

Possible Improvements of Saving Bonds in Latvia

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Abstract— In the European Union government debt issues are combined with Maastricht requirements, whom the majority of member states are not following. At the same time in the case of Latvia in the summer of 2013 the specific saving bond system were introduced and government started to attract resident investments. From authors perspective the system, where each resident can invest money in its own country is the right direction for country development. At the same time there are world wide experience of saving bond instrument and by having the best world practice, the system can be improved. As the first challenge for government is to understand the quantity of financial resources in the household accounts. That follows by the interest rates for deposits. At the end the government can offer some additional bonus programs, to support its residents from one side, and to receive their votes on next elections from other side. The main thing is the way how households are saving their money, as if there is investments in corporate debt or equity, then, by attracting money for saving bonds, government decreases economic activity. At the same time, if the money comes from deposits, it affects profit of banks and supports diversifications on residents investment portfolios.

Keywords — Government debt, government debt securities, saving bonds

I. INTRODUCTION

The theory of government debt and savings bonds is a fundamental aspect of public finance, focusing on how governments manage their borrowing and the instruments they use to finance expenditures. Government debt is typically issued in the form of bonds, which are essentially promises to repay borrowed funds with interest. These bonds can be broadly categorized into nominal bonds and inflation-linked bonds.

Nominal bonds are fixed-income securities that pay a specified interest rate and return the principal at maturity. However, they are susceptible to inflation risk, as the real value of the interest payments and principal can erode over time due to rising prices. Inflation-linked bonds, such as Treasury Inflation-Protected Securities (TIPS) in the

United States, are designed to mitigate this risk by adjusting the principal and interest payments based on changes in the inflation rate[1].

The optimal management of government debt involves balancing the issuance of nominal and inflation-linked bonds. Nominal bonds provide flexibility in terms of monetary policy, as governments can inflate away the debt, reducing its real burden. However, this can lead to higher inflation expectations and increased borrowing costs. On the other hand, inflation-linked bonds offer a commitment to maintaining the real value of the debt, which can help stabilize inflation expectations and reduce the inflation risk premium.[2]

In practice, the share of inflation-linked bonds in a government's debt portfolio is often small. For example, TIPS account for a relatively minor portion of the total U.S. government debt. This is partly due to the liquidity penalty associated with these bonds, as they are less liquid than nominal bonds and may require higher yields to attract investors. Despite this, inflation-linked bonds play a crucial role in providing a hedge against inflation and can be particularly valuable during periods of rising inflation.[3]

The interplay between fiscal and monetary policy is also critical in the context of government debt management. Governments must carefully consider the impact of their debt issuance strategies on inflation and interest rates. By issuing a mix of nominal and inflation-linked bonds, governments can achieve a more balanced approach to debt management, addressing both short-term financing needs and long-term inflation risks.

The theory of government debt also encompasses the concept of intergenerational equity. This principle suggests that the burden of government debt should be distributed fairly across different generations. By issuing long-term bonds, governments can spread the cost of current expenditures over time, ensuring that future generations who benefit from these expenditures also share in their cost.

Online ISSN 2256-070X

<https://doi.org/10.17770/etr2025vol1.8654>

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However, excessive reliance on debt can lead to higher future tax burdens and reduced fiscal flexibility.

Inflation-linked bonds, such as TIPS, are particularly relevant in this context. They provide a mechanism for governments to commit to maintaining the real value of their debt, thereby protecting future generations from the eroding effects of inflation. This commitment can help build trust in government finances and support long-term economic stability[1].

Moreover, the issuance of inflation-linked bonds can influence investor behaviour and market dynamics. These bonds attract investors seeking protection against inflation, which can help diversify the investor base and stabilize demand for government securities. Additionally, the presence of inflation-linked bonds in the market can provide valuable information about inflation expectations, aiding policymakers in their decision-making processes.

In the European Union, the practice of issuing inflation-linked bonds has been adopted by several member states as part of their debt management strategies. Countries like France, Italy, and Germany have been issuing inflation-linked bonds to diversify their debt portfolios and provide a hedge against inflation. These bonds are typically linked to the Harmonized Index of Consumer Prices (HICP), which is a measure of inflation used across the EU.[4]

France, for example, has been issuing inflation-linked bonds since 1998. These bonds, known as Obligations Assimilables du Trésor (OATi), are linked to the French CPI excluding tobacco. The issuance of OATi has allowed France to attract a diverse investor base, including pension funds and insurance companies, which seek to match their liabilities with inflation-protected assets. Similarly, Italy issues Buoni del Tesoro Poliennali Indicizzati all'Inflazione Europea (BTP€i), which are linked to the European HICP. These bonds have helped Italy manage its debt more effectively by reducing the inflation risk premium and stabilizing borrowing costs.[5]

Germany, known for its conservative fiscal policies, also issues inflation-linked bonds called Bundesobligationen (Bobl€i). These bonds are linked to the European HICP and have been part of Germany's debt management strategy since 2006. The issuance of Bobl€i has provided Germany with a tool to manage inflation expectations and maintain investor confidence in its debt sustainability.

The European Union's approach to inflation-linked bonds highlights the importance of these instruments in achieving a balanced and sustainable debt management strategy. By issuing a mix of nominal and inflation-linked bonds, EU member states can address both short-term financing needs and long-term inflation risks. This approach not only helps stabilize inflation expectations but also supports the broader goals of economic stability and fiscal sustainability.[6]

Saving bonds are popular in the EU for several reasons. Firstly, they are considered safe investments due to the relatively low risk of default, making them attractive to

risk-averse investors looking for stable returns. Recent increases in interest rates have made euro area sovereign debt more appealing by offering higher yields compared to other low-risk investments, drawing in both domestic and foreign investors. The resilience of the euro area economy, along with enhancements in the European institutional framework, such as the European Commission's Next Generation EU package, has boosted investor confidence. Additionally, the integration of EU bond markets provides a more unified and stable financial environment, making it easier for investors to diversify their portfolios within the euro area. Bonds are also accessible to a wide range of investors, including households and corporates, providing a relatively safe and attractive option for investing savings.

The popularity of inflation-linked bonds in the EU could increase due to several factors. Firstly, rising inflation expectations make these bonds more attractive as they provide protection against inflation by adjusting the principal and interest payments based on changes in the inflation rate. This ensures that the real value of the investment is maintained, which is particularly appealing during periods of high inflation.

Secondly, the economic policies of the European Central Bank (ECB) and other EU institutions can influence the demand for inflation-linked bonds. For instance, if the ECB adopts policies that lead to higher inflation or if there is increased uncertainty about future inflation, investors may seek out inflation-linked bonds as a hedge.

Additionally, the diversification benefits of inflation-linked bonds can attract investors. These bonds typically have a low correlation with other asset classes, providing a means to diversify investment portfolios and reduce overall risk. This is especially important for institutional investors like pension funds and insurance companies that need to match their liabilities with inflation-protected assets.

Lastly, the growing awareness and understanding of inflation-linked bonds among investors can also contribute to their increased popularity. As more investors become educated about the benefits and mechanics of these bonds, the demand for them is likely to rise.

II. MATERIALS AND METHODS

Measurement of Savings bond system in any country is a challenge, and from theoretical perspective it could be done in comparison to GDP or to other countries. In the case of Latvia the main comparison is made to neighbor countries Lithuania and Estonia, but in this case it is impossible, as in Estonia there is no saving bond system, but in Lithuania the system is based on Defence approach. That means that the money received from the bonds goes to defence direction. In none of three countries saving bond system helps people overcome the fear that their money will be lost due to inflation and United States TIPS approach is not common.

The Euribor 12 month data together with data from Monetary financial institutions account stock are analyzed to understand the situation at the time of analyses. The next thing is to understand the situation with the credit amounts

taken by the households, and if the money in the account decreases and credits are decreasing too, that meant that some money goes to lower dependance from credits.

The main issue is to assess the amount invested in the Saving bonds. As till the end of 2021 the invested money was not impressing, the need for such system could be under discussion from liquidation perspective, like it was done in the case of Lithuania. At the same time changes in the interest rate leads to need for Saving bond systems.

III. RESULTS AND DISCUSSION

Saving bonds system in Latvia is governed by the Treasury of Latvia since 2013. In 2013 it was the way of new approach to investors, who could invest their money, but the interest rates were too low. As the low EURIBOR interest rates lead to lower interest rates for debt securities and saving bonds.

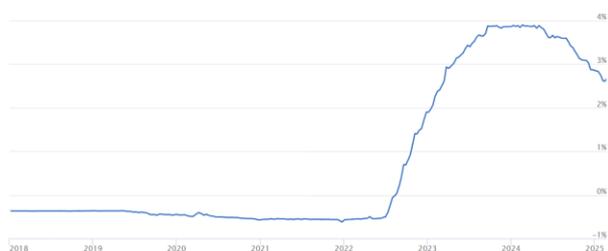


FIG 1. 12 month Euribor from 2018 till 2024 [7]

That leads to the fact, that there is need for commercial banks to follow interest rate changes, and offer higher deposit rates. It can be effective if the price of money is higher via saving bonds them by bank deposits.

TABLE 1 AMMOUNT HELD BY HOUSEHOLD IN ACCOUNTS OF MONETARY FINANCIAL INSTITUTION MIO EUR [8]

Year	Total	Difference to previous year	Euro	Foreign currency
2018	6,926	-	6,343	583
2019	7,442	517	6,918	524
2020	8,395	953	7,865	530
2021	9,671	1,275	9,114	557
2022	10,172	501	9,650	522
2023	10,070	-102	9,626	444
2024	10,978	908	10,513	465

From data in the table we can see, that the amount hold on accounts increased during all the years except 2023, when it was decreased. At the same time the interest rate of Euribor was higher in 2023 than any year before or after.

If there is no connection to increase of Euribor and amount of money on the accounts, there should be another explanation.

From authors perspective there could be explanation from two direction:

- Decrease of credit liabilities of households;
- Alternative investment options.

From decrease of credit liabilities perspective the data from National Credit register can be used to make assessment of it.

TABLE 2 TOTAL CREDIT AMMOUNT BY HOUSEHOLD IN CREDIT REGISTER REPORTED BY BANKS MIO EUR [9]

Year	Amount outstanding mio EUR	Difference to previous year	Euro	Foreign currency
2018	5'660	-	5'464	195
2019	5'559	-100	5'388	171
2020	5'413	-147	5'280	133
2021	5'774	361	5'644	130
2022	5'950	175	5'836	113
2023	5'994	45	5'922	72
2024	6'334	339	6'267	66

From the Credit perspective it is understandable that the increase in credit amounts during 2023 was much lower than year before and after. From authors perspective the main reason was high interest rates. The differences during 2019 and 2020 from analyses perspective are hard to assess due to the fact, that when a bank stops its work, they are excluded also from Ammount outstanding. As one of the Latvian biggest bank at that time ended its banking business [15] the difference appeared. At the same time increase on Ammount outstanding in 2021 shows that the PNB bank under liquidation credit takers were attracted by other banks and increased in accordance to linear regression.

Another investment option from safety perspective is saving bonds, as it is issued by the Treasury of Latvia and is paid back in the same way as government debt securities.

One of the factors that is important for investors is Maturity period, as the longer you choose to give the money for government, the less you can use it.

Usually one of the aspects is interest rate, but for saving bonds the previous interest rates are not published or kept in open data, that leads to the fact, that authors can not do analyses of linkage between maturity period, increase of amount outstanding and investors decision in connection to interest rate offered by the governments.

TABLE 3 INVESTMENT PERIOD TILL MATURITY AS OF DECEMBER 2024 [10]

Maturity period	Amount of securities in mio EUR	Percentage from total
6 month	10	3.1
12 month	237	73.6
3 years	30	9.3
5 years	19	5.9
7 years	3	0.9
10 years	23	7.1
Total	322	100

Saving bonds by the investment period shows that the majority of investors has made investment for one year, and in such case they need to reinvest after the end of the period. At the same time if the profit will decrease as EURIBOR rate can decrease, the saving bonds can become not as

attractive to the investors as they were during high interest rate periods.

From analyses of the quantity of different investors and total amount borrowed, it is understandable, that the increase in both of the values starts as of 2022, and the biggest increase was during 2023.

At this point in time we can understand, that the popularity of this investment type is the highest possible, but when there were lower interest rates, the investors made their decisions in favor of other investment options.

TABLE 4 SAVING BONDS BY THE AMMOUNT OUTSTANDING [11]; [12]

Year	Ammount outstanding mio EUR	Difference to previous year	Investors
2018	5.5	-	-
2019	5.5	0	-
2020	5.5	0	-
2021	5.5	0	-
2022	14.7	9	>1000
2023	253	238	7200
2024	322	69	7900

From data in the table we can see, that till 2022 the interest in saving bonds was low. There were small investor group, who made some investments.

As of 2023, the investors are 7'200 and in end 2024 7'900, at the same time total population of residents 2023 were 1,883 mio and 2024 just 1,872 mio [13], it leads to the fact that investors from total population were:

$$a) \text{ End 2023; } 7200/1,883 * 1 \text{ mio} = 0,38\%$$

$$b) \text{ End 2024; } 7900/1,872 * 1 \text{ mio} = 0,42\%$$

From one perspective we can see that the investors could be more, but the increase shows the financial literacy of residents of Latvia and that with good offer from the government perspective, the money for investments will follow it.

TABLE 5 INFLATION IN LATVIA [14]

Year	Inflation during one year	Inflation to year 2018
2018	2.6	2.6
2019	2.3	4.9
2020	-0.5	4.4
2021	7.9	12.6
2022	20.8	36.1
2023	0.6	39.6
2024	3.3	41.4

As an alternative approach toward saving bond attraction can be not to give good interest rates, but to give social or political or economic reason for households to do the investments.

In the case of Lithuania, the saving bond system existed from 1999 till 2021. As the resident willingness to invest in saving bonds was too low, the system was closed as of 01.01.2022. At that point in time the international financial markets offered more attractive coupon rate that the government of Lithuania to their residents.

At the same time, one of possible usage of saving bond system, is to attract the money for certain goal. That led to the fact that on 07.08.2023 the saving bond system was

reopened. The main difference was political, as there was no more possibilities just to invest in government, but the investment were directly linked to defence goals of the country. [16]

IV. CONCLUSIONS

Results:

1) In accordance to Table 4., during year 2023 and 2024 the saving bonds in the case of Latvia were bought by resident households more than ever before. The number of total amount attracted by the government increased dramatically, and the number of investors also increased.

2) In accordance to Figure 1., during year 2023 and 2024 the Euribor rate increased extra high, and that led to increase of saving bond coupon rates.

3) It is not possible to make assessment on the connection to price of saving bonds, as such data are not published by the government and no data portals provide it.

4) In the case of Lithuania, the saving bond system was closed from 01.01.2022 till 07.08.2023. At the same time it is much easier to reopen system that was some years ago, than to start development of new system. From theoretical point of view it is better to have system, as in the case of urgent need for debt, the money should be able for lower interest rate, than the system were not at all.

5) In the case of Lithuania new direction of saving bonds were implemented – defence saving bonds. It shows, that not always the interest is important, but sometimes the goal of money usages is over the coupon.

6) In accordance to Table 2 and description below it, usage of data from credit register is complicated, from one side we can assess that the total amount outstanding of credits from banks to households increases. At the same time if the bank loses its license, the total amount can decrease for some period, as it is no longer banks credit, but in certain time (one to two years) households are refinancing the credit from other bank and the statistics of credit shows it again.

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