

МЕНЕДЖМЕНТ

The Impact of COVID-19 and 44-day Artsakh war on the public debt of Armenia

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UDC: 336.27; **EDN:** VOBQNW

Keywords: government(public) debt, sustainability, debt / GDP, interest rate, exchange rate, refinancing risk, epidemic, war.

COVID-19-ի և 44-օրյա Արցախյան պատերազմի ազդեցությունը Հայաստանի պետական պարտքի վրա
Ասլանյան Գևորգ Ս.

*Հայաստանի պետական տնտեսագիտական համալսարան,
տնտեսամաթեմատիկական մեթոդների ամբիոնի ասպիրանտ (Երևան, ՀՀ)*

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Ամփոփագիր. Պետական պարտքը պետության տնտեսական ռազմավարության իրագործմանը նպաստող, բյուջետային կարգավորման կարևորագույն գործիքներից մեկն է: Պետական պարտքի մակարդակը և դրա հարաբերակցությունը ՀՆԱ-ին համարվում է մակրոտնտեսական կարևորագույն ցուցանիշներից մեկը, այդ իսկ պատճառով անընդհատ կերպով իրականացվում է պետական պարտքի կառավարման ռիսկերի գնահատում և հետագա քայլերի պլանավորում: 2020թ. Covid-19 համաճարակը և Արցախյան 44-օրյա պատերազմը Ադրբեջանի և այլ գերտերությունների դեմ մեծ վնաս հասցրեցին Հայաստանի և Արցախի տնտեսություններին, ուստի անհրաժեշտություն է առաջանում վերլուծելու դրանց ազդեցությունը պետական պարտքի վրա:

Սույն հոդվածում ներկայացվում է կառավարության պարտքի բեռը բնութագրող ցուցանիշների դինամիկան, պարտքի պորտֆելի կառավարման ռիսկերը և դրանք բնութագրող ցուցանիշները, որոնք հաշվարկվել են միջազգայնորեն ընդունված եղանակներով:

2020թ. ընթացքում համաճարակի և պատերազմի սոցիալական և տնտեսական հետևանքները հաղթահարելու համար կառավարությունը ներգրավեց նոր պարտք: Այսպիսով 7.4% տնտեսական անկման պայմաններում կառավարության պարտք/ՀՆԱ հարաբերակցությունը կազմեց 63.5%, որը կառավարությունը պետք է փորձեր նվազեցնել հաջորդող 5 տարիների ընթացքում: 2021 թվականի փետրվարին կառավարությունը տնտեսական կորուստները վերականգնելու համար թողարկել է 750 միլիոն դոլարի եվրոպարտատոմսեր: Այսպիսով, պետական պարտք/ՀՆԱ հարաբերակցությունը կազմել է 60,3%, ինչը բավականին մոտ է պարտքի շեմին:

Բանալի բառեր՝ պետական պարտք, կայունություն, պարտք/ՀՆԱ, տոկոսադրույք, փոխարժեք, վերաֆինանսավորման ռիսկ, համաճարակ, պատերազմ:

Влияние COVID-19 и 44-дневной арцахской войны на государственный долг Армении

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Аннотация. Государственный долг является одним из важнейших инструментов бюджетного регулирования, который способствует реализации государственной экономической стратегии. Уровень государственного долга и его отношение к ВВП считается одним из важнейших макроэкономических показателей, поэтому постоянно проводится оценка рисков управления государственным долгом и планирование дальнейших шагов. Эпидемия Covid-19 и 44-дневная арцахская война против Азербайджана и других сверхдержав в 2020 году нанесли большой ущерб экономике Армении и Арцаха, поэтому необходимо проанализировать их влияние на государственный долг.

В данной статье представлена динамика показателей долговой нагрузки государства, риски и показатели управления долговым портфелем, рассчитанных по международно-признанным методикам.

В 2020 году правительство взяло новый долг для преодоления социально-экономических последствий эпидемии, войны. Таким образом, в условиях экономического спада на 7,4% соотношение госдолг/ВВП составило 63,5%, которое правительство должно было попытаться снизить в ближайшие 5 лет. В феврале 2021 года правительство выпустило еврооблигации на сумму 750 миллионов долларов для возмещения

экономических потерь. Таким образом, отношение госдолга к ВВП составило 60,3%, что достаточно близко к порогу долга.

Ключевые слова: государственный долг, стабильность, долг/ВВП, процентная ставка, обменный курс, риск рефинансирования, эпидемия, война.

Research Methodology

The analysis was carried out through a comparative analysis comparing public debt indicators before and after the Covid 19 and 44-day Artsakh war. The methodology developed by the IMF was used to assess the risks inherent in the public debt portfolio [12].

Interest rate risk. Interest rate risk refers to the vulnerability of the debt portfolio, and the cost of government debt, to higher market interest rates at the point at which the interest rate on variable rate debt and fixed rate debt that is maturing is being re-priced.

The weight of the fixed interest rate debt in total debt

$$d_t^{fix} = \frac{D_t^{fix}}{D_t} \quad (1)$$

Where d_t^{fix} is the share of fixed interest rate debt in the debt portfolio, D_t^{fix} is fixed interest rate debt, D_t is a total debt.

Amount of the debt stock refixing the interest rate in a particular period t

$$D_t^{refix} = D_t^v + A_t^f$$

Where D_t^v is total variable rate debt, A_t^f principal or amortization repayments of fixed-rate debt falling due in period t

Refinancing (roll-over) risk.

Average time to maturity. This indicator measures the weighted average time to maturity of all the principal payments in the debt portfolio. It is computed as:

$$ATM_t = \frac{\sum_{t=1}^T (A_{t,t})}{\sum_{t=1}^T A_t} \quad (2)$$

where ATM_t is the average time to maturity of debt portfolio, $A_t = t^{th}$ period principal payment in the portfolio. ATM_t shows how long it takes on average to rollover the debt portfolio. A shortening of this indicator suggests that the portfolio is being rolled over more frequently and therefore is more exposed to refinancing shocks.

Foreign exchange rate risk. FX risk relates to the vulnerability of the debt portfolio, and the government's debt cost, to a depreciation/devaluation in the external value of the domestic currency. The following indicator provide a measure to the exposure to this risk:

Ratio of foreign currency debt to total debt

$$d_t^{fx} = \frac{D_t^{fx}}{D_t} \quad (3)$$

where d_t^{fx} is the share of foreign currency debt in the debt portfolio. D_t^{fx} - is foreign currency debt

Analysis

The Government debt of the RA in 2000 was 39.8% of GDP, this indicator decreased to 14.5% in 2007. In these years Debt increased by 29.3%, but as a result of double-digit real GDP growth the debt / GDP

ratio decreased. Large financial resources were injected into the economy due to the state budget deficit to mitigate the effects of the financial and economic crisis 2008-09. Thus, the Government debt of the Republic of Armenia increased almost twice, and the GDP decreased by 14.1%, as a result of which the debt / GDP ratio increased by almost 20 percentage points. Debt / GDP growth was modest in 2010-2013. The government debt / GDP ratio increased sharply in 2014-2016. The government widened the state budget deficit to prevent the economy collapse as a result of the collapse of the Russian economy, the devaluation of the ruble, the fall in commodity assets, including copper prices. In 2016 compared to the 2013, the Government debt of the Republic of Armenia increased by about 59%. As a result that, the debt / GDP ratio exceeded 50% and amounted 51.9%, which led to the limitation of the budget deficit (by 3% of GDP in the last three years). 2017 The debt / GDP ratio increased by 1.8 percentage points to 53.7%. Which prompted the application of the new fiscal rules [1].

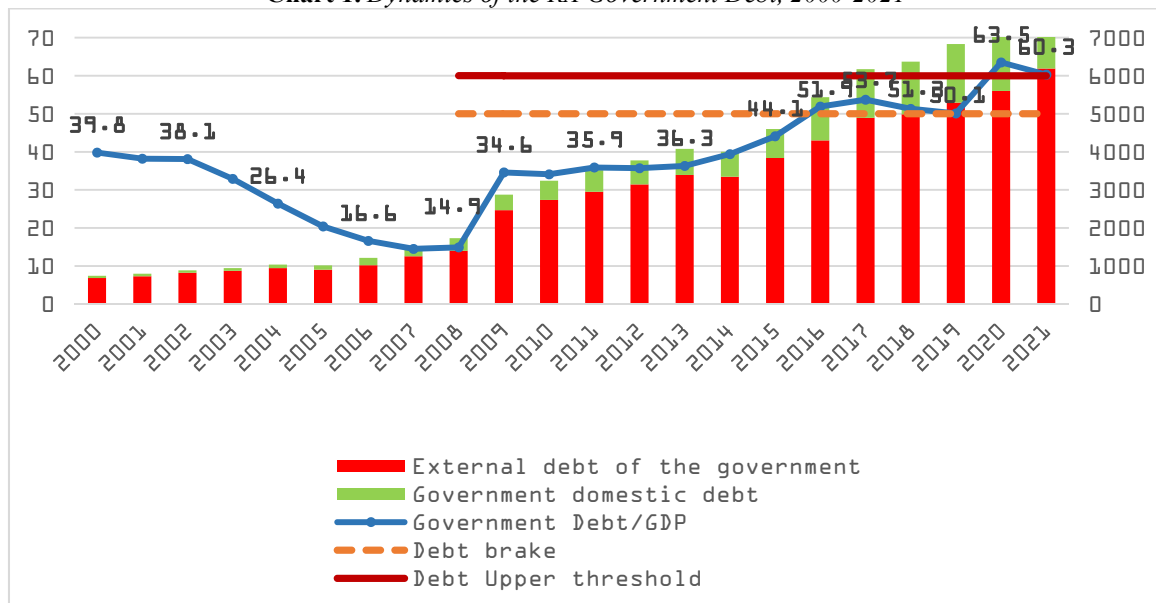
In 2018, the Government debt/GDP ratio of the Republic of Armenia decreased by 2.4 percentage points to 51.3%. The decrease in the index was registered on the one hand due to the fiscal consolidation planned by the Government of the Republic of Armenia, and on the other hand due to the implementation of a more restraining policy than expected, as a result of which the primary budget balance was 0.6% of GDP. In 2019 The debt / GDP ratio decreased by 1.2 percentage points to 50.1%. The main reason was the 7.6% growth of real GDP instead of the forecasted 5.4%. To overcome the socio-economic consequences of the epidemic and 44 day war, and for the repayment of the \$ 700 million Eurobonds issued in 2013, the government borrowed new debt in 2020. Thus, in the conditions of 7.4% economic downturn, the government debt / GDP ratio was 63.5%, which the government should reduce in the next 5 years. In February of 2021 the government issued \$ 750 million worth of

Eurobonds to repair economic losses [3]. Thus, the government debt / GDP ratio decreased to 60.3%, which is quite close to the debt threshold.

In order to effectively manage the Government debt portfolio, it is necessary to identify and assess the risks inherent in the debt portfolio of the Government of the Republic of Armenia. That is why the debt management strategy of the Government of the RA sets benchmarks for debt

portfolio risks [6] In the strategic plans of Government Debt Management (2018-2020) and (2019-2021) the government had set the same benchmarks [5]. However, taking into account 2020 . However, taking into account the events of 2020, the government set the exchange rate risk indicators at least 25% in the 2021-2024 debt strategic plan, instead of the previous 20% [8].

Chart 1. Dynamics of the RA Government Debt, 2000-2021



Source: MF of RA [3-11] and author's calculations

Table 1. RA Government Debt Portfolio 2019-2021 landmark indicators (2021-23 Benchmark indicators)

	Benchmark	2019	2020	2021
Refinancing risk				
Average repayment period	8 – 11 years	9.1 years	8.7 years	8.3 years
Proportion of government treasury bonds (GTB) repaid in the next year in the volume of GTBs (at the end of the year)	maximum 20%	12.7%	11.5%	10.5%
Interest rate risk				
The weight of the fixed interest rate debt in total debt	at least 80%	83.8%	80.4%	82.9%
Exchange rate risk				
The share of domestic debt in total debt	at least 20% (25%)	22.5%	25.4%	29.4%
The share of debt in AMD in total debt	at least 20% (25%)	20.8%	24.4%	28.8%

Source: MF of RA [3-11] and author's calculations

Let's Introduce each risk separately

Refinancing risk

Refinancing risk captures the exposure of the debt portfolio to unusually higher interest rates at the point at which debt is being refinanced; in the extreme, when this risk is too high debt managers are unable to roll over maturing obligations [12].

Refinancing risk is assessed through the size of the average maturity, the share of short-term debt in the total debt, and other risk indicators. The average repayment period of government debt during the last three years and the rates of government bonds repaid during the first year correspond to the guideline rates. The weight of bonds repaid during

the first year in 2017 was 19.1%, which was close to the benchmark, but in the last three years it has been

steadily declining and in 2020 it was 11.5%, and in 2021. 10.5% which is quite far from the risk zone.

Table 2. RA Government Debt Refinancing Risk Indicators for 2017-2021

	2017	2018	2019	2020	2021
Average government debt repayment period (year)	9.0	8.7	9.1	8.8	8.4
Weight of the Government debt repaid within one year (%)	5.3	5	7.0	5.8	5.6
Structure by remaining average maturity(%)	100	100	100	100	100
Short term (up to 1 year)	3.0	2.6	4.4	3.1	3.1
Medium term (1-5 years)	23.5	22.7	16.4	27.9	27.3
Long-term (more than 5 years)	73.5	74.6	79.2	69.0	69.6
Proportion of government treasury bonds (GTB) repaid in the next year in the volume of GTBs (at the end of the year)	19.1	13.1	12.7	11.5	10.5

Source: MF of RA [3-11] and author's calculations

The average repayment period of the RA Government debt in 2017 was for 9 years, in 2020: 8.8 years, and in 2021: 8.4 years, which is in manageable range. Refinancing risk is lower when the share of short-term debt is lower. Thus, the share of short-term debts in 2017-2021 fluctuated in the range of 2-4.4%, and the share of long-term debts decreased by 10.2 percentage points compared to 2019 and amounted to 69%.

The actual data of the above indicators show that in recent years, despite the changes, the refinancing risk is in the manageable range.

Interest rate risk

Interest rate risk refers to the vulnerability of the debt portfolio, and the cost of government debt, to higher market interest rates at the point at which the interest rate on variable rate debt and fixed rate debt that is maturing is being re-priced [12]. From an interest rate risk management perspective, it is important to limit the growth of floating interest rate debt with. The share of fixed interest rate debt was 80.4% in 2020 instead of 86.5% in 2017, but in 2021 it increased to 82.9%. Thus, in 2020 it was close to the benchmark, but as a result of the government's actions it rose again

Table 3. The share of RA Government Fixed and Floating Debts

	2017	2018	2019	2020	2021
Structure by interest rate(%)	100	100	100	100	100
Fixed	86.5	85.0	83.8	80.4	82.9
Floating	13.5	15.0	16.2	19.6	17.1
Average time to refixing of the debt portfolio (years)	7.5	7.1	7.4	7.1	7.2
Share of debt in the debt portfolio refixing the interest rate in one year(%)	18.6	19.8	23.6	25.7	22.2

Source: MF of RA [3-11] and author's calculations

The average time to refixing of the Government debt in 2020, compared to 2017, decreased to 7.1 years instead of 7.5 years, and in 2021 it increased slightly and amounted to 7.2 years. A decrease in this indicator increases the interest rate risk. In 2020, the share of the Government debt refixing the interest rate in one year(%), increased to 25.7%, but in 2021 it decreased to 22.2%. For the floating interest rate loans, the basis for calculating service costs is the LIBOR interest rate (the average 6-month USD LIBOR rate in 2017 was 1.5%, in 2018

- 2.5%, in 2019 - 2.32%, in 2020 - 0.76%, in 2021 - 0.21%) [14]. The amount of this indicator is directly proportional to the amount of interest payments.

Thus, interest rate risk indicators show that although the interest rate risk is in management range, the risk has been increasing in recent years.

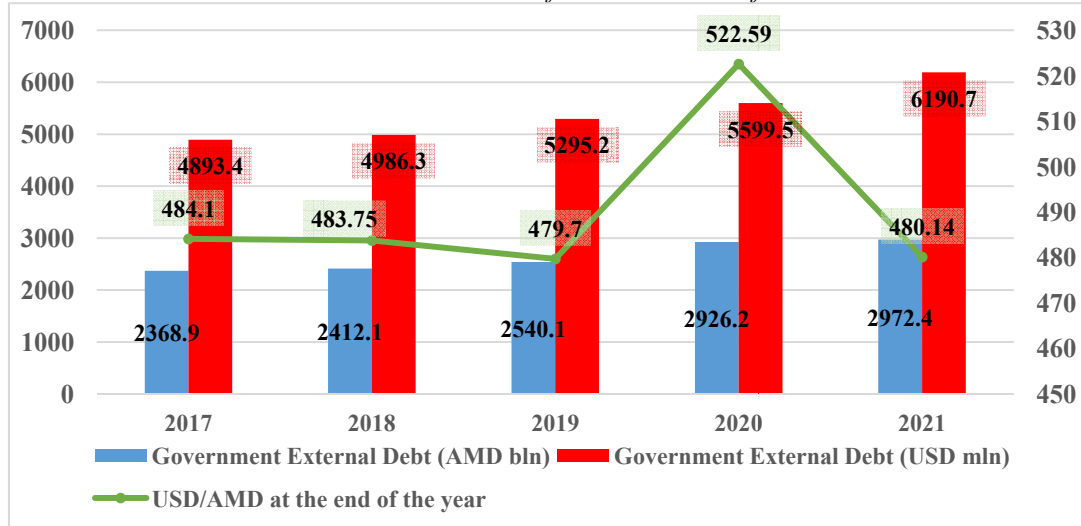
Exchange rate risk

FX risk relates to the vulnerability of the debt portfolio, and the government's debt cost, to a depreciation/devaluation in the external value of the domestic currency.

Analysing the monetary indicators of the foreign debt of the Government of the Republic of Armenia, we notice that depending on the change in the exchange rate, the percentage changes of the debt expressed in drams-dollars do not occur evenly. For example, in 2020 the foreign debt expressed in

drams increased by 15.2%, and the dollar debt increased by 5.7%, at the same time in 2021 the foreign debt expressed in drams increased by 1.57%, and the debt expressed in USD increased by 10.5%.

Chart 2. The External debt of the Government of Armenia

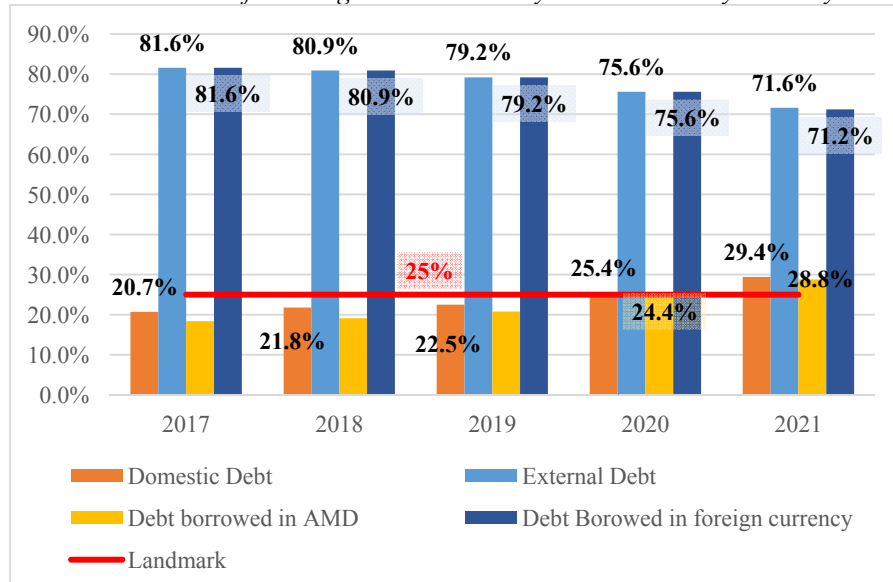


Source: MF of RA [3-11], CB of Armenia [13], author's calculations

In 2020, the domestic debt of the Government of the Republic of Armenia was 25.4%, which is 4.7 percentage points more than in 2017. In other words, if the domestic debt ratio in 2017 approached the risk point, in 2020 it has already strengthened in

the management range, as a result of which the government in 2021 set a new benchmark of 25% [8]. In 2021, domestic debt increased to 29.4%, which has a significant impact on debt sustainability.

Chart 3. The structure of the RA government debt by residence and by currency

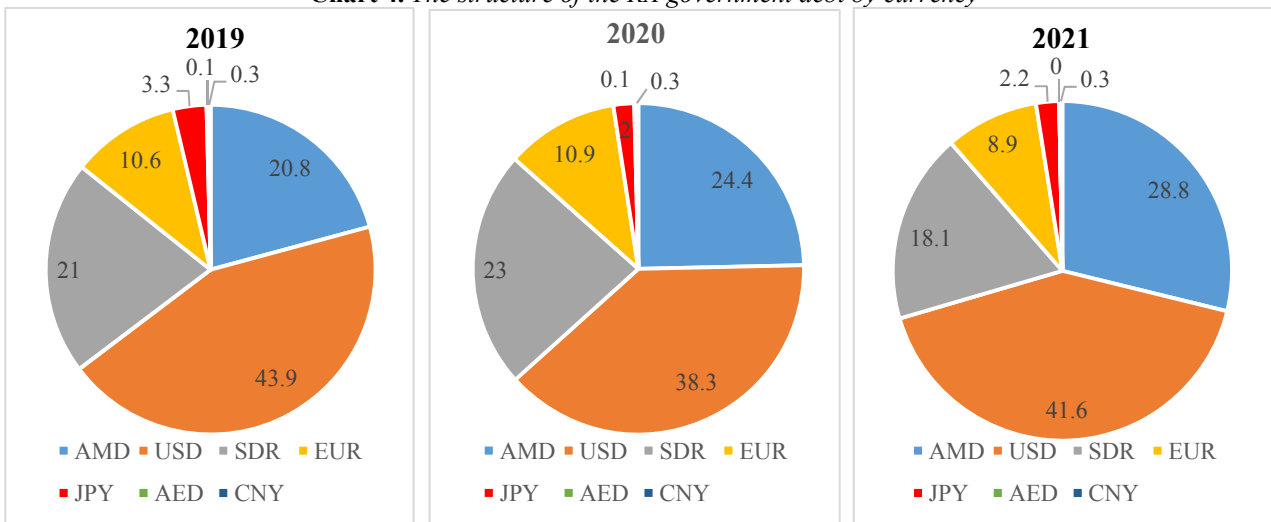


Source: MF of RA [3-11], author's calculations

The Government debt borrowed in AMD amounted to 18.4% in 2017, and in 2018 19.1%, which was in the risk range according to the debt strategic plan. However, in 2019 the index was 20.8%, which is a positive shift in terms of risk

management, and in 2020 the share of debt in AMD continued the growth to 24.4%, but it was still below the new benchmark. In 2021, the debt borrowed in AMD increased to 28.8%, which is already higher than the benchmark.

Chart 4. The structure of the RA government debt by currency



Source: MF of RA [3-11], author's calculations

In 2020 the share of debt in dollars decreased by 5.6 percentage points, and in 2021 it increased by 3.3 percentage points. The share of debt with SDR increased by 2 percentage points in 2020, and decreased by 4.9 percentage points due to the nature of foreign credit operations during the 2021.

The study of indicators shows that in recent years there has been exchange rate risk, but in 2019-20 the indicators have improved, and in 2020 the epidemic and the war forced the government to raise benchmarks to reduce debt management risks.

Conclusions

Thus, despite the fact that the government debt / GDP ratio was declining in 2017-19, due to the fiscal consolidation planned by the Government of the Republic of Armenia and implementation of more restrictive policies, progressive economic growth, in 2020 government debt / GDP ratio, due to the epidemic and 44-day Artsakh war, increased to 63.5%. which the government should reduce in the next 5 years according to the the new fiscal rules. In February 2021, the government issued \$ 750 million worth of Eurobonds to repair economic losses. Thus, the government debt / GDP ratio was 60.3%, which is quite close to the debt threshold.

The study of the debt portfolio of the Government of the Republic of Armenia shows that:

- Refinancing risk is in manageable range
- Interest rate risk has been increasing in recent years, but in 2021 indicators have improved and are in manageable range
- In recent years, there has been exchange rate risk, but in 2019-20 the indicators have improved, and in 2020 the epidemic 44-day Artsakh war forced the Government to raise benchmarks to reduce management risks:

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Տժանա/Հանձնվել է՝ 10.06.2022

Рецензирована/Գրախոսվել է՝ 13.06.2022

Принята/Ընդունվել է՝ 15.06.2022