debt level in medium and long run is determined, which is not to exceed 60% of GDP**. As a result of the economic crisis induced by COVID-19, most of the European Union countries, as well as the countries in the region, have been forced to widen their budget deficits all to the end of ensuring funds for managing the pandemic. At most of the economies, this has resulted in increased level of public debt by more than 10 percentage points. Analogously, in the course of 2021, Republic of North Macedonia has experienced increased level of public debt, exceeding the maximum limit set under this Strategy. Medium-term projections presented in the Strategy show that public debt will exceed the maximum threshold of 60% in the period 2022-2026, however, as a result of the fiscal consolidation measures, it is expected to stabilize in 2025, followed by returning to the stipulated limit below 60% of GDP in 2026. On the basis of the medium-term budget framework determining the need for budget deficit financing in the medium term, repayments of previous incurred debts and implementation of projects beyond the central government, public debt will experience moderate upward trend in the medium term by 2024, as a result of the crisis consequences. Afterwards, in the period following 2025, debt level is expected to decline through the fiscal consolidation measures.

Chart 2: Projections on Total Public Debt (General Government Debt and Guaranteed Debt)



Source : Ministry of Finance and projection of Ministry of Finance (*)

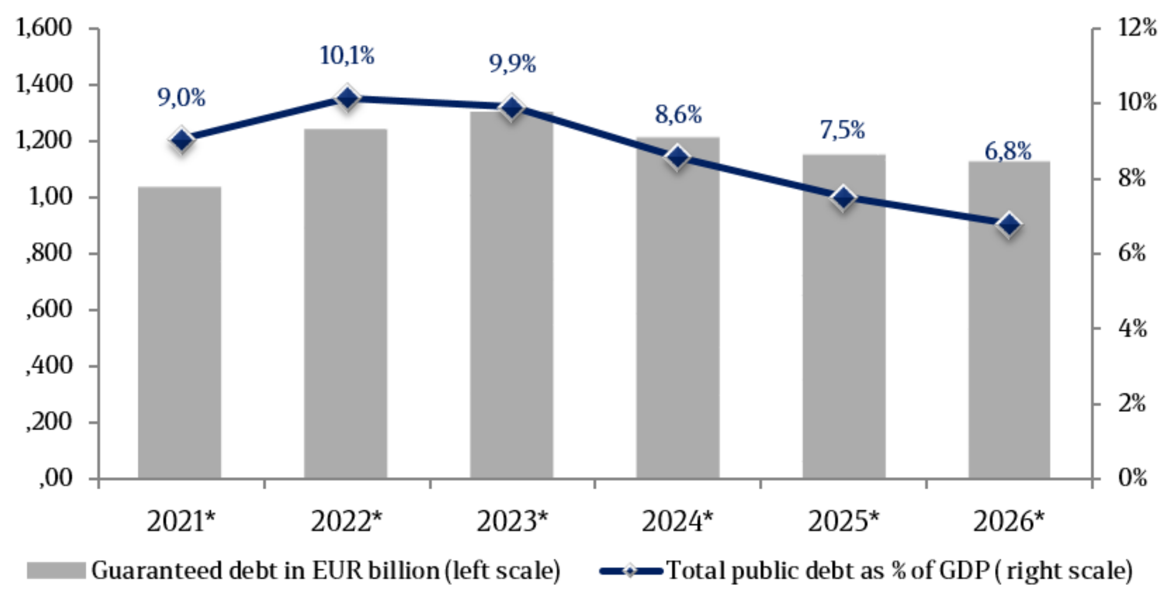
Net borrowing in 2022 includes the planned borrowing within the general government debt, reduced by the repayments thereto. **Short-term maximum limit on net borrowing (domestic and external) on the basis of general government debt in 2022 is set at EUR 650 million.**

Issued sovereign guarantees are a contingent liability in the state Budget, i.e. there is a risk of increased costs related to servicing in case the guarantees are called up. Therefore, sustainable level of issued guarantees in the medium term is of great importance for the Ministry of Finance. Hence, when selecting the projects to be issued a sovereign guarantee for, special emphasis is put on self-sustaining projects, which generate revenues, support the economic growth and provide for boosted competitiveness of the domestic economy in the medium term, which are in line with the strategic priorities of the Government of the Republic of North Macedonia, and justify the purpose which the funds are used for. **To that end, it is determined for the limit on the level of guaranteed public debt not to exceed 15% of GDP in the period 2022-2026.**

On the basis of the analyses made on trends of projected guaranteed public debt in the period 2022-2026, it is expected to moderately increase by 2022, as a result of the disbursement of loan proceeds under the projects, mainly in the field of road infrastructure, implemented with loans for which sovereign guarantee is issued, after which guaranteed debt is expected to stabilize and reduce to 6.8% in 2026. Thereby, level of guaranteed debt throughout the whole period is below the set maximum limit.

In the period 2022-2025, projects in the field of road infrastructure, financed with sovereign guarantee loans, are expected to be implemented. **The limit on maximum net borrowing on the basis of guaranteed debt in 2022 is set up to EUR 250 million**.

Chart 3: Guaranteed Public Debt



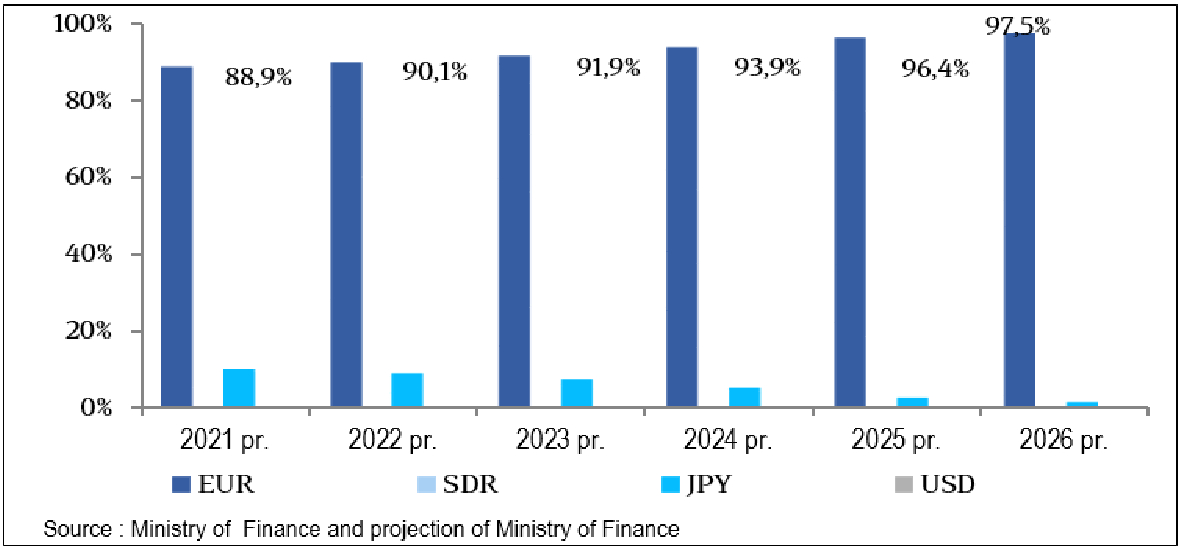
Source : Ministry of Finance and projection of Ministry of Finance (*)

5.2. Limits on Debt Structure

Changes in the exchange rate could largely affect, i.e. increase, the envisaged costs for repayment of the debt denominated in foreign currency. By 1995, Republic of North Macedonia applied de facto fixed exchange rate of the denar in relation to the German mark, and since 2002 onwards, it applies de facto fixed exchange rate of the denar in relation to the euro, whereby such policy will continue in future, exposure to such risk would be measured as a share of the euro in the total public debt portfolio. **Thereby, limit on the general government debt denominated in foreign currency - minimum threshold of euro-denominated debt in the total general government debt portfolio denominated in foreign currency is determined to be 85% in the period 2022-2026.**

Dominant share of euro-denominated debt is evident in the currency structure projections, experiencing moderate increase in the medium term as a result of the commitment of the Ministry of Finance for the new external borrowing to be denominated in euros. Thereby, in the period 2022-2026, share of euro-denominated debt in the total general government debt portfolio denominated in foreign currency is significantly below the minimum threshold. However, in the first half of 2020, IMF loan under the Rapid Financing Instrument in conditions of crisis is denominated in SDR and, accordingly, share of euro in the total portfolio denominated in foreign currency slightly dropped. In addition, share of other currencies refers to loans denominated in US dollars, Japanese yen and SDR for credit lines concluded mainly in the past, being amortized in the period which the projections refers to.

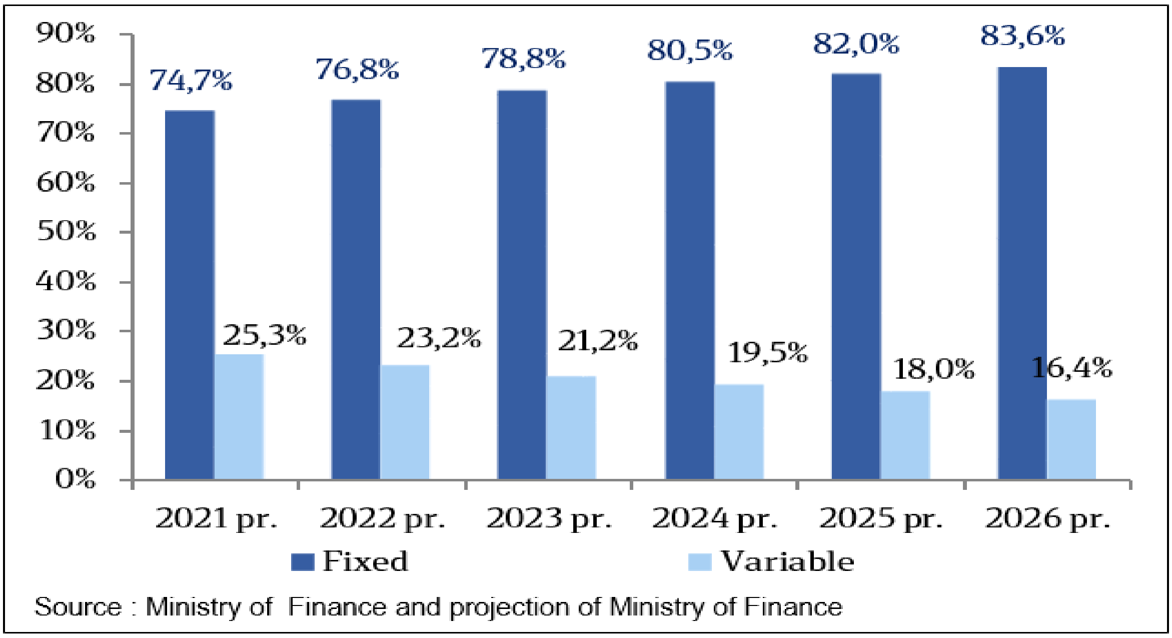
Chart 4: Currency Structure of General Government Debt Denominated in Foreign Currency



In order to protect general government debt portfolio against possible future market shocks, i.e. unfavourable changes of interest rates that directly lead to increase of the costs to the Budget of the Republic of North Macedonia, maintaining optimal interest rate structure of general government debt portfolio is one of the objectives debt managers aim at. Hence, **limit on interest rate structure of general government debt - minimum threshold of debt with fixed interest rate is determined to be 60% for the period 2022-2026.**

Taking into account the current structure of general government debt portfolio, as well as the medium-term projections, in the period 2022-2026, fixed-interest rate debt is significantly higher than the set minimum threshold. This reflects the commitment of the Ministry of Finance to issue long-term securities on the domestic market, as well as the commitment to borrowing on the basis of instruments with fixed interest rate on the international capital market.

Chart 5: Interest Rate Structure of General Government Debt



Threshold on debt refinancing indicator - showing the average time for re-financing the debt is calculated within this Strategy. This indicator also shows the portion of central government debt portfolio falling due in the course of the next year. In addition, indicator of average time to re-fixing (showing the average time for re-setting the interest rates on the debt portfolio) is also calculated. More precisely, in order to protect the central government debt portfolio against the re-financing risk, limit on re-financing risk - **minimum threshold of "average time to maturity" indicator in 2022 is determined to be 4 years**. Moreover, in order to protect the central government debt portfolio against the interest rate risk, **minimum threshold of "average time to re-fixing" indicator in 2022 is determined to be 3 years**.

6. Analysis of the Scenario on Effects of Interest Rate Risk and Currency Risk on the External General Government Debt

In order to analyze the exposure of debt portfolio of the Republic of North Macedonia to the market risk, short simulation is prepared regarding the effects of the interest rate re-fixing and changes in foreign exchange rate on the costs related to servicing the external general government debt (Table 4). Sensitivity analysis of the trends at the servicing-related costs in the Budget of the Republic of North Macedonia on the basis of external debt is based on the following assumptions:

- by changing one variable, all other variables remain the same, i.e. ceteris paribus;
- in conditions of possible currency movements in relation to the euro, denar exchange rate in relation to the euro retains the stable value;
- non-correlation between interest rate movements and exchange rate movements.

Table 4: Sensitivity analysis of costs related to servicing the external general government debt in cases of interest rate re-fixing and changes in foreign exchange rates

	2022	2023	2024	2025	2026
Baseline Scenario	100,0	100,0	100,0	100,0	100,0
Scenario I - increase of respective interest rates by 1 percentage point	109,1	109,6	110,4	109,1	110,1
Scenario III - appreciation of other currencies in the portfolio in relation to the euro by 10%	100,4	100,1	100,2	100,1	100,1

Main conclusions that may arise from this analysis are the following:

1. servicing-related costs on the basis of interest on external general government debt are sensitive to the interest rate movements. Should interest rates in 2022 surge by 1 percentage point in relation to the baseline projection, it would cause for interest-related costs to increase by 9.1%, i.e. by EUR 9.3 million, with similar effects in the period 2023-2026. Such sensitivity could be explained as exposure of debt portfolio to interest rate risk.

2. possible euro depreciation in relation to the other currencies in the portfolio (US dollar, Japanese yen and Special Drawing Rights) by 10% will cause an increase of servicing-related costs by 0.4% in 2022, i.e. by EUR 0.8 million. Given the obtained results, it may be concluded that possible unfavourable trends at exchange rates of other currencies in relation to the euro will not cause any significant increase of the servicing–related costs, as a result of the fact that most of the external general government debt is euro-denominated.

7. Alternative Financing Strategies

To the end of improving the decision-making process related to financing the government needs, aimed at successful fulfillment of the goals set in the public debt management policy, quantitative analysis is prepared within this Strategy by applying the MTDS analytical tool (Medium-Term Debt Strategy). This tool is developed by the World Bank and the IMF, aimed at determining the costs and the risks related to the potential financing strategies.

MTDS model uses the following as an input data:

- principal and interest flows on the existing debt portfolio;
- projections on macroeconomic and financial variables,
- financial variables shocks (interest rate and exchange rate), and
- alternative strategies for financing the government needs.

Alternatives that could be used as source of financing the government needs are the following:

1. treasury bills and government bonds on the domestic government securities (GS) market;
2. Eurobond on the international capital market;
3. funds from international financial institutions intended for budget support, as well as financial support for the anti-crisis measures in conditions of global pandemic induced by COVID-19;
4. funds for project financing from international financial institutions and private creditors.

Goal of MTDS analytical tool is to quantify the costs and the risks and to find out the optimal ratio between them in line with the priorities set in the public debt management policy. The model compares the potential alternatives for financing the government needs, by analyzing the costs and the risks resulting from the different debt portfolios and cash flows. In addition, the tool provides for observing the different features of the debt portfolio at each of the determined alternatives, thereby taking into account the effects of the shocks on the financial variables. MTDS model analyzes three alternative financing strategies, elaborated below. The analyses covers a five-year (2022-2026) timeframe.

Alternative ways of financing differ among themselves mainly in the structure of domestic financing through government securities.

The first alternative envisages provisioning of the financing needs of the government through the domestic GS market, the international capital market, budget-support funds and financial assistance for the anti-crisis measures from international financial institutions, as well as withdrawal of funds for projects financing from the international financing institutions. Feature of this alternative is that most of the net financing within the domestic financing (GS with and without FX clause) is realized through government bonds with various maturities. Goal of this alternative is to maintain constant share of government securities with short-, medium- and long-term maturity and expand the maturity structure of the portfolio of longer-maturity government securities. At the same time, this alternative provides significant support to the Denarization Strategy, considering that it focuses on issuance of denar government securities. The alternative excels, above all, in reducing the exposure to refinancing risk, mainly by reducing the share of the debt falling due within 1 year in relation to the total debt, as well as by increasing the ATM indicator. The first alternative is accompanied by the highest ATM on debt in domestic currency, with the lowest interest rate risk. As regards costs, it is insignificantly costly option compared to the other alternatives, however, it is aimed at furthering the development of the government securities market and reducing the debt portfolio risks.

Ratio between domestic and external financing, as well as the structure of external financing, are kept the same at the other alternatives as well.

The second alternative, compared to the first one, envisages higher amount of net financing by issuing short-term, in particular medium-term, denar instruments, and lower net financing by issuing long-term instruments. Goal of this alternative is to reduce the financing costs by issuing more instruments with lower interest rate on the domestic GS market. As regards costs, the alternative is insignificantly cheaper compared to the other alternatives, however, significant deterioration of the ATM indicator is observed, especially with respect to the denar instruments.

The third alternative envisages for the net financing to be realized through instruments with short and long maturity, in denars and with FX clause. This alternative envisages insignificant net financing through medium-term instruments. Refinancing risk is the most considerable at this alternative. In fact, amount of the following indicators: debt falling due within 1 year and debt changing the interest rate within 1 year is the highest at the third alternative. Currency risk is also the highest observed by the share of foreign currency-denominated debt in the total debt.

Thus, according to the analysis of the results from the application of the alternative approaches, the first alternative is considered the most favourable in terms of the debt portfolio riskiness (as per the refinancing risk, the interest rate risk and the currency risk indicators), although it is a slightly more expensive option than the other alternatives. The second and the third alternatives, as regards the costs, give better results, but are less favourable in terms of the refinancing risk and the interest rate risk indicators. In addition, the first alternative develops further and provides for maintenance of an efficient and liquid domestic government securities market, as well as market deepening, to the end of meeting the needs of the government, at the same time supporting the Denarization Strategy.

8. Debt Portfolio Optimization

For the purpose of further smoothening the redemption profile and reducing the re-financing risk, as well as generating additional interest savings, in the coming period, Ministry of Finance will continue considering the possibilities and the conditions for optimization of debt-servicing costs by actively managing the debt portfolio.