BOND BORROWINGS OF RUSSIAN FEDERATION CONSTITUENT ENTITIES: HISTORY, PRESENT STATE AND PROSPECTS

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Abstract: The Russian Federation specifies by a large number of regions (constituent entities of the Russian Federation) that make up its composition. At the same time, the regions are different in terms of the level of socio-economic development, sectoral focus, climatic and other conditions. The consequence of these differences is a significant differentiation of the indicators of its regional budgets (their revenues and expenditures); at the same time, the overwhelming majority of budgets have an excess of expenditures over revenues, i.e. budget deficit. To cover the deficit of their budgets, the constituent entities of the Russian Federation can use various borrowing instruments; namely, they may issue government securities, in particular bonds, to attract budget loans from the federal budget and loans from credit institutions

Keywords: Constituent Entities of the Russian Federation, bond Borrowing, Budget Loans, Bank loans, Public debt of a Constituent Entity of the Russian Federation

1 Introduction

The regulation of borrowings made by the constituent entities of the Russian Federation is an issue that is always under the close scrutiny of the federal authorities. The position currently followed by the Ministry of Finance of the Russian Federation on this issue is indicated in the "Main Directions of the State Debt Policy of the Russian Federation for 2017-2019":

- Subjects should consider the use of bonds as a source of long-term financing of regional and local budget deficits and, if possible, minimizing the attraction of bank loans;
- Replacement of the market debt of the subjects with budget loans is, in fact, a temporary anti-crisis measure used by the federal authorities in a situation where the possibilities of market borrowing on acceptable terms are extremely limited due to high interest rates;
- As the situation on the debt market improves, the regions will be encouraged to ensure that the overwhelming share of their debt obligations would result from market borrowings, primarily in the form of securities issuance.

Bond, in finance, a loan contract issued by local, state, or national governments and by private corporations specifying an obligation to return borrowed funds. The borrower promises to pay interest on the debt when due (usually semi-annually) at a stipulated percentage of the face value and to redeem the face value of the bond at maturity in legal tender. Bonds usually indicate a debt of substantial size and are issued in more formal fashion than promissory notes, ordinarily under seal. Contract terms are normally found in the indenture, an agreement between the borrower and a trustee acting on behalf of the bondholders. Interest payments on bonds are known as coupon payments; before electronic interest payments made the coupon system obsolete, the bond purchaser received a series of numbered coupons with the bond that represented every interest-payment date throughout the life of the bond. These were clipped from the bond by the bondholder and presented for payment, which usually occurred semiannually (Hale, 2007; Chen, 2012; Larina & Moryzhenkova, 2016; Tkhamadokova, 2016).

Bond ratings are grades given to bonds on the basis of the creditworthiness of the government, municipality, or corporation issuing them. The ratings are assigned by independent rating agencies (in the United States the largest are Standard & Poor's and Moody's Investors Service), and they generally run from AAA to D. Bonds with ratings from AAA to BBB are regarded as "investment grade"—i.e., suitable for purchase by banks and other fiduciary institutions. Bonds with ratings below BBB are considered "junk," or high-yield, bonds; they are often issued by new or speculative companies. Although the risk of default for junk bonds is great, they offer higher rates of interest than more secure bonds.

In addition to repaying the principal, or original amount borrowed, the borrower usually pays interest to the lender. In economics, the interest is a payment for the service of having the money or resources in advance.

When your parents lend you $1000 to help buy a car in exchange for your promise to repay them $100/month, and for your agreeing to keep your room a little cleaner, the $1000 is the principal and the room cleaning is the interest. In economic lingo, your parents bought your $1000 bond. Bonds within families and between friends often trade with the appearance of zero interest. In actuality, interest is usually paid with goods or services, increased courtesy, or an implicit commitment to help each other out similarly in the future. Just because there is no money involved doesn't always mean a loan comes free!

The interest rate is the amount of the interest expressed as a percentage of the principal. Thus, if someone lends you $100 and you agree to repay him $110 a year later, the interest rate is 10%, which equals the interest divided by the principal, or ($110-$100)/$100.

Interest rates are usually expressed on an annualized basis. If someone lends you $100 and you agree to repay him $110 in six months, the six-month rate of interest is 10%. But 10% every six months is 20% per year. That is, the annualized rate of interest is 20%. (To see this, imagine that in six months you repaid the $110, and that same day borrowed $100 with another agreement to pay $110 in another six months. You've essentially borrowed $100 for a year, but paid a total of $20 in interest for the year.) The moral is that you should be careful when comparing interest rates by making sure they are all for the same period of time. Reporting annualized rates is required by law for some kinds of loans, but not all.

Thus, when choosing instruments for borrowing in the future, the regions should primarily focus on the issue of bonds. It should be noted that before the global financial and economic crisis that began in 2008, which manifested itself in 2009 in the form of a strong decline in the main economic and budget indicators of the constituent entities of the Russian Federation, the bulk of borrowings from Russian regions fell precisely on bonds. Over the years, the situation has changed significantly. In this regard, the authors set the task to trace how since 2008 the practice of attracting borrowed resources to the budgets of the constituent entities of the Russian Federation has developed through the use of bonds against the background of a general deterioration in the economic situation in the country.

2 Methods

Based on the methods of comparative and retrospective analysis, the paper examines the practice of implementing bonds by the

constituent entities of the Russian Federation in order to finance the regional budget deficit; the role of liabilities on government securities in the formation of government debt of the constituent entities of the Russian Federation is assessed. The following information was used as an information base: 1) materials of the official website of the Russian Ministry of Finance on the volume and structure of the state debt made by the constituent entities of the Russian Federation; 2) materials of the Federal Treasury on the execution by the constituent entities of the Russian Federation of their budgets.

We use four separate databases, two that are commercially available and two that are proprietary, to construct the sample of corporate bonds used in this paper. All four databases cover the period from January 1, 2004 through December 31, 2007. The commercially available databases are the Trade Reporting and Compliance Engine Database (TRACE) and Fixed Income Securities Database (FISD). The two proprietary databases are a bond inventory database and a bond loan database. These databases were provided to us by one of the world's largest custodian of corporate bonds. The bond inventory database contains all corporate bonds available for lending, and the companion bond loan database describes the loans made from that inventory. The bond CUSIP is used as the common variable to link these four databases.

We begin by matching the proprietary bond inventory database to the FISD database using the bond CUSIPs. The FISD database contains detailed information on all corporate bond issues including the offering amount, issue date, maturity date, coupon rate, bond rating, whether the bond is fixed or floating rate, and whether it is issued under SEC Rule 144a. We exclude any corporate bond in the inventory file that we cannot match to FISD. In addition we also exclude all convertibles, exchangeables, equity-linked bonds, and unit deals. The proprietary bond inventory database contains the number of bonds in inventory and number of bonds available to lend. From January 1, 2004 through March 30, 2005 we have endof-the month inventory information for all bonds. The database reports daily inventory information from April 1, 2005 to December 31, 2007. In contrast to the inventory database, the loan database is updated daily for the entire period January 1, 2004 through December 31, 2007.4 For each day, the loan database includes which bonds are lent, the size of the loan, the rebate rate paid to the borrower, and an indicator of who borrows the bond. The proprietary loan database identifies 65 unique borrowers for corporate bonds. These borrowers are primarily brokerage firms and hedge funds.

3 Results

In modern states, authorities at various levels actively resort to borrowing in order to finance the budget deficit; to pay off existing debt obligations; to smooth out the unevenness of tax payments; to finance investment projects, etc. As for the instruments of borrowing, their set remains quite stable and limited despite all national differences: these are bank loans, bond borrowings, and loans provided by other budgets of the country's budget system. Each of these instruments has both advantages and disadvantages; therefore, when choosing a particular instrument of debt financing, borrowers must take into account various factors. It should be noted that the issue of this has been sufficiently worked out both in foreign and Russian financial science. Among the authors of such works are: Hale, G. (2007), Chen, H. (2012), O.I. Larina, N.V. Moryzhenkova (2016), I.Kh. Tkhamadokova (2016).

Regional borrowings play an important role in the economies of many countries. At the same time, it is regional bonds that occupy one of the main places in the structure of instruments for debt financing of regional budget deficits in federal states with a high degree of economic independence of the regions. This explains the great scientific interest in the problems of the development of the regional bonds market. Various aspects of this problem are reflected in the works of such authors as: Dove, J. (2017), Singla, A., Luby, M.J. (2014) Mitze T., Matz F. (2014) Caperchione E. Salvatori F. (2012) Wang T. (2012) Chuanming F. (2011) Nadia S. (2014), I.R. Sharafutdinova (2014), E. Tishina (2015), and A. Shadrin (2011).

The Recommendations for the Conduct of Responsible Borrowing / Debt Policy by the Subjects of the Russian Federation, developed by the Ministry of Finance of the Russian Federation in 2015, indicate the need to develop medium-term and long-term segments of the regional bond market. The document notes that the presence of a developed market for government securities of the constituent entities of the Russian Federation will allow the regions to pursue a relatively independent borrowing policy; to minimize the need to use federal budget funds; supplement or replace bank lending. The above confirms the relevance of the issues on development of the bond borrowing practice by the constituent entities of the Russian Federation studied by the authors.

From 2008 to 2017, the total volume of state domestic borrowings of the constituent entities of the Russian Federation (bond borrowings, bank and budget loans) raised to finance the budget deficit increased by 7.2 times: from 343.99 billion roubles in 2008 to 2489,22 billion roubles in 2017. In 2018, the volume of borrowings decreased to 1,402.54 billion roubles. The change in volumes was accompanied by changes in the structure of borrowings, which can be seen from the data in Table 1.

Table 1: The structure of state internal borrowings by the constituent entities of the Russian Federation

Year	Share of bond borrowings, %	Share of bank loans, %	Share of budget loans, %
2008	51,5	42,6	5,9
2009	26,6	39,8	31,6
2010	18,1	52,9	29,0
2011	10,9	62,8	26,3
2012	17,2	63,7	19,1
2013	15,2	71,4	13,4
2014	5,8	53,9	40,3
2015	4,1	42,7	53,2
2016	6,6	45,7	47,7
2017	8,2	49,1	42,7
2018	6,2	59,2	34,6

Compiled by the authors based on (http://roskazna.ru)

If in 2008 bond borrowings accounted for more than half of the total volume of internal borrowings of the regions, then in 2009 the largest share fell on bank loans. The situation with the predominance of bank loans continued until 2015. In 2015 and 2016, the largest volume of borrowings fell on budget loans; years of 2017-2018 were characterized again by the predominance of bank loans. As for bond borrowings, their share gradually decreased, amounting to only 6.2% in 2018.

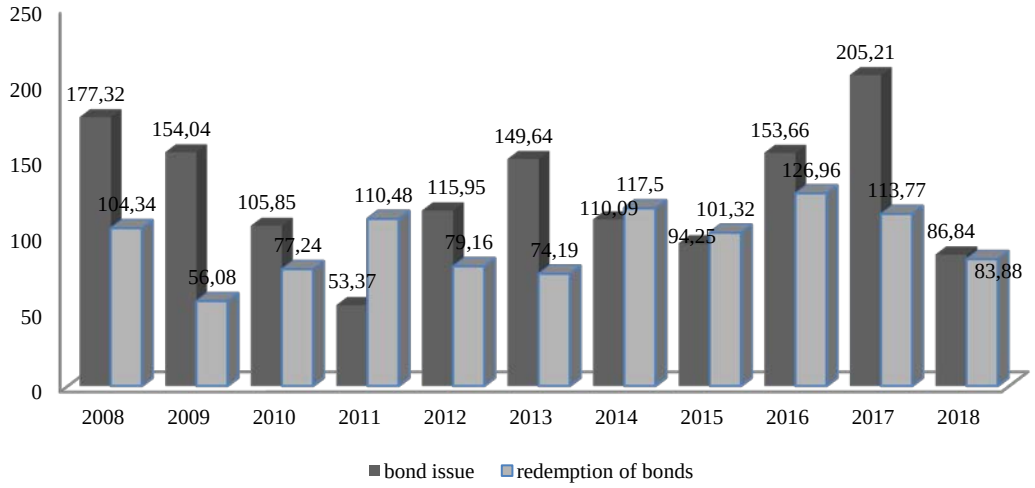

Fig. 1: Dynamics of the volumes of issue and redemption of government securities by the constituent entities of the Russian Federation, billion roubles

The diagram shown in Figure 1 clearly demonstrates the multidirectional dynamics of the regional bond placement volumes for the period under study. So, for three years after 2008, there has been an annual decrease in the volume of funds attracted by the subjects of the Russian Federation through the issue of bonds. The volume of placement in 2011 amounted to only 30% of the volume of bond borrowings in 2008. The next two years, 2012 and 2013, are characterized by positive dynamics of the volume of bond borrowings. In 2014 and 2015, a decrease in the volume of bond issues was observed again. The results of 2016 and 2017 demonstrated a significant increase in the volume of bond borrowings; however, 2018 was characterized by their decline again.

Only a few Russian regions resorted to issuing bond borrowings, as can be seen from the graph shown in Figure 2.

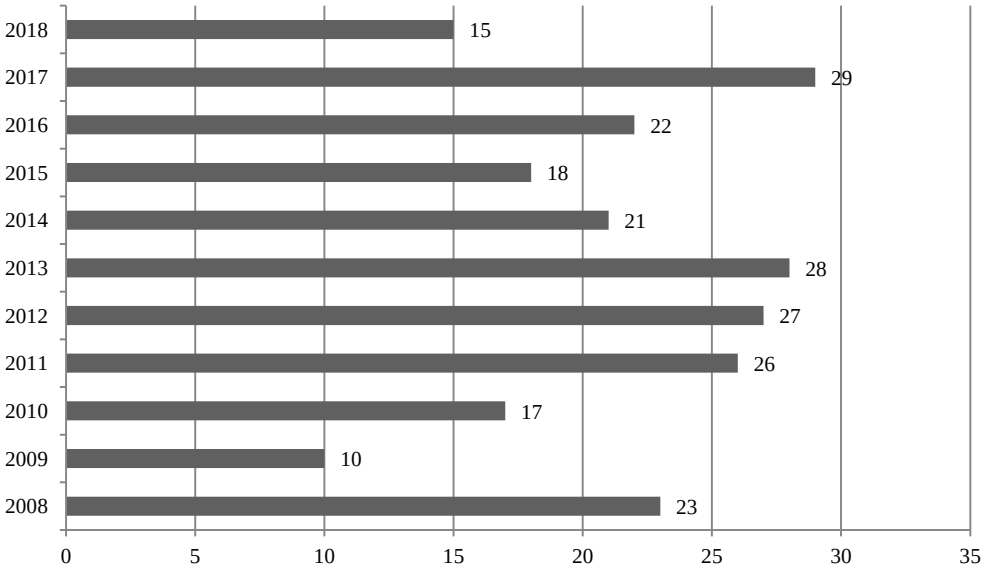

Fig. 2: Number of RF subjects that have placed bonds

4 Discussion

The following entities have been active bond issuers in recent years: the Republic of Sakha (Yakutia), the Komi Republic, the Tomsk region, the Orenburg region, the Samara region, the Volgograd region, the Yaroslavl region, the Belgorod region, the Nizhny Novgorod region, the Krasnoyarsk region, and others.

The growth in borrowing volumes by the constituent entities of the Russian Federation to finance their budget deficits led to an increase in their debt burden. The period from 2008 to 2018 is characterized by a significant increase in the state debt of the constituent entities of the Russian Federation (although the last two years have shown a slight decrease). By the beginning of 2019, the total volume of debt obligations of the Russian regions increased almost fivefold compared to the beginning of 2008 (from 458.70 to 2206.31 billion roubles). At the same time, debt denominated in securities grew 2.9 times, debts on bank loans - 4.6 times, and debts on budget loans received from the federal budget - 31.5 times.

During the analysed period, the structure of the state debt shown by the constituent entities of the Russian Federation also changed. At the beginning of 2008, that is, in the pre-crisis period, government securities accounted for the largest share in the debt structure - 41.6% followed by bank loans, which share

was 30.5%. Such a borrowing instrument as budget loans from the federal budget was used significantly less than bond borrowings and loans from credit organizations. The share of debt on budget loans in the structure of state debt of the constituent entities of the Russian Federation as of January 1, 2008 was only 6.5%. It should be noted that during this period the volume of debt of the Russian regions on bond borrowings was 6.4 times higher than the volume of debt on budget loans.

By 2019, the share of budget loans received from the federal budget (42.6%) in the structure of the state debt of Russian regions becomes the most significant, followed by loans from credit institutions (28.8%). The share of debt for bonded borrowings of the constituent entities of the Russian Federation was only 25.0%. Note that since 2016 budget loans in the regions began to gradually force out expensive bank loans. But, nevertheless, the Ministry of Finance of the Russian Federation envisages the use in the future of budget loans exclusively as a measure to rescue regions that have fallen into an emergency debt situation. Consequently, the financial market will be the main source of borrowed resources. In this regard, it should be noted that the issuance of medium-term and long-term bonds has a number of fundamental features that indicate the greater attractiveness of this instrument for raising borrowed funds to regional budgets in comparison with bank loans. The pre-crisis period confirms this: as has already been shown, in the former conditions of a stable socio-economic situation, the constituent entities of the Russian Federation most actively used the issue of government securities when making borrowings.

Table 2: The share of bond debt in the total volume of government debt made by the constituent entities of the Russian Federation as of 01.01.2019

RF constituent entity	Share, %	RF constituent entity	Share, %
Moscow	100,0	Sverdlovsk Region	27,5
St. Petersburg	100,0	Kemerovo Region	27,0
Khanty-Mansi Autonomous Area	100,0	Volgograd Region	25,9
Nenets Autonomous District	100,0	Kamchatka Territory	24,7
Yamalo-Nenets Autonomous District	77,1	Republic of Bashkortostan	23,4
Republic of Komi	74,3	Ulyanovsk Region	20,0
Krasnoyarsk Territory	70,9	Stavropol Territory	17,6
Samara Region	67,1	Udmurt Republic	17,4
Nizhny Novgorod Region	56,9	Republic of Mari El	15,1
Yaroslavl Region	50,8	Krasnodar Territory	14,3
Republic of Sakha (Yakutia)	48,7	Omsk Region	14,1
Orenburg Region	47,1	Kursk region	14,0
Tambov Region	47,0	Kaliningrad Region	12,2
Irkutsk Region	40,7	Republic of Mordovia	12,1
Lipetsk Region	39,0	Republic of Karelia	12,1
Belgorod Region	38,2	Saratov Region	10,4
Novosibirsk Region	37,9	Voronezh Region	9,4
Republic of Khakassia	36,5	Tula Region	8,4
Tomsk Region	35,0	Khabarovsk Territory	8,3
Karachay-Cherkess Republic	32,8	Magadan Region	7,0
Moscow Region	29,1	Leningrad Region	2,4
Oryol Region	27,6	Tver Region	0,0

Compiled by the authors based on (https://www.minfin.ru)

As of January 1, 2019, only 44 of the 85 constituent entities of the Russian Federation had debt on bonds in the structure of their public debt; information on these regions is presented in Table 2. And only 13 regions have debt on government securities prevailing in the structure of debt. These regions include: Moscow, St. Petersburg, Khanty-Mansi Autonomous District, Nenets Autonomous District, Krasnoyarsk Territory, Yamalo-Nenets Autonomous District, Samara Region, Nizhny Novgorod Region, Komi Republic, Belgorod Region, Tambov Region, Yaroslavl Region, Sakha Republic (Yakutia).

The deterioration of the economic situation in the country after 2008, the increased social obligations of the regions, the fulfilment of which was entrusted to them by the decrees of the President of the Russian Federation of May 7, 2012 - all this, given the existing system of income distribution between the federal, regional and local budgets, inevitably led to an increase in borrowing made by the subjects of the Russian Federation; as shown by the analysis carried out by the authors, they also lead to a reorientation in the choice of borrowing instruments (issue of bonds → bank loans → budget loans).

It must be admitted that not all constituent entities of the Russian Federation have the opportunity to significantly reduce their budget deficit even now in the current system of organizing interbudgetary relations in Russia. This situation retains, at least in the medium term, its general trend towards an increase in government borrowings and government debt of the constituent entities of the Russian Federation, despite a slight decrease in these indicators in 2018. At the same time, the regions have been tasked with a gradual transition to predominantly market mechanisms for attracting resources and, first of all, to the issue of bonds.

5 Conclusions

There are certainly many benefits to issuing bonds. But far from all Russian regions can increase financial opportunities through the use of this instrument. According to the authors, regions with a high credit rating, moderate debt burden, and a positive credit history can take advantage of all the advantages of bond borrowings, while not only the timeliness and completeness of servicing and repayment of existing debts are important, but also the correct positioning of the borrowing region in the capital market. The issuance of bonds by other constituent entities of the Russian Federation is also possible, of course, but: 1) the region's economy should demonstrate its growth (and, as a consequence, the growth of the revenue base of the regional budget); 2) the regional authorities should pursue a policy of information openness; they should also implement measures aimed at improving the image of the region as a borrower in the capital market, and interact with rating agencies.

There is one more aspect: in modern conditions, it is very important that the goals of issuing bonds of the constituent entities of the Russian Federation are not just financing the current budget deficit or paying off existing debt, which is currently taking place. It is necessary that bond borrowings of

the constituent entities of the Russian Federation become a factor in accelerating the socio-economic development of Russian regions. In turn, this will be possible if the financial resources raised through the issue of bonds would be used to finance specific investment projects, the implementation of which will contribute to an increase in the level of socio-economic development of the regions. Thus, we are talking about the need to use targeted bond borrowings. According to the authors, one should expect a significant increase in the emission activity of the constituent entities of the Russian Federation only in the long term, when the Russian economy would come out of the crisis and, as a consequence, the socio-economic situation in the regions would improve.

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Literature:

1. Caperchione, E., & Salvatori, F.: Rethinking the relationship between local government and financial markets. *Public Money and Management*, 32(1), 2012. 21-25.
2. Chen, H.: The study on the risk of local treasury bonds based on new institutional economics. *Advances in Intelligent and Soft Computing*, 116(1), 2012. 85-90.
3. Chuanming, F.: The local government financing efficiency: An evaluation based on the fuzzy comprehensive evaluation process. *International Conference on E-Business and E-Government, ICEE2011 – Proceedings article number 5882250*, 2011. 3689-3691.
4. Dove, J.: Local government type and municipal bond ratings: what's the relationship?. *Applied Economics*, 49(24), 2017. 2339-2351.
5. Execution of budgets. Consolidated budgets of constituent entities of the Russian Federation and budgets of territorial state non-budgetary funds. [Digital source] URL: http://roskazna.ru/ispolnenie-byudzhetov/konsolidirovannye-byudzhety-subektov/ (access date: 15.06.2019)
6. Hale, G.: Bonds or loans? The effect of macroeconomic fundamentals. *Economic Journal*, 117(516), 2007. 196-215.
7. Larina, O.I., & Moryzhenkova, N.V.: Sub-federal and municipal borrowings in Russia: content, sources, foreign experience, and development prospects. *Regional economy: theory and practice*, 1, 2016. 70-88.
8. Mitze, T., & Matz, F.: Public debt and growth in German federal states: What can Europe learn?. *Journal of Policy Modeling*, 2014. December 12.
9. Nadia, S., & Elena, N.: Debt burden of constituents of the Russian federation and its determinant factors". *Mediterranean Journal of Social Sciences*, 524, 2014. 216-221.
10. Shadrin, A.: The market for municipal and sub-federal borrowings. *Securities market*, 7(8), 2011. 97-104.
11. Sharafutdinova, I.R., Kulakova, S.A., & Nikonova, E.N.: Issue activity of subjects of the russian federation and municipalities: Tendencies of the beginning of the XXI century. *Mediterranean Journal of Social Sciences*, 5(24), 2014. 204-208.
12. Singla, A., & Luby, M.J.: A descriptive analysis of state government debt-related derivatives policies. *Public Budgeting and Finance*, 34(2), 2014. 105-125.
13. The volume and structure of the state debt of the constituent entities of the Russian Federation and the debt of municipalities. [Digital source] URL: https://www.minfin.ru/ru/perfomance/public_debt/subdbt/ (access date: 20.06.2019)
14. Tishina, E.: The market for sub-federal bonds: features and problems of formation. *Problems of development of territories*, 5, 2015. 148-154.
15. Tkhamadokova, I.K.h.: Theoretical aspects of the implementation of state (municipal) borrowings. *Economics and Entrepreneurship*, 10-1, 2016. 1052-1054.
16. Wang, T.: An analysis of the effects of online fiscal disclosure on municipal bond issuances. *International Review of Public Administration*, 17(2), 2012. 1-18.

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