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## Article

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# Public Debt Management Experience: The Case of EECCA Countries

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## Abstract

The aim of this study is to cluster the most widely used public debt management tools peculiar to the EECCA (Eastern Europe, Caucasus, and Central Asia) markets. Overall, the results show that the volume of EECCA countries' public debt relative to GDP declined from 2000 to 2015. However, as their public debt enhanced after 2016 and until 2020, inclusive, the need to choose proper tools for its management intensified. The main cause of public debt in most EECCA countries is the state budget deficit (Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan).



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The second place was taken by the balance of payments deficit (Armenia, Belarus). The only unique country was Azerbaijan, since it is likely to use public debt to finance economic and infrastructure development projects. No less interesting is that not all EECCA member states generate internal public debt. Kyrgyzstan, Moldova, and Uzbekistan have external public debt exclusively due to the lack of free resources that can be attracted from within the economy. In general, the investigation revealed that the main tool for managing internal public debt in EECCA countries is public bonds issued in national and foreign currencies. As for external public debt management, the top position is taken by external public bonds and international loans. The study has only two limitations: methodological and implementation. Other macroeconomic indicators of economic development were not considered, even though they may change the assessment of the effectiveness of the selected tools of public debt management. Meanwhile, the results can only be applied to those countries whose financial market is already formed and who have access to international financial markets. Otherwise, the tools of public debt management are limited.

**Keywords:** internal debt, external debt, debt management, public debt management tools, developing economies

**JEL:** H63, O11

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## Introduction

In this day and age, public debt has become a common phenomenon in the world economy. Since the financial crisis of 2008–2009, many countries have experienced a notable public debt increase. This issue is especially acute for EECCA (Eastern Europe, Caucasus, and Central Asia) member states represented by emerging economies. As the EECCA countries do not have excessive funds in state budgets, they have to search for financial resources outside the national economy. The main reasons for the state budget deficit and public debt formation are the lack of financial resources due to the balance of payments deficit, a significant share of the shadow economy, and specialization in the production and export of products with low added value. The problem of compensating for the decline in budget revenues became particularly urgent in 2020–2021 after the fall in world oil prices. And often, such compensation is accompanied by an increase in public debt.

It is undisputed that public debt management is paramount for national economic security. Public debt must be repaid, and the terms and value of the debt largely depend on the tools chosen to manage it. The central goals of public debt management are debt repayment (which can be conducted in many ways, from debt restructuring and re-crediting to the sale of government property), minimization of the cost of borrowing in the medium or long term, and complete renunciation of new borrowings to cover the state budget deficit or to finance socio-economic programs.

Choosing the tools of public debt management is quite complicated as it is possible to identify several methods and processes that can be applied in parallel, depending

on the amount and structure of the debt and the government's decision. Different instruments make it possible to achieve different public debt management effects. For example, loans from the International Monetary Fund (IMF) or other international organizations make it possible to form a certain level of confidence in the state as a borrower, which may reduce the cost of lending by private creditors. But negotiating the loan terms can take a long time, and the loan itself has an intended purpose, limiting the possibilities for its usage.

Turning to external public bonds makes it possible to raise the necessary funds in a relatively short period, but the cost of such debt will be determined by the market and can be quite high. In light of this, it is not infrequent when the government resorts to restructuring existing debts or, in fact, re-crediting.

The financial markets of EECCA economies (if they exist) do not always allow for the efficient borrowing of funds for the state budget. The rationale for this is simple: in addition to an institutionally formed financial market in the country's economy, there should also be savings that can be transformed into investments. The population and businesses must have free money, which can be used to purchase public bonds. Nevertheless, the practice shows that in emerging states, particularly EECCA countries, people often do not have significant amounts of savings, which leads to a lack of domestic investment. In view of the above, it seems reasonable to study which public debt management tools are used in EECCA countries and cluster them to provide comprehensive data that can be beneficial when improving the process and outcomes of public debt management.

The relevance of clustering external debt management tools is emphasized by the Global Sovereign Debt Monitor (Misereor 2020) and the report published by the United Nations (UN) (United Nations 2021). They argue that during the COVID-19 pandemic, the state budget deficit, as well as the public debt in EECCA countries, increased drastically. According to the UN report, Russia's government has focused on borrowing in domestic financial markets and issuing local-currency debt securities. It also noted that the stimulus packages enacted by Russia for 2020 and 2021 are cumulatively equivalent to about 7% of GDP, which is a high level of indebtedness. In order to balance fiscal spending in 2020–2021 in the face of low oil prices, some components of the fiscal rule were temporarily relaxed, and the application of certain articles of the Budget Code of the Russian Federation was extended to 2021, thereby allowing the government to allocate funds to finance anti-crisis measures without making changes to the budget.

Most papers on the matter do not address the clustering of public debt management tools. Most of them cover public debt dynamics, its structure, and implications for macroeconomic and fiscal policy. The theoretical gap of all the analyzed studies is that the attention paid to public debt management tools is insufficient, and no attempts have been made to gather such instruments for EECCA countries, for which this problem is highly relevant.

Thus, the purpose of the current work is to cluster public debt management tools peculiar to the EECCA markets. The choice of EECCA members as the research object is explained by the fact that all of them are emerging economies whose public debt tended to grow after 2016. In addition, EECCA countries are successor states of the former Soviet Union. Correspondingly, they have similar development environments and problems in national economies, which conditioned the emergence of public debt.

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## Materials and methods

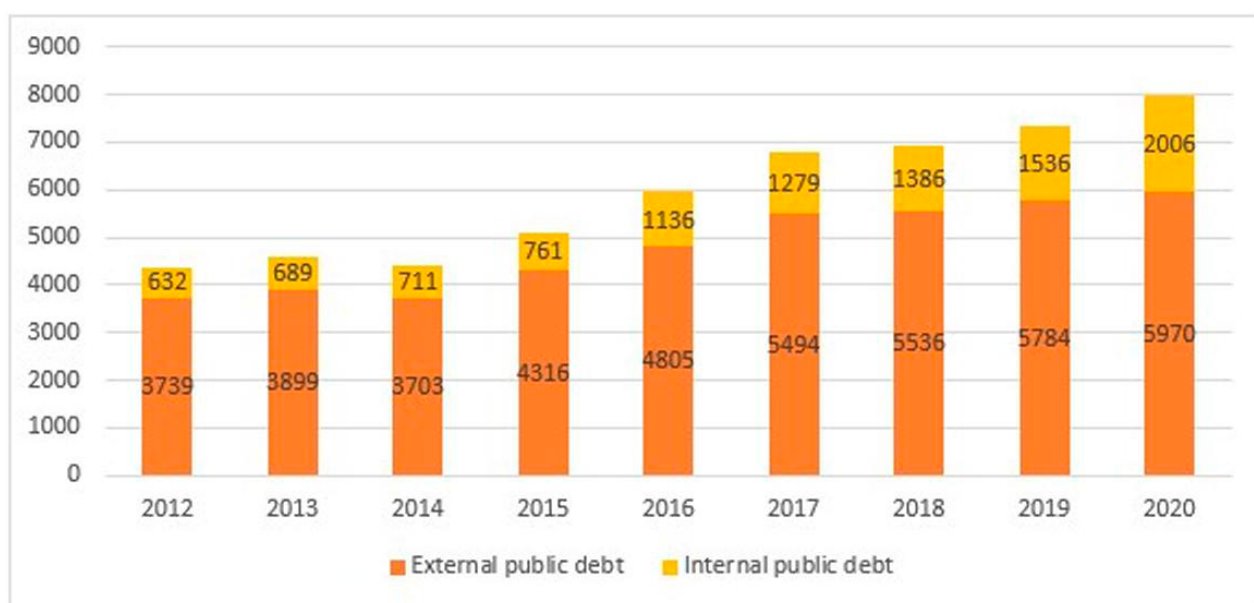
In order to cluster the tools of public debt management inherent in the EECCA markets, this study was conducted in several stages. The first stage analyzed the dynamics of public debt for all EECCA states. This allowed us to identify general trends in the volume of public debt and select countries for a more in-depth examination.

The second stage thoroughly analyzed public debt dynamics in EECCA countries in terms of internal and external public debt. The most recent information available on the websites of the Ministries of Finance of the following EECCA countries was used: Armenia (2012–2020), Azerbaijan (2011–2020), Belarus (2013–2020), Kazakhstan (2015–2019), Kyrgyzstan (2016–2020), Moldova (2013–2020), Russia (2013–2019), Tajikistan (2014–2018), and Uzbekistan (2016–2020). The public debt management tools were analyzed in the context of internal and external public debt since their formation conditions and management tools differ. After all the necessary data were collected, the internal and external public debt management tools were clustered.

All information necessary for the investigation was taken from official statistical data sources. Data on the dynamics of public debt as a percentage of GDP for all EECCA countries analyzed for the period 1992–2016 were retrieved from the official website of the World Bank (2021). Data on the dynamics of internal public debt and external public debt, as well as on the instruments of public debt formation and management, were extracted from the corresponding official websites of the Ministries of Finance and central banks: Azerbaijan (Ministry of Finance Republic of Azerbaijan 2021), Russia (Ministry of Finance of the Russian Federation 2021a; 2021b; 2021c), Kazakhstan (The Agency of the Republic of Kazakhstan for Regulation and Development of Financial Market 2021), Belarus (Ministry of Finance of the Republic of Belarus 2021a; 2021b; 2021c; 2021d), Tajikistan (Ministry of Finance of the Republic of Tajikistan 2021), Uzbekistan (Ministry of Finance of the Republic of Uzbekistan 2021), Moldova (National Bank of Moldova 2021), and Kyrgyzstan (National Statistical Committee of the Kyrgyz Republic 2021). The calculations and diagrams were created in Microsoft Excel.

## Results

All EECCA countries share a common initial characteristic of the development of national economies – at some point, each of them was part of the Soviet Union. Nevertheless, the economies of these countries have developed according to their own model and have faced their own problems for 30 years. As a result, the EECCA states differ in terms of their public debt formation and instruments for its management. The following figures provide a closer look at how each EECCA country manages its public debt, what tools it uses, and how effective such activity is in terms of debt repayment.



**Figure 1.** Public debt dynamics for Armenia, 2012–2020, million USD

Source: developed by the authors based on data retrieved from the Statistical Committee of the Republic of Armenia (2021).

Since 2012, Armenia has seen an increase in the volume of public debt (Figure 1). Its external debt is formed of the debt of the government and the debt of the Central Bank. However, it is worth noting that the external debt of the Central Bank of Armenia does not exceed 10% of the public debt during the whole analyzed period. The primary tools for external public debt formation and management in Armenia are external public bonds and international loans.

In general, the formation of Armenian external debt began after the crisis of 2008 when the government needed to finance state projects to support and revitalize the economy. A closer consideration of the structure of its external public debt makes it evident that 30–35% of its overall volume falls on loans from international organizations and governments of other countries, whereas 65–70% is debt on state external public bonds.

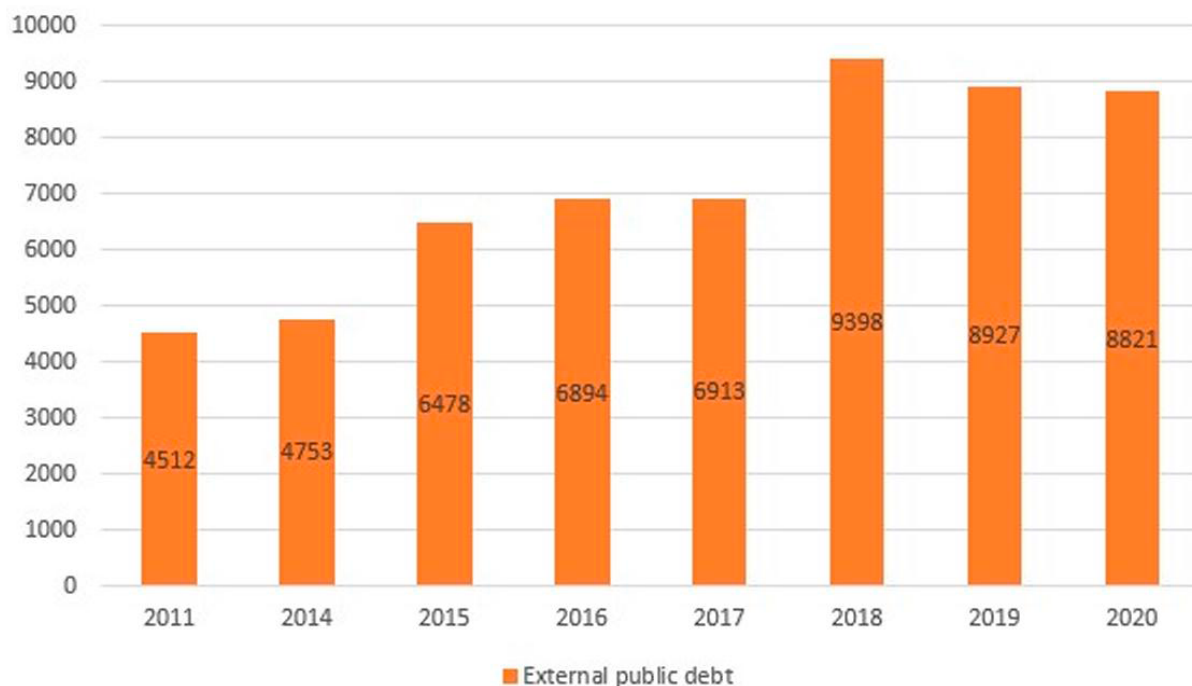


At the same time, about 85% of external debt is owed to international financial organizations, particularly the IMF.

Armenia's internal debt is formed by internal bonds, both in national and foreign currency. The fact that the government issues internal bonds in foreign currency shows that its amount is insufficient for economic activity. This is the consequence of a balance of payments deficit, which necessitates the accumulation of foreign currency to repay external debt. Analyzing Armenia's external debt dynamics shows that the amount grows yearly. Given the deficit of the balance of payments and low volumes of debt repayment during the last two years, one may assume that the volume of external debt will continue its upward trend. As a consequence, the permissible public debt-to-GDP ratio, which currently stands at 60%, may increase. Against this background, the IMF's credit policy towards Armenia may be revised, and the cost of servicing international loans may grow.

Azerbaijan's external public debt also tends to rise (Figure 2). However, unlike Armenia, loans embody the primary tool for managing external debt. The reason for this is that this country tends to attract funds not to cover the deficit in the balance of payments or the state budget but to finance projects. Public debt finances economic reforms, the restoration and reconstruction of infrastructure, the construction and repair of power plants and roads, as well as improving the water supply, aviation, railway, and production and energy sectors. The main sources of financing here are international financial organizations such as the World Bank, the Japan International Cooperation Agency, the Asian Development Bank, the Islamic Development Bank, and the European Bank for Reconstruction and Development (EBRD).

As the aim of public debt is not to solve economic problems but to finance projects, the tendency for it to increase can be viewed from different perspectives. On the one hand, it is a fully negative event because the time for the compulsory repayment will inevitably come, laying an additional burden on the state budget. On the other hand, state debt boosts the country's economic infrastructure and promotes economic reforms. Since the maturity of loans is ten years and more, in the near future, part of them is expected to be repaid, which explains the decrease in external debt in 2019–2020.



**Figure 2.** Public debt dynamics for Azerbaijan, 2011–2020, million USD

Source: developed by the authors based on data retrieved from the Ministry of Finance Republic of Azerbaijan (2021).



**Figure 3.** Public debt dynamics for Belarus, 2013–2020

Source: developed by the authors based on data retrieved from the Ministry of Finance of the Republic of Belarus (2021c).

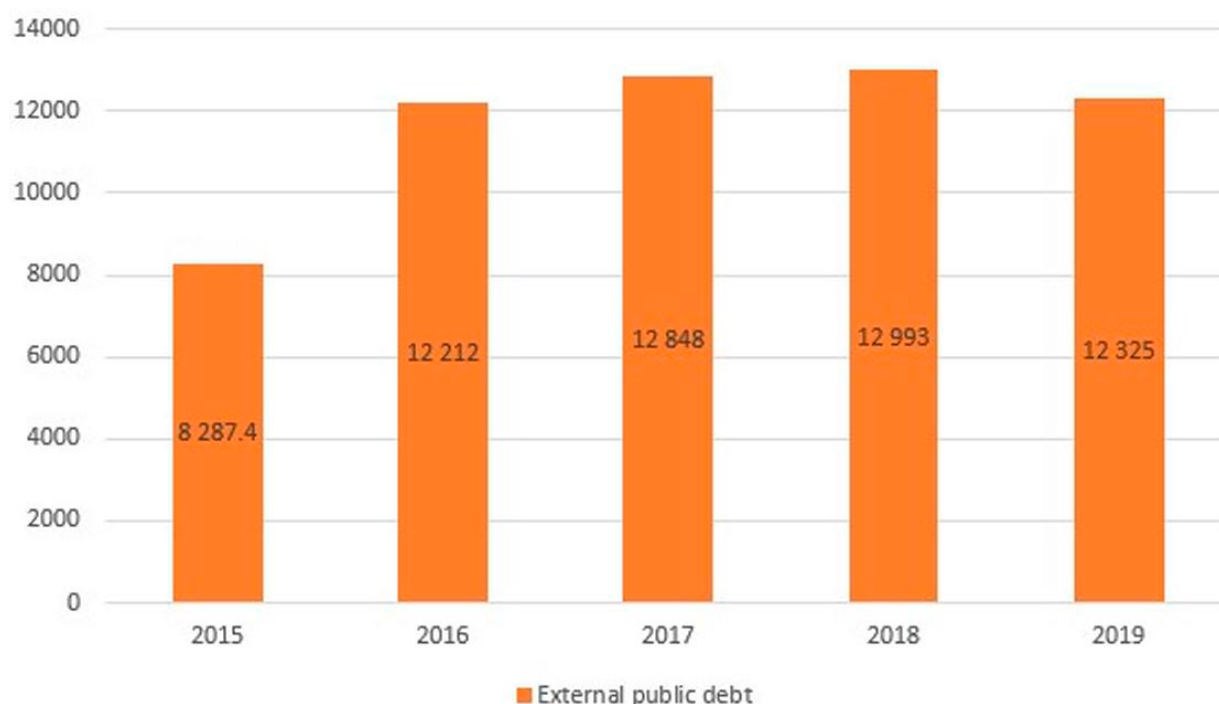


Belarus witnessed a rise in internal and external public debt from 2013 to 2017 (the total public debt increased from 21% to 39% of GDP). According to a report by the Ministry of Finance, Belarus' external public debt grew by 3.1 billion USD in 2017 (equivalent to an enhancement of 22.6%) to 16.7 billion USD as of January 1, 2018 (Ministry of Finance of the Republic of Belarus 2021c). In 2017, Belarus attracted 4.04 billion USD in external public bonds and used loans to raise funds and cover its balance of payments deficit. In more precise terms, the Russian government and banks issued 1.3 billion USD, the Eurasian Fund for Stabilization and Development (EFSD) issued 800 million USD, Chinese banks issued 306.6 million USD, the International Bank for Reconstruction and Development (IBRD) issued 159.4 million USD, and the EBRD and the Nordic Investment Bank (NIB) issued a total of 65.2 million USD. In sum, Belarus' external debt in 2017 was repaid with 1.3 billion USD, including 364.3 million USD to the Russian government, 353.1 million USD to the EBRD, 245.8 million USD to Chinese banks, 62.1 million USD to the IBRD, 3.6 million USD to US banks, and 500,000 USD to the EBRD and NIB (Ministry of Finance of the Republic of Belarus 2021c).

Correspondingly, as of 2017, Belarus' internal debt expanded by 1.1 billion BYR (equivalent to 10.3%) and reached 9.2 billion BYR (as of 2017, 1 BYR = 0.51 USD). In 2017, the Ministry of Finance placed 449.9 million USD and 200 million BYR worth of internal foreign currency public bonds for legal entities and individuals. Additionally, 1.3 billion USD and 189.7 million BYR was used to repay foreign exchange and ruble bonds of entities and persons (Ministry of Finance of the Republic of Belarus 2021c). Consequently, in 2017, the country's total debt increased by 5.2 billion BYR and reached 42.2 billion BYR. The 2017 external debt of Belarus amounted to 13.6 billion USD, i.e., it grew by 9.6% over 2016, while internal debt rose by 10.2 billion BYR (an increase of almost 5%).

Belarus's public debt is formed mainly by external debt, which generally determines the choice of tools for managing it. According to the Ministry of Finance, external borrowings in the international financial markets are carried out through external public bonds. Today, Belarus issues external public bonds in two currencies: US dollars (in the financial markets of Western European countries) and Russian rubles (in the financial market of Russia). In fact, bonds are the only external public debt management instrument in this country.

As concerns the domestic market, the central public debt management instrument is also represented by bonds, which have been actively used, e.g., in particular, in 2012–2013 (issued in USD). Most likely, the issuance of USD-denominated internal public bonds was due to the need to repay external bonds whose maturity was coming to an end. Thus, it can be inferred that both internal and external public debt in Belarus is managed by a single instrument – public loan bonds.



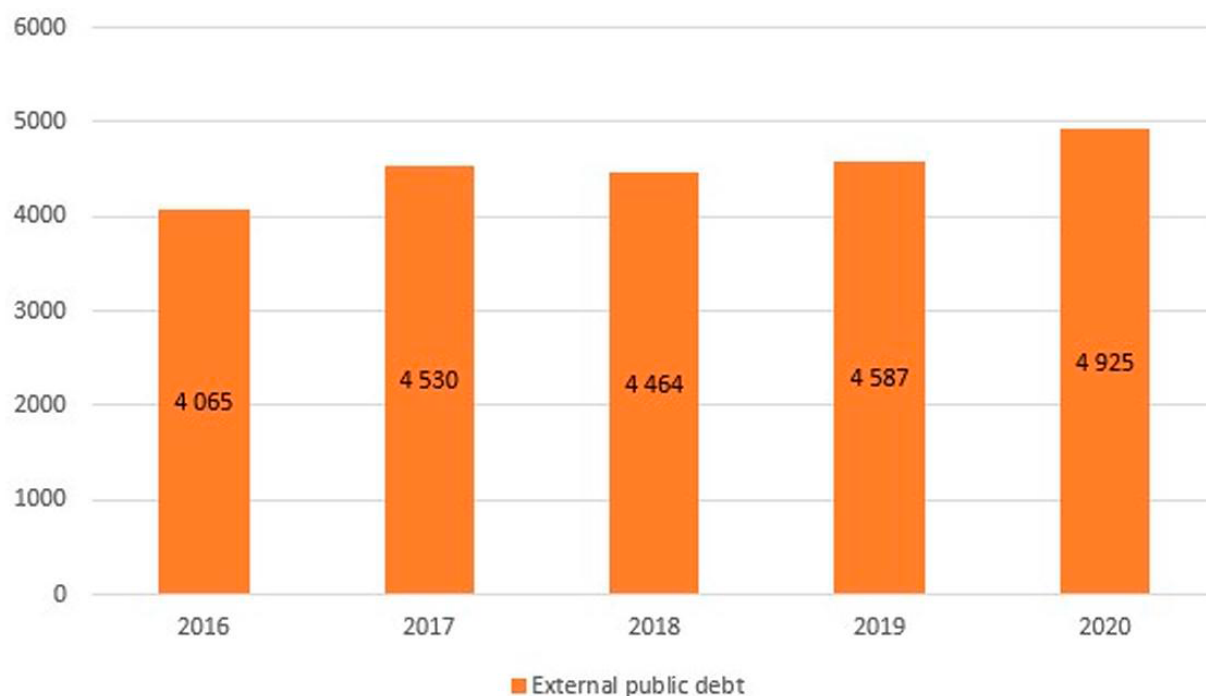
**Figure 4.** Public debt dynamics for Kazakhstan, 2015–2019, million USD

Source: developed by the authors based on data retrieved from The Agency of the Republic of Kazakhstan for Regulation and Development of Financial Market (2021).

Almost 80% of Kazakhstan’s external public debt consists of loans and borrowings, and 20% of liabilities on government securities. Its major creditor countries are the Netherlands, Great Britain, the US, France, China, and Russia. Credit resources are mainly used for financing programs for the development of the economy. In turn, the primary reason for the emergence of public debt is the constant state budget deficit experienced in the 1990s, which needed to be covered with international loans.

The dynamics of Kazakhstan’s external public debt are positive since, over the last four years, there has been not only no growth in the volume of debt but also a slight decrease. Considering that the country’s gold and foreign currency reserves for 2021 will cover 11 months of imports, it is expected that the national debt repayment will not be tough for the budget of this country.

Almost 80% of Kyrgyzstan’s public debt is formed by external public debt and only 20% from internal debt. The main public debt management tool of is government securities, i.e., bonds. The reason for the emergence and increase in Kyrgyzstan’s public debt is a weak economy. It took international loans to combat COVID–19, which led to a significant boost in external public debt in 2020. Kyrgyzstan may soon face complications with external debt repayment as the negative economic consequences of the COVID–19 are far from over. Currently, Kyrgyz authorities are negotiating the possibility of restructuring the debt and postponing its repayment.

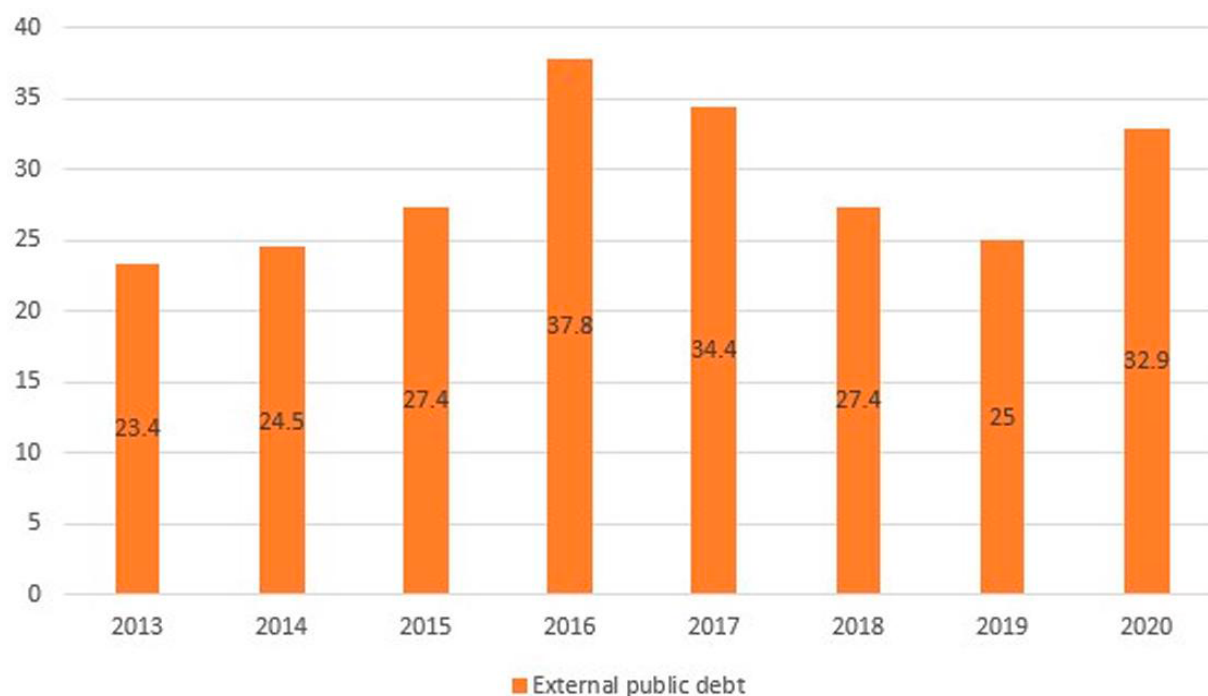


**Figure 5.** Public debt dynamics for Kyrgyzstan, 2016–2020, million USD

Source: developed by the authors based on data retrieved from the National Statistical Committee of the Kyrgyz Republic (2021).

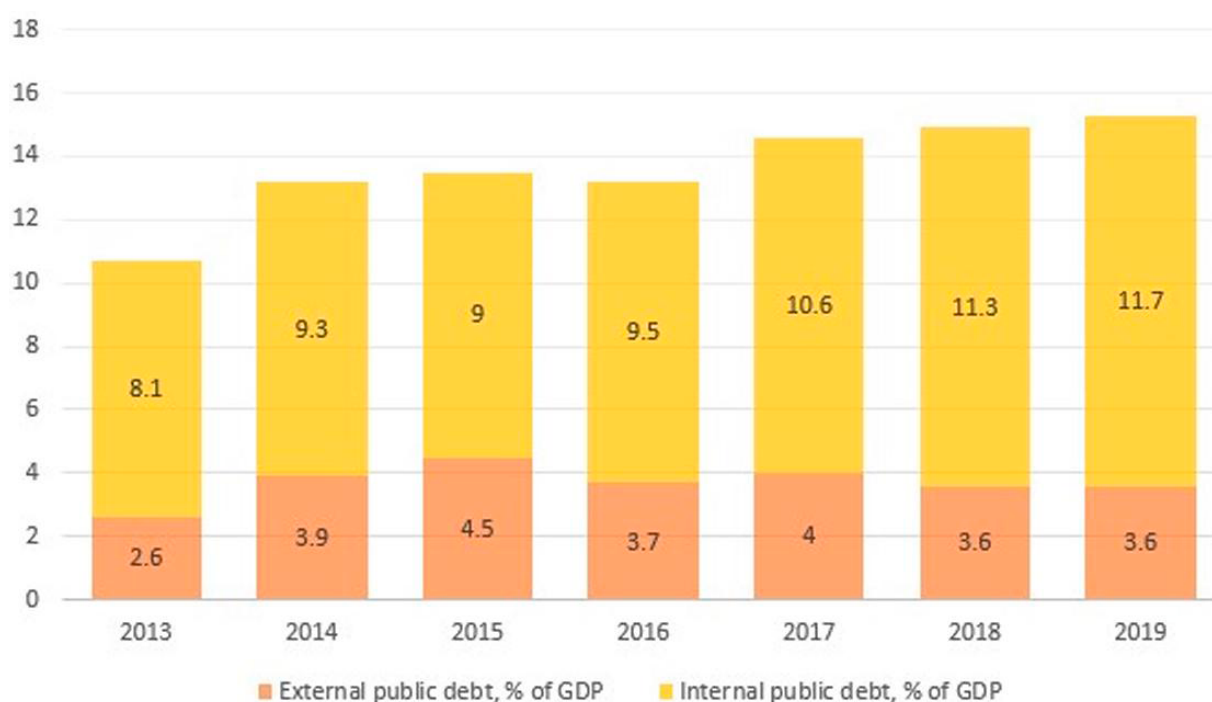
The primary external public debt management tool in Moldova is multilateral loans from international financial institutions. The central creditors of Moldova are the European Investment Bank, the Development Bank of the Council of Europe, the European Union (EU), the EBRD, the IBRD, the International Development Association, the IMF, and the International Fund for Agricultural Development. The main internal public debt management tool is the public bonds.

The principal reason for the increase in Moldovan public debt is the state budget deficit and the need to cover it. The year 2016 was momentous for the country. In view of the conversion of state guarantees granted to the National Bank of Moldova and the issuance of bonds by the country's Ministry of Finance to accumulate funds for state guarantees on loans, Moldova's internal public debt expanded significantly. For this reason, in the next few years, we should not expect a significant decrease in its public debt. The Ministry of Finance continues looking for new ways to restructure debts against the background of a systematic increase in public debt to GDP, which is already over 40% as of the year 2021.



**Figure 6.** Public debt dynamics for Moldova, 2013–2020, % of GDP

Source: developed by the authors based on data retrieved from the National Bank of Moldova (2021).



**Figure 7.** Public debt dynamics for the Russian Federation, 2013–2019

Source: developed by the authors based on data retrieved from the Ministry of Finance of the Russian Federation (2021a).

The situation in Russia (Figure 7) shows that between 2013 and 2019, the state experienced a slight increase in public debt from 10.7% to 14.9% of GDP. Although public debt was projected to rise to 21% of GDP by the end of 2020, this value is still much lower than that of most emerging economies. The state budget deficit is predominantly financed by domestic borrowing, especially from large domestic banks. Not so long ago, the government issued 2 billion EUR worth of Eurobonds in two tranches, with a yield of 1.125% for the 7-year tranche and 1.850% for the 12-year tranche.

In sum, about 70% of public debt in Russia is internal public debt. This can generally provide more flexibility in the public debt management policy and allow different management tools to be used. Among all the tools utilized by the Ministry of Finance of the Russian Federation for external debt management, bonds of different types prevail, depending on the conditions under which the government raises funds. The top three are federal loan bonds with discount amortization, federal loan bonds with a variable discount, and federal loan bonds with a variable coupon. Through these three instruments, the Ministry of Finance has formed almost 85% of the internal public debt. Apart from bonds, Russia's external debt is financed by loans from foreign governments and loans from multilateral development banks. However, bonds still play the leading role as the main external debt management tool.

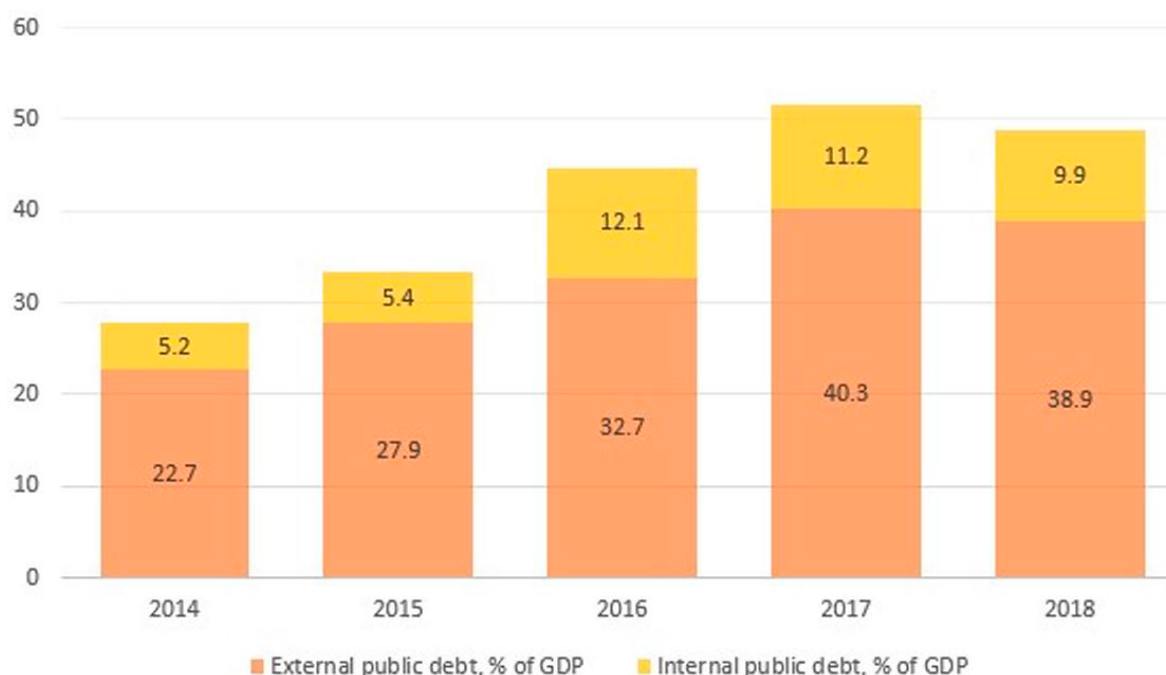


Figure 8. External public debt management tools, by share, for the Russian Federation, %.

Source: developed by the authors.

As can be seen from the figure above, bonds account for more than 90% of Russia's external public debt. Less than 4% is represented by foreign governments loans and less than 3% by development banks loans. In dynamics, the share of loans from foreign countries and development banks decreased significantly after 2014, and, as of 2019, the aggregate share

was less than 3%. This situation can be related to the sanctions of the US and EU countries limiting lending to the Russian economy. Back in 2014, the EU and the US suspended investment cooperation with Russia, and the European Investment Bank stopped financing projects in Russia. Thus, the placement of government bonds is currently the only possible tool for public debt management.



**Figure 9.** Public debt dynamics for Tajikistan, 2014–2018

Source: developed by the authors based on data retrieved from the Ministry of Finance of the Republic of Tajikistan (2021).

The main reason for the increase in Tajikistan's public debt is the need to finance the state budget deficit. To achieve this goal, the country's government also benefits from international loans. Tajikistan's main creditors are the World Bank, the Asian Development Bank, the IMF, the Islamic Development Bank, the EBRD, the Fund of the Organization of the Petroleum Exporting Countries (OPEC), the Anti-Crisis Fund of the Eurasian Economic Union (EAEU), the European Investment Bank, the International Fund for Agricultural Development, and the Asian Infrastructure Investment Bank.

To manage the internal public debt, Tajikistan uses state treasury bills, which cover more than 90% of the total internal public debt. Since 2014, there has been a steady increase in both external and internal public debt. In order to effectively manage it, the government has implemented the Program of State External Borrowings. According to the Ministry of Finance's forecasts, the rise in the volume of public debt is not critical at the moment and will amount to 40% of GDP in 2021. In any case, the government plans to continue using loan agreements to cover the state budget deficit and support the country's economy. Thuswise, the repayment of the existing debt might take



place at the expense of new loans, as the country's budget cannot cover these debts on its own. Under the current conditions, the public debt is not expected to decrease, and the continuation of its upward trend may cause problems in the medium term after its volume exceeds the critical indicator (60% of GDP).

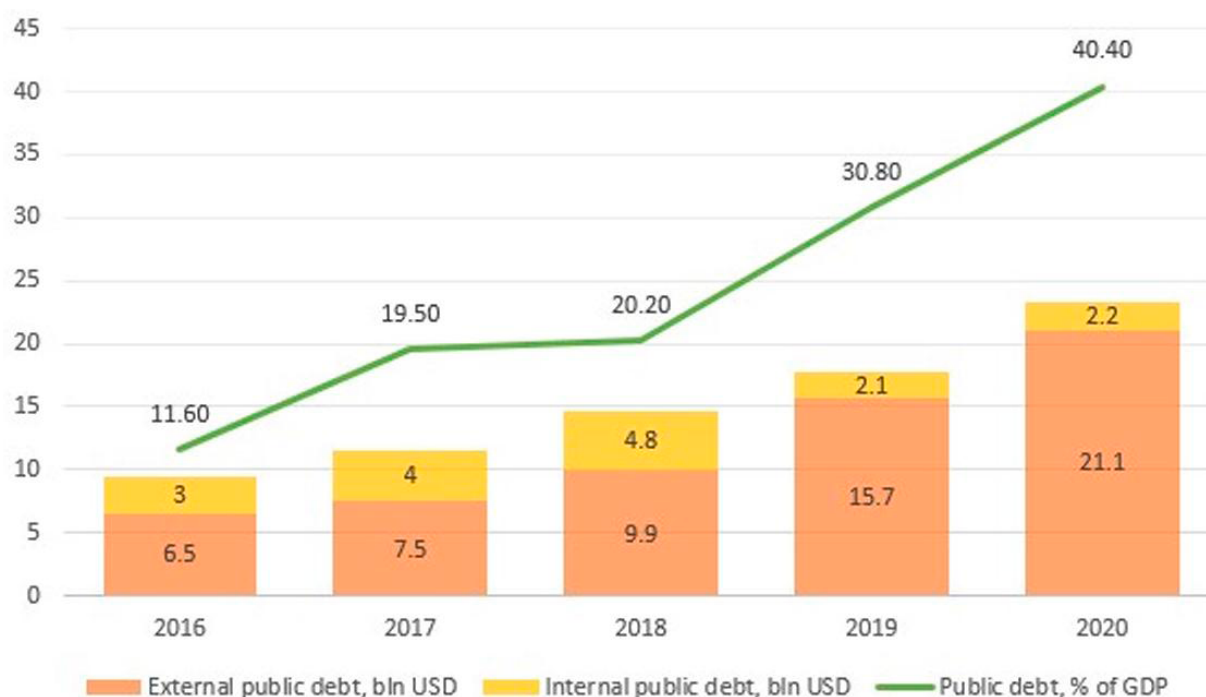


Figure 10. Public debt dynamics for Uzbekistan, 2016–2020

Source: developed by the authors based on data retrieved from the Ministry of Finance of the Republic of Uzbekistan (2021).

External debt accounts for the bulk of Uzbekistan's public. The main creditors of Uzbekistan are the Asian Development Bank, the World Bank, the State Development Bank of China, the Export-Import Bank of China (China Exim Bank), the Japan International Cooperation Agency, the Economic Development Cooperation Fund, the Islamic Development Bank, and the Japan Bank for International Cooperation. The chief reasons for the increase in Uzbekistan's public debt are financing the state budget deficit and supporting different sectors of the economy. The systematic growth of the budget deficit is the major challenge of public debt management, and the government is trying to reduce it to 2% of GDP.

Uzbekistan relies most on loans as the principal public debt management tool. As long as this country has a good payment history and an acceptable level of public debt to GDP of 40%, one can assume that it should not have significant problems with debts payment in the foreseeable future. Nevertheless, the COVID-19 pandemic has significantly weakened the country's economy and will require additional resources, which Uzbekistan

does not have. Thus, it is anticipated that the government will use crediting programs to resolve economic issues.

The by-country results provide enough data to cluster public debt management tools typical for EECCA countries based on the frequency of their application (Figure 11) and characterize the general state of public debt management in the EECCA states (Figure 12).

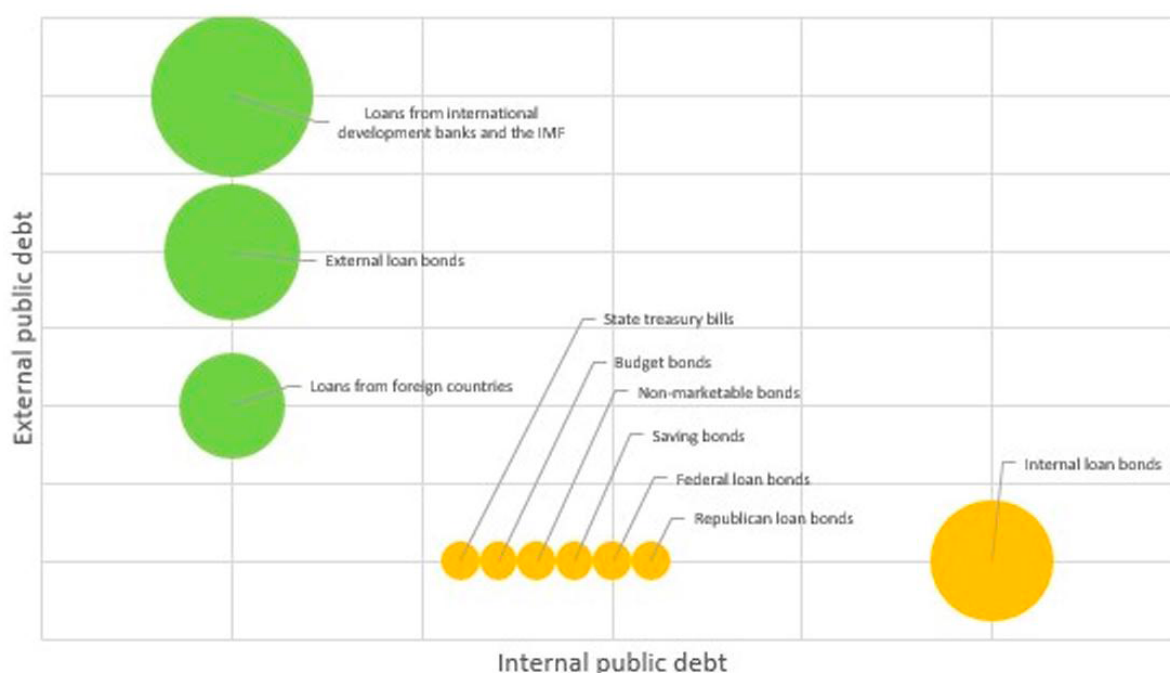


Figure 11. Public debt management tools used in EECCA member states

Source: developed by the authors.

The data summarized in Figure 11 indicate that among all of the external public debt management tools used in EECCA countries, loans from international development banks and the IMF are the most popular. This is explained by the problems of EECCA members with the state budget and balance of payments deficits, which are covered by credit resources. At the same time, external loan bonds can be used only by those countries that have confidence in the international financial market and whose state-issued securities are in demand. Loans from the governments of other states are the least frequently used as they attract the least amount of funds.

As for the internal public debt, in most cases, it is managed with internal bonds. This tool is used in all countries that have internal public debt. Additionally, the government can issue bonds in both domestic and foreign currencies. Other types of bonds as an instrument of public debt management are used in Russia, and only Tajikistan takes advantage of state treasury bills.

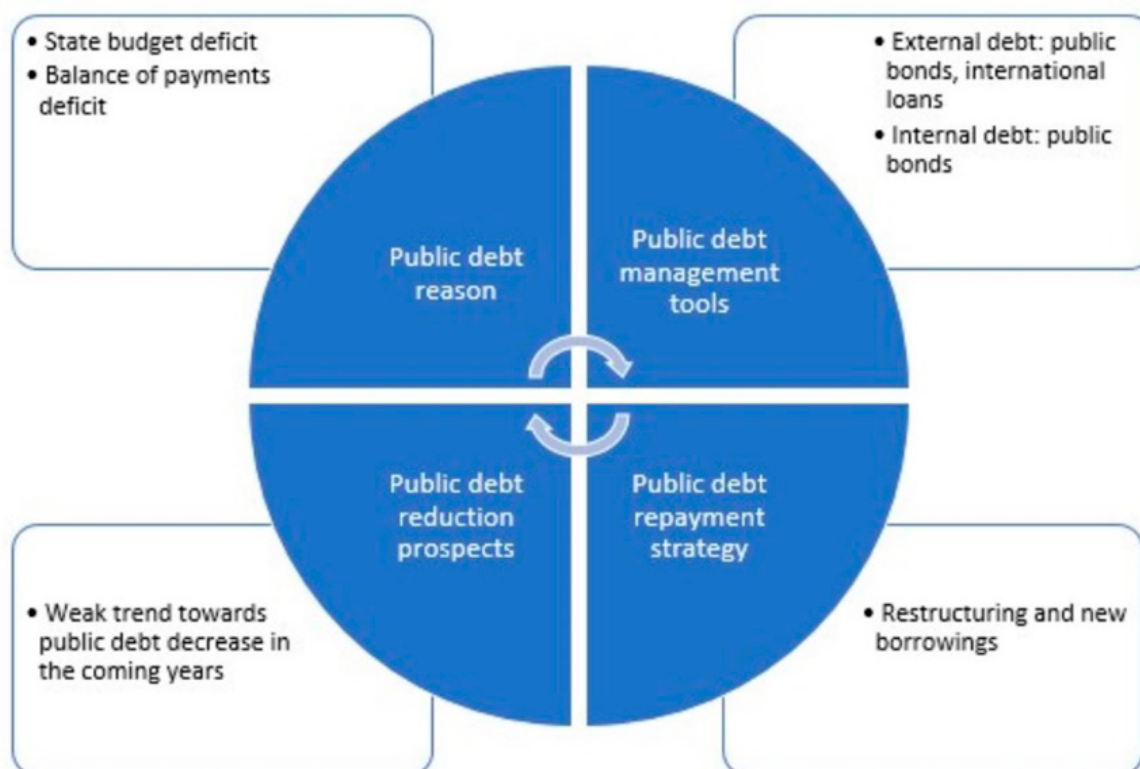


Figure 12. Main characteristics of public debt management in EECCA member states

Source: developed by the authors.

The developed approach to clustering public debt management instruments can be used by both EECCA governments and public debt researchers. EECCA governments, as well as state authorities involved in public debt management, can employ the data to introduce new public debt management tools that are not yet used in a particular country. In addition, this clustering can be useful in terms of diversifying the sources of financing the state budget deficit, the balance of payments, or other development goals of a country's economy. It can be taken advantage of by researchers for the further study of issues related to the public debt management infrastructure, for instance, to discover why external public debt is mostly formed through loans and not through bonds placement. Along with this, the predominant use of bonds to manage internal public debt, while other instruments are not used at all, also requires further research.

The study findings revealed that bonds are the foremost tool for managing both external and internal public debt. This can be explained by the fact that bonds are debt securities and can be traded in the financial markets, making them attractive to investors. At the same time, bond liabilities are government-guaranteed and, therefore, have low risks and high reliability, allowing the country that issues them to manage public debt effectively.

## Discussion

Comparing the results with other studies showed that the clustering of public debt management tools used in EECCA nations encompasses all means ever applied in these countries. The report on the state of Belarus's economy (Anokhov 2020) demonstrates that this state has a relatively good debt situation – it was given a credit rating of “B”. At the date of the report's preparation, the government had access to international financial markets, and in the first half of 2020, there were two government bond placements: 10 billion RUB in the Russian capital market and 1.25 billion USD of Eurobonds. The last Eurobonds issue was four times oversubscribed, indicating high demand for the country's national debt. However, the growing spread between US dollar-denominated Belarusian bonds and US government bonds indicates that international investors are increasingly aware of the country's risks. The report data confirm that the main tool for managing external public debt is represented by bonds, which the Ministry of Finance places on both Western and Russian financial markets.

Examining the external debt and macroeconomic balance in Belarus, Dayneko (2017, pp. 33–38) suggested several measures to reduce liquidity risks for the country's economy. In particular, he proposed using amortizable bonds and limiting the annual volume of bonds issued in foreign currency for the domestic market. His findings and proposals are fully consonant with the outcomes of this work and confirm the conclusions made for Belarus.

In his study of the demand for internal public debt in Russia, Belyakov (2017, p. 43) examined the structure of Russia's internal debt from the perspective of investors and the context of its formation. The results of his investigation coincide with the outcomes presented in this research and prove that the Russian government uses bonds in the domestic market. Depending on the objectives, different types of bonds are used, and they are the primary internal debt management tool.

While analyzing the effect of public debt on Russia's budget system Parasotskaya and Yakovlev (2019, pp. 61–69) argued that attracting additional funds into the budget to finance government programs can be carried out through receiving loans from other states or international financial organizations, and by placing bonds issued by the state on the international financial market. These arguments are also in line with the findings of the present research.

In another study devoted to the issues of public debt in Russia, Tsvirko (2014) criticized the policy of the Ministry of Finance after 2014. In her opinion, the most promising instrument for covering the federal budget deficit is the additional issuing and placement of state loan bonds in the domestic financial market. According to Tsvirko, a rapid increase in government debt can lead to problems that already occurred in 1998. Indeed, this statement deserves further investigation as this problem is still relevant today.

While investigating the structure of the Russian Federation's public debt, Vilkova and Cheplakova (2017, pp. 106–114) found the same results as those given in this paper. Internal public debt is fully formed with public bonds of various types, maturities, terms of premium, discount, and amortization. External debt is also formed by bonds, but not them alone.

The practical value of this paper lies in the fact that the results of clustering can be used for a detailed analysis of the structure of instruments and their comparison in different countries. In particular, national economic security will depend on the prevalence of one or another external debt management tool insofar as all of them presuppose obtaining finances on different terms and conditions. What is more, the collected data open up broad opportunities for further developments on this topic, specifically the study of the effect of the choice of one or another public debt management tool on the country's macroeconomic indicators and its fiscal policy.

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## Conclusions

Collectively, the investigation outcomes show that the ratio of internal and external public debt varies across EECCA states. However, in the majority of countries, external public debt accounts for more than 80% of the total public debt. The only exception is Russia, which has more than 70% of its public debt as internal, which may indicate that only the Russian economy has a significant amount of free funds that the government can accumulate to finance the state budget deficit. All other EECCA countries need external financial assistance.

The collected data suggest that the central tools for internal public debt management are represented by internal bonds (Armenia, Belarus, Russia) and state treasury bills (Tajikistan). The main tools of external public debt management are external bonds (Armenia, Belarus, Kyrgyzstan, Russia) and international loans (Azerbaijan, Kazakhstan, Moldova, Tajikistan, Uzbekistan). The prime reasons for public debt are the state budget and the balance of payments deficit. The exception in this respect is Azerbaijan, which finances economic development and development projects with international loans.

The major limitations of this study are its methodology and how it was implemented. The first lies in the fact that this work considered only public debt indicators without additional considering the macroeconomic peculiarities of the EECCA countries' economic development. Consideration of inflation, national currency exchange rate, the balance of trade, foreign exchange reserves, and the burden of public debt servicing on the country's budget may change the understanding of the effectiveness of public debt management tools. The implementation limitation is explained by the fact that the conclusions can only be applied to countries with a developed domestic financial market.



A poorly-developed financial market means that the state is restricted in the choice of public debt management tools, and only loans from international financial institutions are available to it.

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## Doświadczenia w obszarze zarządzania długiem publicznym: przypadek krajów EWKAŚ (Europy Wschodniej, Kaukazu i Azji Środkowej)

Celem tego opracowania było zestawienie najczęściej stosowanych narzędzi zarządzania długiem publicznym, charakterystycznych dla rynków EWKAŚ. Ogólnie rzecz biorąc, wyniki przedstawione w niniejszym opracowaniu wskazują, że wielkość długu publicznego krajów EWKAŚ w relacji do PKB zmniejszyła się w latach 2000–2015. Ponieważ jednak ich dług publiczny wzrastał po 2016 r., aż do 2020 r. włącznie, zwiększyła się potrzeba doboru odpowiednich narzędzi zarządzania długiem. Odkryto, że główną przyczyną długu publicznego w większości krajów EWKAŚ jest deficyt budżetu państwa (Kazachstan, Kirgistan, Mołdawia, Rosja, Tadżykistan, Uzbekistan). Kolejną przyczyną jest deficyt bilansu płatniczego (Armenia, Białoruś). Jedynym krajem, który w tym kontekście charakteryzował się dość wyjątkową sytuacją, był Azerbejdżan,

który prawdopodobnie wykorzysta dług publiczny do finansowania projektów przyczyniających się do rozwoju gospodarczego i infrastrukturalnego. Nie mniej interesujący jest również fakt, że nie wszystkie państwa członkowskie EWKAŚ generują wewnętrzny dług publiczny. Kirgistan, Mołdawia i Uzbekistan mają zewnętrzny dług publiczny wyłącznie ze względu na brak wolnych zasobów, które można pozyskać z gospodarki. Przeprowadzone badanie ujawniło, że centralnym narzędziem zarządzania wewnętrznym długiem publicznym w krajach EWKAŚ są obligacje publiczne emitowane w walutach krajowych i obcych. Jeśli chodzi o zarządzanie zewnętrznym długiem publicznym, to pierwsze miejsce zajmują zewnętrzne obligacje publiczne i pożyczki zagraniczne. Obecne badanie ma tylko dwa ograniczenia, metodologiczne i wdrożeniowe. Pierwsze z nich to fakt, że nie uwzględniono innych makroekonomicznych wskaźników rozwoju gospodarczego, choć mogą one zmienić ocenę skuteczności wybranych narzędzi zarządzania długiem publicznym. Drugie polega na tym, że uzyskane wyniki można zastosować tylko do tych krajów, których rynek finansowy jest już uformowany i które mają dostęp do międzynarodowych rynków finansowych. W przeciwnym razie narzędzia zarządzania długiem publicznym mają ograniczone zastosowanie.

**Słowa kluczowe:** dług wewnętrzny, dług zewnętrzny, zarządzanie długiem, narzędzia zarządzania długiem publicznym, gospodarki rozwijające się