III. PUBLIC DEBT MANAGEMENT STRATEGY FOR THE PERIOD 2022–2024

According to the Public Debt Law, as the legal basis for the borrowing of the Republic of Serbia, the public debt shall include all the direct liabilities of the Republic, based on borrowings, as well as the guarantees issued by the Republic of Serbia for public enterprises’, local governments’ and other legal persons’ borrowings. The Republic may borrow in domestic or foreign currency, in order to finance budget deficit, current liquidity deficit, to refinance an outstanding debt, to finance investment projects, to procure financial assets and to make payments on issued guarantees. The provisions of the Public Debt Law state that the public debt constitutes and absolute and unconditional obligation of the Republic of Serbia regarding the repayment of principal, interest and other borrowing costs.

A quantitative approach was used to formulate Public Debt Management Strategy, identifying possible constraints through macroeconomic indicators, cost-risk analysis, and market conditions which affect public debt management. The analysis involved the use of financing instruments available in the domestic and international financial markets. The Public Debt Management Strategy is based on the principles that define the need for transparent and predictable borrowing process, with the continuous development of the government securities market and acceptable level of exposure to financial risks.

The situation on domestic and international financial market, successful implementation of fiscal consolidation measures, along with good coordination of fiscal and monetary policy have led to a significant decline in borrowing costs on dinar and euro denominated securities in recent years, and reduction of premium risk for Serbian government securities to the historical minimum.

The fiscal strategy envisages the reduction of general government public debt by the end of 2024 to the level of 53.8% of GDP and, in accordance with the public debt management guidelines defined by the World Bank and IMF provides, in the framework of the Public Debt Management Strategy provides, a stress-scenario analysis of the effects of the foreign currency exchange rate in the domestic currency against the currencies in which the public debt of the Republic of Serbia is denominated.

Significant progress has been made in the last eight years in terms of increasing the average maturity of dinar-denominated government securities and reducing financing costs based on this type of borrowing, thus reducing the exposure to refinancing risk. It is important to note that the in the mentioned period the average coupon rate of dinar-denominated government securities decreased from 13.68%, as it was at the end of 2012, to 4.59% at the end of August 2021.

The Public Debt Management Strategy defines the basic measures for further development of dinar-denominated government securities market. The development of this market is expected to increase internal debt and increase its share in total debt, as well as to reduce public debt exposure to foreign exchange risk, which will positively affect the increase in the credit rating of the Republic of Serbia.

After the successful implementation of fiscal consolidation measures in 2016, the growing path of public debt and the debt-to-GDP ratio was reversed, and it fell from 70.0% of GDP, as it was at the central level of government at the end of 2015, to 67.7% at the end of 2016. During 2017, there was an even more significant decline to 57.8% of GDP. The trend continued during 2018, when debt-to-GDP ratio fell to 53.6%, as at the end of 2019 when the ratio decreased to 51.9% of GDP. In order to reduce the impact of the crisis caused by the COVID-19 virus pandemic, there was a need to finance measures to support the economy and citizens, which resulted in a debt-to-GDP ratio of 57.0% at the end of 2020, and in August 2021 debt to GDP was reduced to 54.3%.

Due to more stringent control over the issuance of guarantees in previous years, the guaranteed public debt was halved, falling from EUR 2.8 billion at the end of 2013 to EUR 1.4 billion at the end of August 2021.

The positive fiscal results achieved by the Republic of Serbia were also confirmed through the movement of Serbia’s credit rating. In 2019, Fitch Ratings and Standard and Poor’s upgraded Serbia’s rating to BB + from BB, while Moody’s changed the outlook on Serbia’s ratings to positive from stable. In 2020, the Republic of Serbia succeeded to maintain the
unchanged credit rating it received in 2019. In March 2021, Moody’s upgraded the credit rating of the Republic of Serbia to Ba2 from Ba3 in result of a very successful response to the crisis caused by the COVID-19 virus pandemic and the preservation of macroeconomic stability during a very difficult and challenging 2020. Rating agency Standard and Poor’s, in its report published on 11 June 2021, affirmed credit rating of the Republic of Serbia at BB + and kept stable outlooks for its further increase, the same as Fitch Ratings in its latest report from 3 September 2021.

During 2020, the Republic of Serbia issued Eurobonds on two occasions in order to finance a package of measures to help the economy and households aimed at minimizing the impact of the crisis caused by the COVID-19 virus pandemic and prepay previously issued expensive Eurobonds. The first issue of Eurobonds was on 15 May 2020, in euros, at the most delicate moment in the first wave of the pandemic, in the total amount of EUR 2.0 billion. The coupon rate was 3.125%, with maturity in 2027 and they were listed on the London Stock Exchange, one of the largest and most representative markets in the world. The second issue of Eurobonds was on 1 December 2020, in the total amount of USD 1.2 billion, maturing in 2030. The coupon rate was 2.125%, and the final interest rate in euros, after a hedging transaction, was 1.066%. A return to the dollar securities market, and a new dollar-denominated issue, allows Serbia to remain present in the EMBI Index, ensuring its visibility in the US capital market as well as on the wider international investment map. With the funds from December 2020 Eurobonds issue, the early repayment of USD 900 million of Eurobonds issued in 2011 was made, out of the total of USD 1.6 billion that matured in September 2021. Bonds issued at a coupon rate of as much as 7.25% were prematurely redeemed. To lower financing costs and extend debt maturity, on 3 March 2021, the Republic of Serbia successfully used the still favourable conditions on the international financial market and for the first time issued twelve-year government bonds denominated in euros, in the amount of one billion euros, at a coupon rate of 1.65%.

On 23 September 2021, the Republic of Serbia again moved the boundaries in the choice of financing its investments by entering the international green bond market. The green Eurobond was issued in the amount of EUR 1.0 billion with a seven-year maturity and at the lowest coupon rate ever of 1.00% an. The Republic of Serbia joined the ranks of the few European countries that have issued green Eurobonds on the international financial market, which are intended exclusively for financing environmentally friendly projects. At the same time with the issue of green Eurobond, a fifteen-year (15G) conventional Eurobond in euros in the amount of EUR 750 million was issued, at a coupon rate of 2.05% which is the longest maturity Eurobond issued by the Republic of Serbia so far, and which will additionally increase public debt maturity.

Guided by the best international practice of active public debt management, in December 2020, the Republic of Serbia realized a hedging transaction for the first time, i.e. use of financial derivatives for the purpose of hedging against foreign exchange and interest rate risk, in accordance with internationally recognized ISDA standards (International Swaps and Derivatives Association), i.e. cross-currency swap transactions by which liabilities based on issued bonds are converted from US dollars to euros at significantly lower final interest rates. The Republic of Serbia will settle its liabilities based on the dollar-denominated issue, in the amount of USD 1.2 billion, in euros, at a coupon rate of 1.066% on the nominal value of the issue after the conversion of EUR 1.016 billion. The favourable exchange rate of the euro and the US dollar at a given time was used, as well as the current divergence between dollar and euro interest rates on the international capital market, and the most favourable borrowing price was achieved, with optimization of the currency structure of public debt, all in order to ensure protection against the risk of exchange rate changes. In this way, additional savings of around RSD 11.6 billion were achieved. In February 2021, the second swap transaction was realized, by which liabilities under the Debt Rescheduling Agreement between the Republic of Serbia and the Kuwait Investment Authority were converted from US dollars to euros, at a significantly lower interest rate. Liabilities based on the said rescheduled loan, agreed in dollars at an interest rate of 1.5%, the Republic of Serbia will settle in euros at an interest rate of 0.393%, which will provide a saving of about EUR 16.5 million. In April 2021, a new swap transaction was concluded under which the loan with Export - Import
Bank of China for the project of building a bypass around Belgrade on the E70 / E75 highway, which was initially contracted in Chinese yuan in 2018, was converted into euros with a negative interest rate. The loan, on which a fixed interest rate of 2.50% per annum in Chinese yuan was payable, was converted into euros at a fixed negative interest rate of -0.07%. As the negative interest rate has been agreed, the Republic of Serbia will not have any interest expenses in the first 5 years of the swap arrangement, which is valid until 2030, but will realize additional income from the banks with which the transaction was concluded.

During 2020, the issue of "benchmark" bonds on the domestic market continued. Bonds with a maturity of 5.5 and 12.5 years were issued in RSD with a nominal value of RSD 100 billion each, the volume of which increased to 150 billion each during 2021. On 30 June 2021, dinar benchmark bonds of the Republic of Serbia with maturities of 7, 10 and 12.5 years were included in J.P. Morgan GBI-EM Index. With the inclusion in the mentioned index, significant progress has been made in strengthening the liquidity of the secondary market of government bonds and coming of new international foreign investment funds ensured, which will result in greater competition and a further decline in borrowing costs. In October 2021, Clearstream, the international central securities depository, which performs clearing and settlement (ICSD) operations, opens a securities account in the domestic register and enables foreign investors to settle Serbian bonds, whereby another step towards further increase in investors base has been made.

In 2019, the Republic of Serbia effected early redemption of previously issued government securities on the domestic market through regular auctions in which it repurchased government bonds denominated in dinars with high coupon rates of 4.5% on bonds with a maturity of 3 years and 10.0% on bonds with a maturity of 7 years, in the total amount of RSD 35.1 billion. The same practice continued in 2020, with the early redemption of RSD 10.2 billion worth bonds with high coupon rates. In 2021, by mid-October, RSD 21.3 billion worth bonds with original maturity of 3 years, 3.75% coupon and maturity on 17 January 2022 were prematurely redeemed. Through these auctions, active public debt management was continued in order to replace debts with a shorter maturity and higher interest rates with the longer maturity debts with lower borrowing costs. At the same time, investors who actively invest in domestic securities were given the opportunity to extend the maturity of their investments and continue investing in the country, which is of great importance for further development of the capital market and government bond issues in the future.

Currency risk was further reduced during 2020 and in the first eight months of 2021. The share of public debt in local currency in the total public debt on the central government level was only 2.6% at the end of 2008, while by the end of 2020 it surged to 30.5%, and reached 30.9% at the end of August 2021. The growth of dinar debt was primarily due to issues of dinar government securities on the domestic securities market. During 2019 and 2020, early redemption of expensive Eurobonds issued in 2011 and 2013 in US dollars was realized, and during February 2020, regular repayment of the dollar bond issued in 2013. In December 2020, the first hedging transaction was concluded, under which Eurobond issued in US dollars was immediately converted into euros. In February 2021, another hedging transaction was realized by which liabilities in US dollars were converted into euros. Thanks to transactions from December 2020 and February 2021, the share of dollar debt in the total public debt decreased from 33.9% at the end of 2016 to 12.2% at the end of August 2021, while due to the repayment of the dollar Eurobond in September and new issues of Eurobonds in euros, its share is expected to fall to 10.5% by the end of September.

Borrowing costs were also reduced in 2020. The share of interest expenses in GDP fell from 2.9% in 2015 to just under 2.0% in 2020, and is expected to be at 1.8% in 2021.

Thanks to the proceeds from the sale of Komercijalna Banka, in December 2020, the entire remaining amount of EUR 172.7 million of the loan agreed with the Government of the Republic of Azerbaijan for the construction of the E-763 Ljig-Preljina highway was prepaid. The interest rate on the loan was high and amounted to 4.0%, so that this prepayment saved about EUR 25.9 million.

At the end of August 2021, the total general government public debt amounted to RSD 3,389.2
Revised Fiscal Strategy for 2022 with Projections for 2023 and 2024

billion, or 55.0% of GDP. Out of this, RSD 3,184.0 billion referred to direct liabilities, RSD 163.9 billion to indirect liabilities, while RSD 33.0 billion referred to the unsecured debt of local self-government units and RSD 8.3 billion to the unsecured debt of PE “Roads of Serbia” and the company “Corridors of Serbia” LLC.

General government public debt share in GDP, %

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021/VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public debt (in billion RSD)</td>
<td>2,757.3</td>
<td>2,864.0</td>
<td>3,181.2</td>
<td>3,389.2</td>
</tr>
<tr>
<td>Public debt (in million EUR)</td>
<td>23,328.4</td>
<td>24,354.9</td>
<td>27,055.8</td>
<td>28,829.2</td>
</tr>
<tr>
<td>Public debt (in million USD)</td>
<td>26,669.1</td>
<td>27,296.9</td>
<td>33,254.3</td>
<td>34,079.0</td>
</tr>
</tbody>
</table>

Table 23. General government public debt of the Republic of Serbia in the period from the end of 2018 to 31 August 2021

In the first eight months of 2021, due to the need to finance measures aimed at supporting the economy and households in the fight against the pandemic caused by the coronavirus COVID-19, there is a slight increase in central government debt in currencies with the largest share in public debt, i.e. in euros and dinars. Due to borrowing on the domestic securities market, which in 2020 and in the first eight months of 2021 was predominantly effected in dinars, there was an increase in public debt in dinars. There was also an increase in debt in euros, due to the issue of Serbian Eurobond 2027 and Eurobond 2030, in 2020, as well as of Serbian Eurobond 2033, in March 2021. In February 2020, the remaining amount of USD 210.3 million Serbian Eurobond 2020 was repaid. In the same year, Serbian Eurobond 2030, which was issued in US dollars, was immediately converted into euros, i.e. in order to reduce currency risk, the Republic of Serbia concluded a swap transaction. In February 2021, another swap transaction was concluded and the debt in US dollars was further reduced.
Table 24. Central government debt balance per original currencies in the period the end of 2018–31 March 2021, in millions

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021/VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR</td>
<td>9,216.7</td>
<td>10,582.5</td>
<td>13,222.5</td>
<td>14,450.6</td>
</tr>
<tr>
<td>USD</td>
<td>6,963.9</td>
<td>5,397.3</td>
<td>4,323.9</td>
<td>4,122.9</td>
</tr>
<tr>
<td>RSD</td>
<td>708,389.1</td>
<td>781,250.4</td>
<td>957,952.2</td>
<td>1,035,943.7</td>
</tr>
<tr>
<td>CHF</td>
<td>120.7</td>
<td>110.5</td>
<td>90.3</td>
<td>80.6</td>
</tr>
<tr>
<td>SDR</td>
<td>618.1</td>
<td>570.4</td>
<td>522.7</td>
<td>483.7</td>
</tr>
<tr>
<td>Other currencies (in RSD)</td>
<td>100,910.4</td>
<td>128,958.8</td>
<td>127,674.8</td>
<td>125,918.3</td>
</tr>
</tbody>
</table>

In line with the aspiration to reduce the exposure to currency risk, extend the maturity and continue with the development of new borrowing instruments on the domestic financial market, the main source of financing in the period 2018-2021 have been issues of dinar securities, which affected the increase in the share of the central government public debt in dinars from 26.0% at the end of 2018 to 30.9% of the public debt of the Republic of Serbia at the end of August 2021, i.e. from RSD 708.4 billion, which was the amount of public debt in dinars at the end of 2018, to RSD 1,035.91 billion at the end of August 2021.

According to the data from 31 August 2021, the largest part of the general government public debt of the Republic of Serbia is still denominated in euros and amounts to 51.2%. It is followed by dinar-denominated debt in the amount of 30.7% and dollar-denominated debt in the amount of 12.1%. The remaining debt is denominated in special drawing rights (2.0%) and other currencies (4.0%). Thanks to the continuous development of the domestic securities market and the gradual increase in the volume of issues in domestic currency, there was a significant increase in the share of debt in domestic currency in previous years, which at the end of 2011 amounted to only 16.4%.
On 31 August 2021, the majority of the general government public debt of the Republic of Serbia was with the fixed interest rate – 86.4%, whereas the public debt with the floating interest rate accounted for 13.6% of the total public debt. Among the floating interest rates, the highest share hold EURIBOR and Euro LIBOR interest rates, accounting for 81.2%, then floating interest rate for special drawing rights, accounting for 11.9%, and USD LIBOR interest rate, accounting for 2.9%, while the share of liabilities with other interest rates was 4.0%.

Interest rate structure of the government public debt in the period 2018–31 August 2021, %

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021/VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed interest rate</td>
<td>19.7%</td>
<td>16.8%</td>
<td>14.5%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Variable interest rate</td>
<td>80.3%</td>
<td>83.2%</td>
<td>85.5%</td>
<td>86.4%</td>
</tr>
</tbody>
</table>

In the last few years, there has been a downward trend in borrowing costs, which is most pronounced in government securities issued on the domestic market. The decline was due to the development of the government bond capital market, the growth of the country’s credit rating, i.e. the reduction of the risk premium, low inflation rate and the fall of the NBS key policy rate, which currently amounts to 1.0%, thus continuing the trend that began in the last quarter of 2012. The weighted average interest rate on public debt fell from 5.70% at the end of 2014 to 2.81% as at the end of August 2021. At the end of September, it will additionally fall to around 2.60%, thanks to new Eurobond issues and the repayment of an expensive Eurobond that was repaid during the month. The average coupon rate on dinar government securities decreased from 13.68% at the end of 2012 to 4.59% at the end of August 2021.
Overview of price trend and yield rates trend for Serbian Eurobond 2021

Overview of price trend and yield rates trend for Serbian Eurobond 2027

Overview of price trend and yield rates trend for Serbian Eurobond 2029

Overview of price trend and yield rates trend for Serbian Eurobond 2030

Closing price

YTM

Closing price

YTM

Closing price

YTM

Closing price

YTM
Overview of price trend and yield rates trend for Serbian Eurobond 2033

Table 25. Interests and principals repayment projections by 2024 (RSD billion)

<table>
<thead>
<tr>
<th></th>
<th>2021 p</th>
<th>2022 p</th>
<th>2023 p</th>
<th>2024 p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>325.6</td>
<td>429.4</td>
<td>490.1</td>
<td>413.3</td>
</tr>
<tr>
<td>Interest</td>
<td>111.2</td>
<td>115.8</td>
<td>123.2</td>
<td>129.3</td>
</tr>
<tr>
<td>Total</td>
<td>436.8</td>
<td>545.2</td>
<td>613.4</td>
<td>542.6</td>
</tr>
<tr>
<td>Share in the public debt on 31 August 2021</td>
<td>13.0%</td>
<td>16.3%</td>
<td>18.3%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

Table 26. Interests and principals repayment projections by 2024 (% GDP)

<table>
<thead>
<tr>
<th></th>
<th>2021 p</th>
<th>2022 p</th>
<th>2023 p</th>
<th>2024 p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>5.3%</td>
<td>6.5%</td>
<td>6.8%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Interest</td>
<td>1.8%</td>
<td>1.7%</td>
<td>1.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total</td>
<td>7.1%</td>
<td>8.2%</td>
<td>8.5%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

Planned amounts for interests and principals repayment, at the central government level, also include the funds for buy-back operations, i.e. early debt redemption, in order to replace the more expensive debt with a cheaper one, as well as insurance premiums on export credits.

Projection of General Government public debt in the period 2021–2024

Considering the projected primary budget deficit of the Republic of Serbia for the period 2020 - 2024,
Revised Fiscal Strategy for 2022 with Projections for 2023 and 2024

Table 27. Basic projection of general government public debt by 2024

<table>
<thead>
<tr>
<th></th>
<th>2021 p</th>
<th>2022 p</th>
<th>2023 p</th>
<th>2024 p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public debt (central government), in RSD billion</td>
<td>3,529.8</td>
<td>3,682.3</td>
<td>3,893.8</td>
<td>4,085.8</td>
</tr>
<tr>
<td>Central government debt, as % of GDP</td>
<td>57.3%</td>
<td>55.5%</td>
<td>54.3%</td>
<td>52.7%</td>
</tr>
<tr>
<td>Non-guaranteed local self-government debt, as % of GDP</td>
<td>0.9%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>1.1%</td>
</tr>
<tr>
<td>General government debt, as % of GDP</td>
<td>58.2%</td>
<td>56.5%</td>
<td>55.3%</td>
<td>53.8%</td>
</tr>
</tbody>
</table>

In 2021, a slight increase in the general government debt-to-GDP ratio, to 58.2% is expected, due to the need to continue financing measures to support the economy and households affected by the pandemic caused by the coronavirus COVID-19, as well as to provide in advance part of the funds for financing the deficit and debt that matures in the first quarter of 2022. Thereafter, in the coming years, the stabilization of the situation is expected, and the return of this ratio to the downward trajectory, so that at the end of 2022 it is expected to be 56.5%, at the end of 2023 - 55.3%, and at the end of 2024 - 53.8%. In the given period, the realization of large infrastructure projects is expected, which will be financed mainly from project loans, and their more intensive implementation compared to the previous period. This is precisely one of the points where a clear coordination of fiscal and development goals can be seen. Account is taken of the sustainability of public debt and the gradual decline of its share in GDP, while concurrently using new borrowings to improve infrastructural conditions which lead to the growth of GDP, living standards and new investments. The non-guaranteed debt of the local self-government units and the rest of the government sector is envisaged to remain at the relatively stable level of about 0.9% to 1.1% of GDP in the period from 2021 to 2024.

Public debt management principles

According to the Public Debt Law, the primary goal of Serbia’s borrowing and public debt management is to ensure the funds necessary to finance budget expenditures regularly, under the most favourable conditions, with minimal financial costs and acceptable risk level. With this in mind, the Public Debt Management Strategy of the Republic of Serbia defines the following general objectives and principles:

1) ensure the financing of the fiscal deficit and regular financing of liabilities based on the public debt of the Republic of Serbia;

2) set an acceptable risk level that should be defined within the targeted debt portfolio structure, in terms of debt currency structure, interest rate structure, maturity structure, and debt structure by the types of instruments;

3) uphold the development of the market of government securities issued both in the domestic and international market, so as to help the reducing of the medium-term and long-term borrowing costs;

4) enable transparency and predictability of the borrowing process.

The public debt management strategy must be consistent with the general medium-term macroeconomic and fiscal framework.

The Public Debt Management Strategy shall in the following medium-term period be based on the financing of the deficit and the principal of budget debt of the Republic of Serbia, through the issue of government securities in the international and domestic capital market, in order to secure the regular financing of liabilities. Flexibility shall be reflected in the selection of the market for borrowings, borrowing currency and financing instruments. Financing structure will be selected taking into account current state and development trends on the domestic and international financial market (interest rate level, risk premiums, yield curve, reference foreign currency exchange rates), and an acceptable level of exposure to financial risks.

The goal for the next long-term period is to effect financing primarily by issuing dinar securities on the domestic market. Part of the financing might be ensured also on the international financial market in the medium term. The establishment of the GMTN program in 2020 has enabled flexibility in the choice of financing and faster access to financing on the international market.

Borrowings in foreign currency, e.g. in US dollars, entail foreign exchange risk due to the changes in the
Public debt management policy must take into account the long-term perspective, but the decisions on the financing of budget expenditures must be made annually. Decisions on annual borrowing are taken within the Law on Budget for each specific fiscal year. Depending on the changes in the basic fiscal aggregates, adjustments of the borrowing plans are possible during the fiscal year.

Financial risks and financial risk management measures

The impact of financial and fiscal risks may lead to higher public debt growth than the baseline scenario envisages. Risks that are present and that can lead to an increase in indebtedness and public debt service costs include: refinancing risk, foreign exchange risk, market risk (interest rate risk, inflation risk), liquidity risk, credit and operational risks, and risks related to the distribution of servicing costs (debt structure, liability concentration).

In order to reduce the exposure to financial risks, the following measures need to be implemented:

1. Refinancing risk
   - increasing the share of medium-term and long-term financial instruments denominated in dinars on the domestic financial market;
   - even annual distribution of liabilities based on public debt in the next long-term period;
   - extension of the average maturity of debt issued in securities;

2. Foreign currency risk
   - striving to reduce the share of debt denominated in foreign currency while taking into account the costs of new debt (dinarization costs);
   - use of financial derivatives in order to limit the effects of changes in the exchange rates of reference currencies;
   - striving to ensure that external debts are mainly in euros and opt for dollar debts only if dollar financing on the international market is cheaper, using financial derivatives to limit risks;

3. Market risk (interest rate risk, inflation risk)
   - striving to extend the average maturity of domestic debt in dinars;
   - striving to ensure that risk based on interest rates on external debt does not jeopardize the long-term goal of minimizing public debt costs;

4. Liquidity risk
   - continual maintenance of the level of cash assets on the accounts of the Republic of Serbia at a level that enables unhindered financing of liabilities for a minimum of four months, and at a level that enables the absorption of possible smaller than planned inflows based on borrowing;
   - adequate management of free cash assets in the accounts of the Republic of Serbia in accordance with the principles of asset-liability management, and in accordance with the possibilities;

5. Credit and operational risks
   - conducting transactions with financial derivatives only with financial institutions that have a high credit rating;
   - use of financial instruments that limit credit risk;
   - providing guarantees and approving new debt to local self-government units only if there is an adequate analysis of the relatively low probability that the guarantee will be realized or that the local self-government unit will become insolvent in the medium term;
   - introduction of adequate control in all business activities in the Public Debt Administration and improvement of employees’ knowledge;

6. Risks related to the distribution of servicing costs
   - adequate annual borrowing planning and even distribution in subsequent years and during the fiscal year, in order to avoid the risk of a large concentration of refinancing liabilities;
   - avoidance of concentration of liabilities based on public debt on a monthly basis, which could not be amortized by free cash assets on the accounts of the Republic of Serbia.

Thanks to the implementation of defined measures in the past few years, there has been a significant improvement in the structure of public debt in almost all segments - improved currency structure and
interest rate structure, significantly increased maturity, reduced borrowing costs, reduced guaranteed public debt, more even distribution of liabilities, maintaining an adequate level of liquidity. For example, at the central government level, the share of public debt in dinars increased from 20.9% at the end of 2016 to 30.9% at the end of August 2021. In the same time period, the share of public debt in US dollars decreased from 33.9% to 12.2%. The share of debt with a fixed interest rate increased from 73.2% to 87.1% in the period from 2013 to April 2021. In the same period, guaranteed debt fell from EUR 2.8 billion to EUR 1.4 billion and the average weighted interest rate on public debt fell from 5.64% to 2.81%.

**Analyses used to create the Public Debt Management Strategy**

Public Debt Management Strategy was formulated using a quantitative approach in the analysis of costs and risks that affect public debt management. Having in mind the macroeconomic environment and market conditions, alternative sources of financing were considered in parallel.

For the purpose of analysis, instruments available on the domestic and international financial markets were used.

Sources of financing denominated in foreign currency:

- Loans from foreign governments and international financial institutions, as well as from domestic commercial banks - presented as concession instruments denominated in euros or US dollars, with a fixed or variable interest rate;
- Domestic debt denominated in euros expressed through two instruments - treasury bills and government bonds issued on the domestic financial market;
- Eurobond - issued in euros or US dollars on the international financial market.
- IMF allocation funds

Sources of financing denominated in domestic currency:

- All government securities denominated in dinars are grouped into treasury bills (with maturities of up to 53 weeks) and government bonds (with maturities of 2 to 12.5 years).

**Future market interest rates and analysis scenario**

After selecting the appropriate composition of financing sources (selected and comparative financing strategies), a cost-risk analysis is performed starting from the base case (most likely) scenario, followed by stress testing for additional types of scenarios - shocks, to obtain an overview of cost effects of the considered strategies.

The baseline scenario is based on the most probable market conditions for three groups of market variables: exchange rate, international market interest rates, and domestic market interest rates. The approach for dinar and euro interest rates is based on the rates realized during the previous and current year.
After defining the baseline scenario, additional types of scenarios - shocks - were selected for the purpose of stress testing:

- Depreciation of the dinar in relation to all currencies of 15% in 2023. In this scenario, the ratio of the euro to the US dollar would remain stable, while only the dinar would depreciate against both currencies;

- Increase of interest rates on the domestic and international market by about 2 percentage points;

- Increase of interest rates on the international market up to 3 percentage points, and on the domestic market up to 4 percentage points;

- Combined shock related to the depreciation of the dinar against the dollar by 15% in 2023 and the growth of interest rates by about 2 percentage points;

Alternative borrowing strategies for the period 2022–2024

Based on the World Bank model Medium Term Debt Strategy Model - MTDS, the following alternative borrowing strategies were examined:

Baseline strategy (S1): under this strategy total financing needs are mostly met by using foreign currency financing sources in 2022 (60%) and 2023 (70%), while in 2024 it is planned to re-establish balanced financing from sources in domestic and foreign currency. Budget financing in 2022 is planned mostly from the issue of government bonds in domestic currency, from IMF allocation funds and a petty part from the issue of government bonds in euros. In 2023, it is planned to ensure approximately the same parts of the budget financing from the issue of government securities in dinars and the issue of Eurobonds. In 2024, budget financing from the issue of government securities in dinars is planned. As in previous years, project financing is provided mostly from loans denominated in foreign currency, from foreign creditors.

Strategy (S2): compared to S1 strategy, total needs for financing are met by issuing USD-denominated Eurobonds, with a maturity of 10 and 15 years.

Strategy (S3): compared to S1 strategy, under this strategy financing is fully based on the issue of euro-denominated Eurobonds with a maturity of ten, twelve and fifteen years.

Additional Dinarization Strategy (S4): under this strategy financing is fully based on the issue of dinar-denominated securities with longer maturity.

Financing of budget expenditures of the Republic of Serbia under all strategies will be done mainly through issues of government securities on the international and domestic capital markets.

Comparing the alternative strategies

Alternative borrowing strategies were compared by applying two costs measures: the ratio of public debt to GDP and nominal interest as a percentage of GDP. The former is the status indicator, and the latter is the flow indicator. For the purpose of comparison, attention is focused on the results of the strategies examined, at the end of 2024.

Based on the chart, the costs associated with each of the considered strategies are clearly seen. The cost of alternative strategies in the baseline macroeconomic scenario is shown on the vertical axis of the cost chart, while the horizontal axis shows the potential cost of a particular borrowing strategy (the result of a stress test).

In the baseline macroeconomic scenario at the end of 2024, the S4 strategy has the highest debt-to-GDP ratio because it is based on the issuance of dinar securities, which is why it is more expensive than strategies that combine domestic and foreign currency borrowings (S1) and those based on financing only from government bonds in foreign currency (S2 and S3). Strategy S1 has the best cost position measured by debt-to-GDP ratio because it also includes concessional sources of financing (loans, allocations), unlike strategies S2 and S3 which are based exclusively on market instruments (government bonds in foreign currency). On the other hand, in case of deviation from baseline macroeconomic scenario the biggest risk to the debt-to-GDP ratio is related to changes in the exchange rate. Viewed from the aspect of exchange rate shocks, strategy S4 is best positioned because all financing is in dinars, while strategies S1, S2 and S3 have greater exposure to exchange rate risk because financing is based on sources in foreign currency. In terms of
exchange rate risk, Strategy S1, which combines financing in domestic and foreign currency, has a more favourable position compared to strategy S2 and S3, where all financing is in foreign currency.

In terms of interests share in GDP, the S4 strategy is relatively more expensive and has a higher risk of increased interests share in GDP because it is exposed to fluctuations in dinar interest rates. Strategies based on sources of financing in foreign currency (S1, S3) have a lower interests share in GDP compared to strategy S2 (sources of financing in dollars) and strategy S4 which is based on domestic sources of financing which are the most expensive. The results of the stress analysis showed that the biggest risk for a change in the interests share in GDP, if the baseline scenario changes, comes from the shock of interest rate changes that is higher in the domestic than in the international market. If the above scenario of interest rate shock were realized, the interest to GDP ratio would increase the most in strategy S4, which is based on domestic sources of financing and is subject to interest rate fluctuations in the domestic market, while in strategies S1, S2 and S3 interest rate risk would be at a lower level. With the S1 strategy, the interest rate risk is the lowest because it also uses concessional borrowing instruments with a fixed rate, and not only market ones, as is the case with the S2 and S3 strategies.

Having in mind the above, it is evident that borrowings in the coming period by applying the chosen strategy S1 will have satisfactory results in terms of quantification of costs and risks arising from them.

Table 28. Public debt-to-GDP ratio at the end of 2024

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline scenario</td>
<td>51.7</td>
<td>52.0</td>
<td>51.8</td>
<td>52.1</td>
</tr>
<tr>
<td>Foreign currency exchange rate shock (15% of all the currencies)</td>
<td>57.0</td>
<td>57.7</td>
<td>57.5</td>
<td>56.7</td>
</tr>
<tr>
<td>Interest shock (scenario 1)</td>
<td>52.1</td>
<td>52.6</td>
<td>52.4</td>
<td>52.7</td>
</tr>
<tr>
<td>Interest shock (scenario 2)</td>
<td>52.4</td>
<td>52.9</td>
<td>52.7</td>
<td>53.2</td>
</tr>
<tr>
<td>Combined shock (15% of USD and interest shock 1)</td>
<td>53.4</td>
<td>54.8</td>
<td>53.5</td>
<td>53.8</td>
</tr>
<tr>
<td>Maximum risk</td>
<td>5.3</td>
<td>5.8</td>
<td>5.7</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Table 29. Payments based on interest-to-GDP ratio at the end of 2024

<table>
<thead>
<tr>
<th>Scenario</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline scenario</td>
<td>1.2</td>
<td>1.4</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Foreign currency exchange rate shock (15% of all the currencies)</td>
<td>1.3</td>
<td>1.5</td>
<td>1.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Interest shock (scenario 1)</td>
<td>1.4</td>
<td>1.8</td>
<td>1.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Interest shock (scenario 2)</td>
<td>1.6</td>
<td>2.0</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Combined shock (15% of USD and interest shock 1)</td>
<td>1.5</td>
<td>1.9</td>
<td>1.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Maximum risk</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
</tr>
</tbody>
</table>
The following table shows movements of the basic public debt parameters in each of the four strategies considered, which reflects the abovementioned characteristics of each of the strategies:

**Table 30. Alternative strategies risk indicators at the end of 2024**

<table>
<thead>
<tr>
<th></th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal debt (% GDP)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied interest rate (%)</td>
<td>2.3</td>
<td>2.8</td>
<td>2.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Refinancing risk</td>
<td>ATM16 external portfolio (in years)</td>
<td>8.7</td>
<td>8.9</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>ATM domestic portfolio (in years)</td>
<td>6.6</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>ATM total portfolio (in years)</td>
<td>8.1</td>
<td>8.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Interest rate risk</td>
<td>ATR17 (in years)</td>
<td>5.9</td>
<td>7.4</td>
<td>7.1</td>
</tr>
<tr>
<td>Refinancing (% of total debt)</td>
<td>22.3</td>
<td>13.6</td>
<td>13.6</td>
<td>13.5</td>
</tr>
<tr>
<td>Fixed rates debt (% of total debt)</td>
<td>84.7</td>
<td>92.1</td>
<td>92.1</td>
<td>92.1</td>
</tr>
<tr>
<td>Foreign currency exchange rate risk</td>
<td>Foreign currency debt (% of total debt)</td>
<td>72.5</td>
<td>86.4</td>
<td>86.4</td>
</tr>
</tbody>
</table>

**Stress test analysis**

The fiscal rule, defined by the Law on Budget System, prescribes that the general government public debt may not exceed 45% of GDP. In case the amount of debt exceeds that level, the Government is obliged to adopt a program for reducing public debt in relation to GDP, i.e. to return the debt into the framework prescribed by the law.

At the end of 2020, the central government debt reached 57.0% of GDP, and the general government debt reached 57.8% of GDP. At the end of August 2021, the public debt-to-GDP ratio of central government and general government were 54.3% of GDP and 55.0% of GDP, respectively. By the end of 2021, a slight increase in the ratio is expected, to about 57.3% of GDP at the central level, or 58.2% of GDP at the general government level, due to the need to further finance measures to combat the effects of the COVID-19 pandemic. Due to the high share of foreign currency-denominated debt (69.1%), it is evident that foreign exchange risk will determine changes in the public debt-to-GDP ratio in the coming period, and it will significantly influence the success of fiscal policy measures designed to consolidate public finances and reduce public debt share in GDP.

Based on the planned macroeconomic framework, and in the absence of the impact of possible risks, central government public debt in 2024 should be at the level of 52.7% of GDP.

The main factors influencing the stabilization of public debt-to-GDP ratios include GDP growth, positive primary result, dinar exchange rate against foreign currencies and interest rates.

**Table 31. Contributions from the key macroeconomic variables to the change in the central government public debt-to-GDP ratio, in %**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Central government debt-to-GDP</td>
<td>51.9</td>
<td>57.0</td>
<td>57.3</td>
<td>55.5</td>
<td>54.3</td>
<td>52.7</td>
</tr>
<tr>
<td>Changes compared to the last year, in% of GDP</td>
<td>-1.7</td>
<td>5.1</td>
<td>0.3</td>
<td>-1.8</td>
<td>-1.2</td>
<td>-1.6</td>
</tr>
<tr>
<td>Contribution of primary fiscal result</td>
<td>-2.2</td>
<td>6.4</td>
<td>3.1</td>
<td>1.4</td>
<td>-0.1</td>
<td>-0.5</td>
</tr>
<tr>
<td>Contribution of interests</td>
<td>2.0</td>
<td>2.0</td>
<td>1.8</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Contribution of nominal GDP growth</td>
<td>-3.5</td>
<td>-0.8</td>
<td>-6.1</td>
<td>-4.1</td>
<td>-4.2</td>
<td>-4.0</td>
</tr>
<tr>
<td>Contribution of other factors</td>
<td>2.0</td>
<td>-2.5</td>
<td>1.5</td>
<td>-0.8</td>
<td>1.3</td>
<td>1.2</td>
</tr>
</tbody>
</table>

16 ATM (Average Time to Maturity) – abbreviation for average maturity time.
17 ATR (Average Time to Refixing) – abbreviation for average interest rates change time
Impact of changes in the RSD exchange rate against the basket of currencies from the central government public debt portfolio on the change in public debt-to-GDP ratio

It is important to note that the reduction of public debt in relation to GDP will be enhanced by more adequate control over the issuance of guarantees and improvement of the process of prioritization of investment projects, which are financed from credit lines of multilateral and bilateral creditors. Starting from 2015, guarantees are issued only for project (investment) loans, i.e. the issuance of guarantees for loans for current liquidity to public enterprises has been suspended, which has significantly affected the reduction of the guaranteed public debt balance in the previous six years.

Long term strategic framework of public debt management

The main strategic goals that need to be pursued in the coming long-term period, in order to minimize the risks of increasing indebtedness and the cost of servicing public debt include the following:

- the share of dinar-denominated debt is at least 30% of the total public debt in the medium term;
- the share of euro-denominated debt in public debt is at least 65% of foreign currency debt, including future borrowings and transactions;
- the share of debt with a variable interest rate is below 15% in the medium term;
- the average time to refixing (ATR) is maintained at a level of at least 5.0 years, in accordance with the abovementioned measure of gradual decrease of the share of debt with variable interest rates;
- the weighted average interest rate (WAIR) for public debt in local currency does not exceed 5.00%;
- the share of short-term debt (whose maturity is up to one year) is up to 15% of the total public debt;
- the average maturity time (ATM) of internal debt is at least 5.0 years in the medium term;
- the average maturity time (ATM) of external debt is maintained at the level of 7.0 ± 0.5 years in the same time horizon.

The chart presents the movement of central government public debt–to GDP ratio depending on the change in the dinar exchange rate against a certain basket of currencies. The basic projection is presented with alternative scenarios depending on the appreciation or depreciation of the dinar exchange rate in the range from 10% appreciation to 10% depreciation of the dinar in relation to the currency basket. Applying the above scenarios, it can be seen that the ratio for 2024 would range from 49.1% to 56.3%, while under the baseline scenario it would be at the level of 52.7%.

The main risks to the realization of the Strategy, in addition to the above factors that have been quantified, include the stability of the macroeconomic situation in the Republic of Serbia, the need for additional borrowings to regulate debts at other levels of government, public and financial sector, and the activation of guarantees.
the share of long-term dinar-denominated instruments with an original maturity of three or more years amounted to 38.3% in the dinar-denominated securities balance, while at the end of August 2021 it amounted to 92.2%.

Transparent work and reports, as well as the presence on the international capital market, help the non-residents to be informed and therefore interested to invest their capital into debt instruments, primarily into long-term government securities, which enhances the development of a stable investor base.

Due to successful realization of benchmark issues during 2014 and 2015, the same practice continued during 2016. In February and July 2016 there was an issue of a three-year and seven-year benchmark bond in the amount of RSD 110 billion each. In April 2017 there was an issue of a three-year benchmark bond in the amount of RSD 110 billion. In January and February 2018 there was an issue of a five-year and ten-year benchmark bond in the amount of RSD 110 billion each. In January 2019 there was an issue of a three-year and seven-year benchmark bond in the amount of RSD 100.0 and 150.0 billion. In January and February 2020 for the first time there was an issue of a five-and-a-half-year, i.e. twelve-and-a-half-year bond with a six-month coupon.

In 2021, amendments to the Regulation on General Conditions for Issuance and Sale of Government Securities on the Primary Market ("Official Gazette of RS", No. 100/2014, 78/2017, 66/2018, 78/2018 and 140/2020), made it possible to increase the volume of previously issued bonds, so with the five-and-a-half-year and twelve-and-a-half-year bonds, the volume of the issue was increased by RSD 50 billion each. Also, an increase in the volume of the issue, in the amount of RSD 10 billion, was effected for a ten-year bond originally issued on 6 February 2018.

These issues considerably extended the scope of secondary trading in these instruments, which has considerably contributed to the drop in effective yield rates in the re-opening of the stated issues. The share of foreign investors in dinar-denominated securities, at the end of August 2021 amounted to 20.9%.

On 30 June 2021, three dinar benchmark bonds were included in J.P. Morgan index of government bonds of emerging economies (GBI-EM Global Diversified Index), maturing on 11 January 2026.
Revised Fiscal Strategy for 2022 with Projections for 2023 and 2024

(RSMFRSD89592), 6 February 2028 (RSMFRSD55940) and 20 August 2032 (RSMFRSD86176).

In the period covered by this Strategy, the efficiency of the primary market is expected to improve through access to Euroclear platform and through the concept of primary dealers, as a mechanism of selling government securities that directly, in the long run, contributes to reducing borrowing costs and refinancing risk. The introduction of the selling system for the government securities in the domestic financial market through primary dealers provides a good base for the improvement of the market efficiency of the secondary market of government securities. With the development of the secondary market, over time, the concept of market efficiency in the process of government securities evaluation will be established. The introduction of the “benchmark” bond issues has had a positive effect on the volume and continuity of secondary trading, as well as on improving market efficiency in the process of selling government securities on the primary market.

The fiscal result, the expected inflation rate and the exchange rate should be highlighted as the key factors that influence the yield curve of government securities. It is important to emphasize a special group of factors consisting of the macroeconomic trends and expectations, as well as changes in the international financial market, which are reflected in the country’s risk premium.

At the end of 2012 the average maturity of dinar-denominated securities was 394 days (1.1 year), at the end of 2013 it was 469 days (1.3 years), at the end of 2014 it was 645 days (1.8 years), at the end of 2015, it was 749 days (2.1 years), at the end of 2016 it was 789 days (2.2 years), at the end of 2017 it was 864 days (2.4 years), at the end of 2018 it was 1,188 days (3.3 years), at the end of 2019 it was 1,403 days (3.8 years), at the end of 2020 it was 1,429 days (3.9 years), and at the end of August 2021 it was 1,552 days (4.2 years).

The development of the domestic securities market will be supported by the following measures of the Republic of Serbia:
- Bonds of the Republic of Serbia are included in the global index which should significantly increase
- In order to create the largest possible investor base and develop the secondary market for securities issued on the domestic market, equal tax treatment of domestic and foreign investors was created at the end of 2011, and in the coming period efforts will be made to remove any obstacles to free flow of capital;
- Activities have been undertaken to enable the settlement of government securities on the foreign market. Amendments to the Public Debt Law from December 2019, enable the clearing and settlement of government securities issued on the domestic market, in addition to the Central Register, by another foreign legal entity that performs clearing and settlement operations. In October 2021 Clearstream became the first international central securities depository, which enabled foreign investors to directly settle government bonds denominated in dinars (RSD). Clearstream’s presence will contribute to a further increase in the participation of foreign investors and increase liquidity in the domestic capital market.
- During 2021 and 2022, intensive actions will be taken to harmonize legislation relevant for Central Registry connecting with Euroclear through the I-link platform.

The Republic of Serbia plans to establish iLink with Euroclear in the second half of 2022, so that at the beginning of 2023 the first government bond auctions will be settled via I-link.

The introduction of the iLink settlement system will further increase the participation of foreign investors and increase liquidity in the secondary market of government securities.

The Ministry of Finance of the Republic of Serbia expects that this step will significantly facilitate the access of foreign investors to the Serbian capital market.