

Tools of state borrowings at the regional level in the digitalization of the economy

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Abstract — The subject of this research is the economic relations arising in the process of using bonds by regional Russian authorities. The objectives of the bond issue by the subjects of the Federation of the Russian Federation are the following: financing the budget deficit, cash ruptures of budget implementation, and financing public debt. The bond method of attracting funds in some cases may be the most effective from the point of view of attracted amounts of money and “accumulating” of a credit rating. Subjects of the Federation can use several types of bond loans to raise funds. Taking into consideration that most regions have serious problems in attracting funds, and the restrictions imposed on the volume of emissions and the size of a public debt suggests investment bonds as the most attractive mechanism for raising funds.

Keywords — *bonds, borrowings, investments, budget, regional authorities, subjects of the federation*

I. INTRODUCTION

Bonded loans are a source of raising funds not only to solve the budget problems of regional authorities, but also to attract investments in the region. However, at present, this component of borrowing is not paid enough attention to in Russia. In most developed countries, investment loans are a significant source of attracting funds for regional development. In Russia, there have been some attempts at issuing investment loans as well as their varieties (housing certificates, mortgage securities), as well as legislative development and promotion of infrastructure and concession bonds. In reality, at the current moment, only commercial mortgage bonds and mortgage participation certificates are circulated as investment securities on the market.

II. OBJECTIVE

The objective is to analyze the possible bonded methods of attracting funds by regional authorities, to identify their strengths and weaknesses, to offer the most optimal type of borrowing.

The methodological basis of this study consists of such methods of scientific research as statistical and comparative analysis, synthesis, forecasting of economic and financial

indicators of investment processes related to bonded methods of attracting funds

III. MAIN RESULTS

1. A comparative analysis of different types of bonded loans was carried out from the standpoint of matching the time of issue of a bond to a borrowing goal; 2. The distinctive features of investment bonds are revealed in order to identify the advantages and disadvantages for their practical use; 3. A typology of different types of investment bonds is presented by sources of repayment, sources of attraction, objectives of the issue; 4. The prospects of investment attraction of funds by regions are proved.

All tools of government borrowing can be divided into two groups: credit and bond. Depending on the purpose and source of repayment, the state uses 2 main types of bonded loans: budget (non-target); target (investment) [6]. The most common type of used bonds are non-target types of bonds aimed at financing budget problems (budget bonds). They are issued to finance cash ruptures of budget implementation. For this reason, their characteristic features are: short-term nature (up to 1 year).

This group also includes bonds aimed at financing the budget deficit and public debt (that is, in fact, a previously financed budget deficit). Accordingly, the term of their release is more than one year. Source of repayment of all budget bonds is current or future budget revenues.

However, this group of loans has both advantages and disadvantages. The positive aspects of budgetary bonds include a direct focus on solving a global task - financing budgetary problems. The negative is that the source of their repayment is the profitable base of the budget, which contributes to the rapid accumulation of debt and the public debt of the region. [11]

These shortcomings target types of government bonds are deprived. Their peculiarity is that by means of their release direct, extra-budgetary financing of budget expenditures is carried out, respectively, budget revenues will not be distracted by their repayment (Table 1).

The time of issue of a bond depends on the purpose of the issue. Firstly, these are budget objectives aimed at financing

cash gaps, budget deficits and public debt (that is, in fact, the budget deficit of previous periods).

Secondly, they are targeted loans aimed at financing specific socio-economic programs (Table 2).

The remaining parameters of the loan should also be closely related to the objectives of the loan. Investigating the foreign experience of using bonds as a tool for attracting funds, the author revealed that three main types of target bonds are used. Depending on the purpose of the issue and the type of providing, the bonds are divided into: general bonds; profitable bonds; bonds of industrial development (Table 3).

TABLE I. COMPARATIVE CHARACTERISTICS OF BUDGETARY AND EXTRABUDGETARY BONDS

Characteristics	Budgetary bonds	Non-budgetary bonds
The Purpose of the Issue is	to finance cash ruptures of budget implementation; financing of the budget deficit; financing of public debt	Construction or reconstruction of social and investment objects
Source of repayment	Current or future budget revenues	Revenues from a constructed or reconstructed social or investment object
Security	Cash (budget)	Social or investment object
Benefits	Financing budget problems	Extra-budgetary financing of budget expenses
Disadvantages	Leads to the growth of public debt	It is impossible to use in conditions of high inflation

TABLE II. COMPLIANCE OF THE TERM OF THE BOND ISSUE TO THE LOAN PURPOSES

Characteristics of loans	Financing of cash ruptures of budget implementation	Budget financing deficit and public debt	Financing of socio-economic programs
Loan term	up to 1 year	Medium and long term, more than 1 year	Medium and long term, more than 3 years
Loan amount	in % of budget revenue base	in % of budget revenue base	in % of property value
Terms of issuing of a loan	depend on the focus on the investor	depend on the focus on the investor	depend on the focus on the investor

Under current conditions, it seems necessary for Russia to raise funds for direct financing of investment programs. One of the options for additional financing of socio-economic and investment programs is to issue investment securities.

Investment bonds are target securities issued for financing social or investment objects, i.e. infrastructure facilities of government. The source of their repayment is the income received from the constructed or reconstructed investment object. Based on this, there may be 2 options for the repayment of investment bonds:

1. Bond issue for an investment object, repayment is carried out at the expense of future income from the object.

2. Bond issue for an investment object, repayment is through the sale of an investment object in commercial use.

The main advantage of this form of raising funds is the elimination of a double flow of funds: into the budget and from the budget; instead, there will be direct funding for programs from funds raised through borrowing. In addition, the issue of investment bonds will not increase the public debt of the region. The possibility of financing these programs seems in the extrabudgetary financing of regional property by means of attraction of financial resources under such projects that will bring income. [11]

TABLE III. FEATURES OF ISSUE IN CIRCULATION OF CERTAIN TYPES OF BONDS (FOR EXAMPLE, THE UNITED STATES)

Estimated General indicator	General bonds	Profitable bonds	Bonds of industrial development
Sources of repayment	taxes	project revenues	revenues from private sector projects
Benefits for the issuer	financing of the budget sector	<ul style="list-style-type: none"> project costs fall not on all taxpayers, but on investors; for bond issue there is no need to hold a referendum; it does not increase the (debt on) public debt. 	tax base expansion
The advantages for the investor	lower risk, since payment is carried out in a priority order,	they have a "double" provision, since provided by the project income and the guarantee of the authority	the issuer is the authorities, but the construction is carried out for the private sector

In foreign countries, target loans are widely used for these purposes. Emission volumes and the number of issues are shown in the table.

Investment loans are applied to a wide range of programs. The most common is the financing of schools, hospitals, universities, industrial development facilities.

Large profitable investment programs, the implementation of which is important for many regions of Russia, make the implementation of investment bond loans strategically promising. This requires real investment programs and competent investment policy of the regions (including the mechanism for selecting investment projects).

Proceeds from investment loans are directed to the construction or reconstruction of investment objects, the operation of which should ensure the return and maintenance of the loan. In the United States, the regional investment bond market is the most developed; funds are being received for the

construction of various investment infrastructure facilities (utilities, transport, roads, bridges) and industries (agriculture, industry, education, health care, culture) (Table 4).

TABLE IV. USE OF PROCEEDS FROM THE BOND ISSUE IN THE UNITED STATES (1986)

Directions of use	Amount (million dollars.)	Number of issues	Directions of use	Amount (million dollars.)	Number of issues
Agriculture	850,0	5	Public transport	3144,5	24
Aeroports	599,9	30	Housing and municipal services	2680,7	70
Conference centers	718,0	23	Recreation facilities	187,1	29
Correctional institutions, courts	2248,0	64	Parks, zoo	194,4	54
Economic development	684,6	50	Parking for cars	528,3	41
Education	318,2	4	Ecology	2753,7	70
Power stations	18444	147	leisure and recreation	484,1	18
Fire stations	72,8	40	Slum development	1159,0	92
Flood control	230,8	15	Help for pensioners	294,8	13
Administration	36205	1365	Roads and bridges	6628,9	82
Public works	6013,9	580	Sanitary and epidemiological control	546,4	66
Public sector	1108,9	68	Sea ports	479,4	24
Health care	288,7	43	Schools	10552,1	1357
Universities	6971,5	241	Recycling	1801,5	32
Hospitals	8560,0	268	Stadiums	42,6	4
Single family houses	6054,0	106	Street maintenance	234,4	130
Apartment blocks	3320,4	118	Student loans	1283,3	19
Other housing	946,6	24	Tennis and golf	20,5	4
Industrial development	2668,0	251	Theatres	26,6	2
Other industries	71,4	5	Other transport	1238,5	19
Libraries, museums	141,5	28	Other infrastructure	296,0	33

In Russia, at the present legislative level, there is no definition of an “investment bond”. Moreover, in the history of Russia, 3 types of bonds were used, which can be attributed to investment bonds:

1. Housing certificates
2. Investment bonds
3. Mortgage securities

Housing certificates were issued from 1992 to 2001 by many subjects of the Russian Federation and a number of municipal entities. Their issue was associated with the need of building construction from extrabudgetary sources. Housing certificates are targeted securities representing bonds which take place among legal entities and individuals and grant the right to housing.

The funds received by the issuer from the sale of housing certificates are directed to the building constructions. Housing certificate is a documentary (or non-documentary) registered security, the value of which is equal (or multiple) to the cost of one square meter of housing. It should be noted that the main task - the resumption of housing construction in the absence of private developers in the market - housing bonds fulfilled [7].

The first experience of issuing investment bonds in the Russian Federation belongs to the cities of Moscow and St. Petersburg in 1997. During this period, the mentioned subjects of the federation needed investment resources. The city of Moscow required funds for the reconstruction of the Luzhniki Stadium to the Youth Olympic Games, and St. Petersburg needed for the reconstruction of the central streets of the city [8]. Investment bonds are a targeted personalized non-documentary security, since raised funds due to their sales are directed to the construction and reconstruction of investment objects. Revenues received from the investment object put into operation (as well as leased or sold) are sent for repayment them (Figure 1).

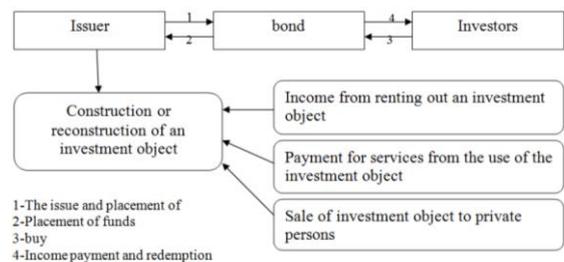


Fig. 1. Scheme of Borrowing Through Investment Bonds.

Due to the fact that currently there is no legislative regulation of investment bonds, this scheme of attracting funds by regional authorities can be recommended for introduction in the Law "On Features of Issue and Circulation of State and Municipal Securities" of July 29, 1998 No. 136-FZ. [2]

Mortgage securities have appeared in Russia since 2003. The Law “On the Securities Market” establishes various types of secured bonds, incl. mortgage security of real estate (mortgage bonds) [3]. The Law “On Mortgage Securities” refers to this group of securities (Table 5): - mortgages - bonds with a mortgage covering - investment participation certificates.

Mortgage securities traded (exchange-traded) are bonds with a mortgage covering and mortgage participation certificates. In spite of the fact that these bonds are corporate, they are interesting for research in terms of attraction of financial resources.

TABLE V. COMPARATIVE CHARACTERISTICS OF MORTGAGES, BONDS WITH A MORTGAGE COVERING, MORTGAGE PARTICIPATION CERTIFICATES

Characteristics	Mortgage	Bond with a mortgage covering	Mortgage participation certificate
Mortgage,	Mortgage,	Mortgage, Mortgage Agreement	Mortgage, Mortgage Agreement
Security rights	It certifies the right of its owner to receive funds according to the obligation, the right of pledge for property	It confirms the right of its owner to receive funds	The right to cash payments on the total share of property ownership under a trust management agreement
Form of issue	Personalized, documentary (or non-documentary)	Personalized, documentary (or non-documentary)	Personalized, documentary (or non-documentary)
Other characteristics	After payment of the loan, the mortgage is canceled. The issue is accompanied by the terms of the loan or on condition of pledge.	Fixed income. Released by banks and mortgage agents.	Pledge of property in common ownership on the basis of a trust management agreement
Appeal	Market, not exchange. A bank can sell this mortgage to another bank.	Market, stock market	Market, stock market
Date of issue	Tied to the loan agreement (from 3 years and more)	Tied to the loan agreement (from 3 years and more)	From 1 year to 40 years
Nominal cost	Tied to the mortgage security.	Tied to the mortgage security depending on the share in the mortgage.	Does not have
Yield	Tied to % mortgage + bank margin	Tied to % mortgage + bank margin	Depends on management revenue
Issuer	Bank	Bank, mortgage agents	Commercial banks licensed to manage an investment fund, a non-state pension fund.

istics	certificates	bonds	mortgage covering
Issuer	Authorities of the Federation Council of the Russian Federation	Authorities of the Federation Council of the Russian Federation	Bank, mortgage agents
Aim of issue	Construction	Construction or reconstruction of an investment object	Raising funds
Nominal cost	Tied to the cost of 1 square meter housing	Tied to the cost of investment object	Tied to the mortgage security, depending on the share in the mortgage
Terms of issue	Tied to the terms of construction, but not more than 10 years	Tied to the deadline of the implementation of the investment object	Tied to the loan agreement (from 3 years or more)
Form of issue	Personalized, documentary (or non-documentary)	Personalized, documentary (or non-documentary)	Personalized, documentary (or non-documentary)
Profitability	Unprofitable	Profitable	Tied to % mortgage + bank margin
Appeal	OTC	Market, exchange market	Market, exchange market
Security rights	Confirms the right of its owner to housing	Confirms the right of its owner to receive funds	Confirms the right of its owner to receive funds
Mortgage	Not provided	Investment object, reserve fund	Mortgage, mortgage agreement

As you can see, the common features for these securities are the form of issue, the term of issue (long-term) and the nominal value, calculated on the basis of the value of the object. One can clearly see the evolutionary development of investment papers. From non-market, unprofitable (housing certificate), the state moves to market (exchange) and profitable securities.

In essence, infrastructure bonds are very close to investment bonds, and according to the name, the purpose of their issue is the development of infrastructure.

In Russia, there were attempts to introduce legislatively infrastructure bonds by regional authorities. The possibility of raising funds by means of infrastructure bonds, which are issued by the transfer of subfederal property to the concession, was considered. Such bonds are actually corporate bonds, but they allow the authorities to raise funds from the bond market for the development of regional infrastructure. Infrastructure bonds allow you to attract an investor in a concession. The advantage of infrastructure bonds is higher sovereign rating, and, consequently, lower profitability.

In world practice, infrastructure bonds, as a rule, are represented in the form of municipal targeted bonds and corporate infrastructure bonds. The USA, Canada, Australia, South Korea, Kazakhstan and even Chile have significant experience in the bond issue.

In the US, bonds issued for a specific project and, therefore, are provided by a specific source of income. The number of issuers of municipal bonds has achieved several tens of thousands. Some states have amended legislation to allow a lawsuit to be filed in case of a non-payment of a bond,

Mortgage securities traded (exchange-traded) are bonds with a mortgage covering and mortgage participation certificates. In spite of the fact that these bonds are corporate, they are interesting for research in terms of attraction of financial resources.

So, speaking about investment securities that are actually used in Russia, it is worth noting housing certificates, investment bonds and bonds with a mortgage covering. Let's consider their features, as well as the approaches of the regulator to target bonds (Table 6).

TABLE VI. COMPARATIVE CHARACTERISTICS OF HOUSING CERTIFICATES, INVESTMENT AND MORTGAGE BONDS

Characte	Housing	Investment	Bonds with a
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which would increase the reliability of these bonds. In addition, state bond revenues are not subject to federal taxes. The result is that almost all large infrastructure projects are built using bonds issued for a specific project and secured by a specific source of income.

In Russia, the definition of infrastructure bonds has not appeared at the legislative level. The draft of the federal law "On peculiarities of investing in infrastructure using infrastructure bonds" was not adopted either. The terms "infrastructure bonds", "concession bonds" and "corporate bonds" are still not distinguished in the market.

If the draft of the federal law "On peculiarities of investing in infrastructure using infrastructure bonds" had been adopted, the term "infrastructure bond" would have had the following meaning: it would have been a bond issued by a specialized project organization to raise funds for infrastructure projects, such as building bridges, roads, kindergartens, etc. But the draft of this law was not adopted, therefore, there is no legislative definition of an "infrastructure bond" [5].

IV. CONCLUSIONS

The main difference of concession bonds from investment ones is that the source of their repayment is payments of the population in the form of paid tariffs for the rendered services.

In Russia, investment loans (as well as their varieties) are in demand only for the banking sector (mortgage securities). Nowadays for regional authorities the main objectives of the issue are to finance the budget deficit and to repay debts. Thus, at the moment, investment bonds are a promising source of raising funds by public authorities. They do not require to withdraw funds from the budget to repay them, but at the same time they can be used to attract investments in infrastructure. In addition, they allow you to attract investments to the region. [10]

Infrastructure bonds have not become a separate type of investment securities. Their implementation would look as follows: participation in the tender for an agreement - creation of a special legal entity to participate in the agreement - conclusion of an agreement - placement of infrastructure bonds for twenty-twenty-five years - construction of infrastructure facilities using money received from the placement of securities, - operation of constructed objects and collection of a payment from users – payment of the part of the collected funds to the investors.

Infrastructure bonds were intended as a tool for the implementation of small and medium infrastructure projects at the regional level and at the municipal level. It is impossible to tell that the introduction of infrastructure bonds has failed. But the goal, that the market set for infrastructure bonds is to reduce investment risk and increase the investment attractiveness of regional infrastructure projects, has not been achieved.

After having analyzed various bonded borrowing methods, the author came to the following conclusions:

1. Target and non-target methods of attracting funds on terms, on purposes, on sources of repayment, on mortgage security, non-target bonds are investigated.

2. Target bonds used in Russia such as housing certificates and investment bonds are considered.

3. A comparative analysis of mortgage bonds used in Russia such as mortgages, mortgage-backed bonds, mortgage participation certificates is made.

4. Attempts of legislative introduction of infrastructure and concession bonds are considered.

5. As a result of the foregoing, it can be noted that, despite the fact that Russia has experience at the regional level of using investment bonds, they are not in circulation at present, and there is no basis for issuing investment bonds in the legislation. However, these instruments of attracting funds are necessary for regions. It is possible to recommend to make amendments concerning investment bonds to the law "On peculiarities of emission and circulation of state and municipal securities".

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