## **Bond Yields and Yields Vaciations on Bonds in Montenegro** UDC: 336.761(497.16)

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The issue discussed is bond yields and yields variations on bonds in Montenegro. Specifically, we consider the frozen foreign currency savings bonds (FFCS bonds) and bonds issued to compensate the insured through the State-operated pension and disability insurance system (PandD bonds). Both classes of bonds are issued by the Central Government. Both are zero-coupon bonds, and mature in tranches: FFCS bonds mature annually, from 2004-2017 (as by tickers: OB04-OB17), while PiO bonds mature semiannually, from 2008-2011 (as by tickers: P08P, P09P, P09D, P10P, P10D, P11P). The former are issued to compensate natural persons whose foreign currency deposits became frozen, amid the collapse of the banking system during 1990's (at the time State-owned), while the latter are issued to compensate for the controversial adjustment of pensions and other remunerations during the July 2002 - December 2003 period. The aforementioned bond classes are considered for various reasons, the most important being their highest trading volume among all the bonds. In addition, let us mention that after the new capital markets had been established in Montenegro, only one corporate bond issue was achieved.

#### 1. Introduction

The 2005 – 2008 period is taken under consideration. It is for various reasons that this period is chosen.

The primary one is that there was almost no trading with bonds before 2005, therefore, the 2005 – 2008 period may be absolutely representative for the analyses. As far as the formula for yield calculation is concerned, various approaches are possible; however, here we will do the annualization observing a complex interest account and on a (real) premise that the year lasts 365 days. We will use the so-called effective annual yield. The formula goes as follows:

## $(1 + discount/price)^{365/number of days till maturity} - 1$ (1)

On calculating the yields, we present three curious sets of facts:

1. The yields on series of FFCS bonds are unstable; specifically, each graph "rises" abruptly towards the end of the period presented in the graph (2005-2008.), that is, shows an expansion upwards. A similar situation is repeated in the PiO bonds. For example, in P08P they plummet, and then rise abruptly. In P09P, P10D and P11P: after a plummet (especially in P09P), there is a gradual, however, striking rise.

2. The yields differ greatly from one FFCS bond set to the other. For example, in OB05, the yields amounted up to about 40%, then fell to 20%, to rise again up to over 100%. In OB06-OB08 they remained around 15-20% for quite a long period (depending on the series), to rise dramatically a couple of months prior to maturity. The yield on OB10 was for a long time steady, about 10%, to rise in 2008. Similarly, the yields on OB15-OB17 were for quite a long period at about 4-5% (depending on the series), to rise, roughly, from the end of the first half of 2007 onwards. The situation is similar with the series of PiO bonds. For example, in case of P08P we are dealing with hundreds percents of yields. After the fall, in P09P, the yields go from 20% to 60%. With P10D i P11P, the yields range from 20% to 40%. A rare "regularity" is observed in the movement of P09P, P10D and P11P: after plummetting at the beginning, there comes a rise, and in such a way that the yield on the series that matures earlier exceeds that of the later maturing series.

3. The yields on the series of FFCS are rather high. This estimation is valid for all the series, except the OB15-OB17 series, from the moment (period) of the rise. The situation is similar with the series of PiO bonds. For example, the minimum of all (average) yields is 20,5%.

The yields on certain series are graphically presented as follows.

Graph no. 1 – Yields on FFCS bonds

















Source: Montenegrostockexchange, NEX exchange, authors' calculations





*Source: Montenegrostockexchange, NEX exchange, authors' calculations* 

#### 2. Possible reasons for yield growth

Let us first consider the yield amount. This will lead us to a discussion on what the investors' perceptions of credit and other risks of investments into Montenegrin state bonds (partly the risk of a change of interest rate) are. Generally, it is not easy to find relations between the economic theory and the practices of the developed countries.

Among the FFCS and the PiO bonds, it appears that only the OB15-OB17 series and perhaps the OB10series, had a "meaningful" yield, from the moment (period) as we already mentioned, in case of OB15-OB17 in the range of 4-5%, while in OB10 they were about 10%. Why "meaningful"?

The yields on bonds must be compared to any other classes of assets (with risks comparison, which, at least to a rational investor, gives a complete layout of the investment.) Let us then compare the bonds under study with other classes of assets available in Montenegro.

As far as shares are concerned, setting a relationship there is problematic. The share market "exploded" in spring 2007, earning enormous yields to those who invested in, e.g., 2005. (when, objectively real trade began). After that peak was reached, however, the fall ensued that lasted until as long as the end of 2008, bringing the indices back to the values from the last quarter of 2005.

It is the same with real estate, the prices of which formed a balloon, almost parallelly with the share prices balloon. The real estate prices continued to rise after reaching the price peak on the share market and stopped at the end of 2007. The plummet, sincerely, did not ensue like that on the share market, however, it was significant, followed by a significant fall in trading. In spite of the sellers trying to maintain the same price levels, at the end of 2008 hardly anything could be sold at the prices recorded one year earlier.

The comparison of yields on bonds with the yields on shares and real estate is meaningful if volatility is taken into account. Share prices rose extremely, then plummetted equally fast; the real estate prices did not fall as much as that, however, with the forecast for the year 2009, nobody can say they will not. The yields on bonds, on the other hand, however changeable, are steadier still compared to those on shares and real estate. We are, however, left with the impression that the period of observation is too short if we attempt to give any estimations of the sort. Similarly, the shares and the real estate assets classes largely differ from the bonds by the way in which they earn yield. The return on the discount bonds is quite known on condition they are kept until maturity, provided the issuer answers his obligation. The shares, on the other hand, do not mature, and earn the yield either by dividends (that cannot be known beforehand), or in the form of capital profit or loss. Similarly,the real estate does not mature, and earn yied either by the rent (that can be known beforehand, better than dividends in case of shares, however, up to a defined deadline), or in the form of capital profit/loss. Likewise, the real estate is generally considered to be a type of non-liquid assets.

Apart from the other (actually alternative, and much less present) asset classes available in Montenegro, there is a practically only one class, which is not enlisted, but is widely present and has to be discussed – a fixed time (savings) deposit account. And it is here, it appears, that the first serious illogical issue is born The reason is simple: the interest rate that the banks pay to fixed time deposits (that is, returns to the investor) amounts to 6% annually. Fixed deposits are not negotiable, that is, they do not behave as securities, as do the bonds, however, they are, by the manner in which they earn the yield, rather similar to the discount bonds: the fixed deposit matures and earns a fixed interest, known in advance.

Why, then is the yield on fixed deposits so much lower compared to the FFCS and PiO bonds (except the above mentioned exempts)?

Basically, it is the risk that defines the yield, that is, the risk is the basic determinant of yield, at least for a reasonable investor. But then, the basic risk component (or the key risk type) is the credit risk.

If we analyse the credit risk of investing into the state bonds and into the fixed deposits of the privately owned banks - it is common sense that the state bonds should be a less risky investment, however an investment with a lower yield. The state is a debtor that has a budget at disposal, and this is contributed by all who do business on its territory. The state is also authorised to impose taxes and to, e.g., raise tax rates. Or, if the worse comes to the worst, it can pay off its debt by increased emissions, in collaboration with the Central Bank<sup>1</sup>. The commercial bank can hardly do anything like that. This is, of course, what "economic theory" advocates. Normally, the U.S.A. Treasury cannot pay a manyfold interest rate on its debt, as compared to the interest rate paid by the Citigroup or the Bank of America. If we compare the case of Montenegro to that case, the situation would be the same, which would be an absolute

<sup>&</sup>lt;sup>1</sup>However, Montenegro cannot do it, because it uses the euro, actually the foreign currency, as an official means of payment. This fact, however, does not significantly affect the conclusions that ensue further in the text.

nonsense. The situation in Montenegro is all the more absurd, because the deposits in the banks are protected by the State (the Central Bank of Montenegro, The Deposit Protection Fund, the Ministry of Finance), and then, this same State is expected to pay a higher rate on the debt it emitted itself.

It is not easy to continue the comparison by using the credit ratings, since not one of Montenegrin banks is rated, which shows the low de facto ratings in fact. The explanation is, however, just that: as regards the cred-

it ratings, the credit rating of Montenegro is worse than that of the banks-owners of the Montenegrin banks, as well as than the states these banks come from – in the sense that, the "mother" bank is behind its "daugter"; and perhaps the state from which the "mother" bank is – therefore it is normal it pays a bigger interest rate on its debt. The following table presents the history of the credit ratings of the four best known banking groups present on the Montenegro market, including the ratings of the State itself, all in the 2005 – 2008 period.

1 – Crean rainings, tong-term aeot in foreign currency, 2005-2006 periou									
Societe Generale		OTP Bank		Nova Ljubljanska banka		Hypo International AG		Montenegro	
source: S&P		source: S&P		source: Moody's		source: Moody's		source: S&P	
date	rating	date	rating	date	rating	date	rating	date	rating
until 15.11.06.	AA-	until 30.07.08.	no rating	until 24.04.07.	A2	until 28.03.07.	Aa2	until 27.03.07.	BB
15.11.06.	AA	30.07.08.	BBB+	24.04.07.	Aa3	28.03.07.	A2	27.03.07.	BB+
15.02.08.	AA-	17.11.08.	BBB						

1 – Credit ratings, long-term debt in foreign currency, 2005-2008 period

Source: Bloomberg

Such argumentation is, by all means, disputable. The banks in Montenegro are (regardless of the fact that they are owned by some of the well known banking groups) nevertheless independent entities, accountable for their business acctivities, securing their credit worthiness by their own reputation and financial position. There is, of course, the argument that a well known banking group would not risk its reputation for "a small bank somewhere" in Montenegro, and in case of a crisis, it would normally support the "daughter" bank however, this approach has its flaws. In the first place, the crisis would probably go public, which might well endanger the bank, and besides, that well known banking group might not want to rescue that inefficient and incompetitive bank in Montenegro, especially in the current global crisis that is a peril to a parent bank which also suffers from insolvency problems, and by no means has surplus of assets to rescue its subsidiaries worldwide. It even may have assets to rescue one, however, not all of them. And which criterion will it use to decide which subsidiary to rescue?

However, even if we agree with the above mentioned arguments, there remains a question: what about the banks that are not owned by such well known groups, but are subsidiaries of not so famous banks, entities from the area of former Yugoslavia, or national legal or natural bodies? Shouldn't their deposits earn higher interests? They should. This, however, is not the case in Montenegro. The banks here offer similar passive interest rates (roughly, 6% or a number of percents higher), and then still less than the State gives to pay off its own debt.

Where is, then, the problem? In the investors' ignorance, in the bond market insolvency, in the inefficiency of the bond market?

By the way, the problem could be observed via the relationship between the demand and offer. In the fixed time deposit accounts the offer of capital is on the depositors' side - they offer free assets, whereas the demand is the banks' - they need the assets. In case of bonds, as discount securities, we have both the demand and the offer, with various economic sectors as owners or as prospective owners. (Primary owners are those that are first indemnified by the State by way of bonds.) Let us note that both the offer and the demand are incomparably greater in case of fixed term deposit accounts (in amounts, as well as in the number of participants, especially on the side of the capital offer), as regards offer and demand on the bond side. As regards such relationships, we could conclude that the yield on fixed term deposit accounts are lower due to greater offer, and a relatively low demand<sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> We say "relatively", mitigating the evaluation, although 11 banks, that are now present in Montenegro, is rather a small number compared to the number of buyers and sellers in the bond market. Competition, however, doas exist among banks, therefore the demand for deposits cannot only be observed and studied by the number of banks.

All these, however, do not answer the question: why is the relationship between the offer and the demand on two observed instruments such, i.e., which are the forces behind those offers and demands?

The answer to this question seems to be simply in the combination of a number of the causes mentioned. Let us make a short review of them:

1. *Distrust in the State as a debtor*. The doubts and fears of investors that the State will not settle its debts, i.e., that it will postpone the settling, can be fully understood. Simply, the sad memories of the investors of 1990's, of the times 10-15 years ago, when many people lost their life savings, are still fresh. Or, let us not go so far back, remember the years 2002 and 2003, when the State did not settle its debts towards pensioneers. Finally, the bonds themselves mean the State's redemption towards those it did not honour in due time. Why should we believe it will now? Objectivelly, there are arguments in favour of that, however, *trust* is, as we well know, something that needs time to recover, once it is lost.

2. *Investors' ignorance.* The capital market in Montenegro is a young market, only several years old. Economy has been a market economy for just a short period. The society, too, goes through a difficult transition period when knowledge is, unfortunately, rated rather low. Therefore, there is no wonder the ignorance and misunderstanding survive.

3. *Investors' dormancy (inertia)*. Investors find it easier "not to think" and simply make the surplus of liquidity into fixed-term deposits with a bank. This is what they are familiar with, what they have been used to for years; and, finally, where they come, draw cash, pay bills, apply for credits, etc

4. *Market insolvency*. There is, of course, no internationally adopted scale for the exact measuring of liquidity (different coefficients are possible: e.g., relationship between trading and capitalization, or trading and GDP, etc.,), however, it is all so obvious that we do not need such a scale to conclude that the bond market in Montenegro is rather insolvent. Over a four year period, from 2005 to 2008, about 80 million euros were trad-

ed. The figure includes both primary and secondary trading3. Having in mind the number of working days at the stock exchange (about one thousand), we can calculate that, by a working day, 80 thousand euros were traded, with only 50 transactions by a working day. As regards the total number of transactions and the stock exchange trading, the number of transactions with bonds amounts to 9%, whereas bonds transactions participation amounts to 5,5%. Not to mention how small the bond market (capitalization) is and how small a number of players in the market is.

Insolvency repudiates investors who do not believe that they will be able to cash (at not much lower a price) the bonds if they happen to need the cash before the maturity date. On the other hand, they know that they can cash the deposit before the end of the fixed-term period, however, with a loss of interest.

It is important, however, to know that inslovency may also be the consequence, since, if potential players do not enter the market, they make it less liquid.

5. The transaction costs, especially in case of PiO bonds. The transaction costs are not an important problem of the bond market, however, with small amounts, in transactions with PiO bonds, they may slow down the market, that is, make it inefficient. In almost 35 thousand transactions only 4 million euros were traded, making the average transaction value of not more than  $\in$ 120. Since the buyer has to pay a broker the commission of  $\in 12$ , which makes as much as 10%, it is a big stimulus and an "average buyer" does not enter the transaction and does not take the opportunity to gain<sup>4</sup>. He has to annul the cost of the  $\in 12$ , which means that, having in mind only the case of waiting for the maturity date (in no case the sale, or new purchase after the sale - which would incur even larger transaction costs), he will receive at least €132 at maturity, which further means that the purchase at any price higher than  $\in 0.91$ does not pay.

#### 3. Yields variations

In the context of the risk from the interest rate changes, it is essential that the *trends* of yields, that is *changes* in yields, not the *levels* of yields themselves are observed. Although it is obvious that they are related. (In this sense, discussions on the levels of yields on bonds, from the above paragraphs, are a logical and appropriate introduction into the analysis of yield variations).

<sup>&</sup>lt;sup>3</sup> As to the primary trading, it here means the primary sales of municipality bonds as well as the bonds for the road system rehabilitation. Also, we here include the primary trading with bonds of NLB Montenegrobank, although the stock exchanges (for no known reasons) do not include this fact. As to other types of bonds, although their innitialization is named issuing, these are actually teh so-called dry emissions (without new money, i.e., as debt securitization), therefore there is no primary sales of other types of bonds.

<sup>&</sup>lt;sup>4</sup> In practice, commissions are €10-15. Here, €12 was taken for the purpose of simpler (and more obvious) calculation.

As we well know, the method of duration and convexity is good in estimating the interest rate, but only as long as the question of a real opportunity for the rates to be changed is not asked. In other words, the method of durations and convexity only shows the "potential" of the bond price to react to the interest rate change. However, if that does not happen, the potential cannot be employed.

It is for this reason that, in studying the interest rate risk, the volatility of interest rates must be taken into account. Here, we will use a number of elementary, intuitive parametres to analyse the volatility of state bonds yield in Montenegro and compare it with that of the US state (federal) securities. We will disregard the method of duration and convexity. Besides the above mentioned flaw of the method, in the case of the Montenegrin bonds we have one hindering reason: there are no coupon bonds. As the non-coupon bond duration, by definition, equals the bond maturity itself, that would leave us little space for any productive analysis.

Let us, then, analyse the yield variations on OB05-OB08, OB10, OB15-OB17, P08P, P09P, P10D and P11P series. We will survey the period 2005-2008, using the standard deviation and variation coefficient as indicators. We are, of course, aware of the shortcomings of the indicators we use, however we believe they are the most intuitive, and they will, on the other hand, serve well enough in the concrete case, regardless of their shortcomings. The results are presented in the following table.

Bond series	Standard deviation, %	Variation coefficient, %		
OB05	17.9	37.7		
OB06	13.7	50.4		
OB07	5.2	29.8		
OB08	2.9	20.2		
OB10	3.6	30.7		
OB15	3.7	63.7		
OB16	2.6	46.6		
OB17	2.0	42.1		
P08P	246.1	69.8		
P09P	16.4	33.7		
P10D	7.8	20.5		
P11P	7.0	19.8		

Table no.2 – Yield variations, the Montenegrostate bonds

Source: Nex exchange and Montenegrostock exchange; Dauthors' calculations One regularity that can be observed is that the standard deviation falls in the series that mature later. If we look at the variation coefficient, however, we will notice that, relatively, it is not the case with the FFCS bonds, but only with the PiO bonds. We could also (partly) conclude that the variations in yields are on the average greater in the FFCS bonds, in relation to the PiO bonds (especially if the extreme P08P series is excluded). Beside this one, it is hard to find any other regularities.

Let us for a moment return to our discussion on the difference in the yield amount on the fixed-term deposits and bonds in Montenegro. We will note the difference in the yield variation in bonds, in relation to yield variations in deposits. Compared to the yield on bonds, the yields on deposits are (almost) constant. This argument may join the others on the list, in favour of the expelnations of the lower level of yields on deposits. Because, clearly, the investor finds such yield variations unfavourable. The investor who would have to sell part of his portfolio (if in need for cash), might risk to obtain considerably less than he paid for the bonds<sup>5</sup>. On the other hand, the depositor would only lose the interest, or part of interest. This argument cannot, naturally, be all in favour of the higher level of yield on bonds, contrary to that on deposits, since there is always a solution to keep the bonds until their maturity date, in which case the interest rate risk is eliminated<sup>6</sup>.

Let us now look at, e.g., debtor securities issued by the US Treasury<sup>7</sup>. The observation period is the years 1990-2008.

Graph no. 3 - Yield on American debtor securities, %



Source: The US Treasury

<sup>&</sup>lt;sup>5</sup> Generally, this is a disadvantage for any active investor into bonds. In fact, it is here that the interest rate risk essence is.

<sup>&</sup>lt;sup>6</sup> The probability that the bond will be kept till the maturity date is rather real and comparable, since the depositors in principle do not make fixed-term deposits to break the deal lated..

<sup>&</sup>lt;sup>7</sup> It is clear that the USA cannot be compared to Montenegro, both in the size and in economy, and in the size and the level of development of money markets. Anyway, the comparison may even be useful in drawing the conclusions that follow.

Note the significantly lower yield levels compared to the securities issued in Montenegro. On an average, in this period, the yields on the US Treasury securities ranged from 4-5%. As we see, however, the yield variations on American securities are also striking. This is clearly shown by the variation coefficient.

Table no. 3 –	Yield	variations,the	US	Treasury
	securi	ities		

Maturity	Standard deviation, %	Variation coefficient, %
1-month	1.5	61.1
3-month	1.8	44.6
6-month	1.8	43.0
1-year	1.8	40.7
2-year	1.8	37.1
3-year	1.7	34.0
5-year	1.5	29.2
7-year	1.5	26.6
10-year	1.4	24.3
20-year	1.0	17.0
30-year	1.3	19.7

Souce: The US Treasury; authors' calculations

We will point out that the standard deviation and the variation coefficient depend on the observation period. Here, we observe the entire 1990-2008 period. The variations would have been smaller had some other been observed, for example 1995-2000. (see the graph). This, however, does not change the conclusion that the yield variations on American debtor security are present. The yields are significantly lower compared to those in Montenegro, nevertheless, the variations are almost equally present.

What is, however, behind the variations in the yields on securities issued by the US Treasury? Primarily, it is the monetary policy of the FED, the US Central Bank. On the basis of the economic conditions (primarily inflation, and then growth) the FED changes its so-called federal funds target rate, the interest rate at which the business banks, mostly over night, lend each other the resources they keep as statutory reserves with the FED (the so-called federal funds). The FED targets this interest rate, that is, it attempts to achieve it through the operations on the open market. It is clear that the interest rate on the securities issued by the Treasury, especially the short-term ones (since the transactions with federal funds are very short-termed) must correspond with the interest rates on federal funds. In addition to the US monetary policy impact, some other factors condition the yield on the Treasury issued securities. For example, the crisis situations on money markets direct the investors towards the Treasury securities, since these are considered to be the safest instruments.

On the other hand, what is it that causes the variations in the yield on the Montenegro state securities? Using the euro, i.e., the foreign currency as the official paying instrument, Montenegro obviously has a "no money policy" central bank. Montenegro is not member of the EMU, however, it may be expected that the ECB monetary policy affects the yield range. This, however, is not the case, since the yields do not show any correlation with the ECB decisions on the referent interest rate.

Let us stop here for a moment. In a way, we could maintain that the risk of the change in the interest rate on the Montenegro state bonds conditionally "does not exist" since the interest rate(s) affecting the price cannot be "identified". In this sense, we can talk about a risk of "price change", which changes without a direct influence of interest rates on the market. Such an attitude, however, cannot be correct. Montenegro *is* affected by the influences of interest rates on the money markets of the developed countries. The interest rates approved of by the banks in Montenegro and the changes in the levels of these interest rates may serve as rough approximation.

It is by no means easy to understand what is it behind the yield variations on the Montenegro state bonds, that is, what the explanation to these variations is. Take the series OB15, OB16 and OB17. These are the series whose prices fell inexplicably from the autumn 2006 towards the end of 2008<sup>8</sup>. Or, equivalently, from the level of 5%, the yields became two, three and at one moment four times as high (in series OB15). It is really difficult to explain what caused this. Would the abrupt rise in yields (fall in prices) mean that the state became a worse debtor, less credit worthy than before? This is, of course, nonsense, because 2007 was an even better fiscal and economic year (the most successful after the break of the SFRY), and so was 2008 (although slightly worse than 2007). Or, we may wonder what it was in autumn 2006 that showed that the state was to become a worse debtor (ever, until the end of the maturity period), what could not be foreseen before 2006. Using a different approach, the market may have "decided" in 2006 that the OB15-OB17 series were overpriced, returning low yield on credit risk, and consequently lowered the price, increasing the yield? Hard to believe.

<sup>&</sup>lt;sup>8</sup> Also, with enormously lower trading in comparison with the period till autumn 2006.

One reason we did not state earlier is the option of purchasing property (shares, real estate) in the state ownership, paying by bonds. This option is valid for the property the state pronounces available to purchase by bonds. It is evident that when the property is announced for sale by bonds (actually, already as early as the announcement is anticipated), the bond prices rise (lowering the yield), due to the increased interest in the bonds. This reason, however, only partially explains the problem we analysed.

Finally, we come to a conclusion that it is the same factors that are quoted to be the causes of the yield *level* (compared to other classes of assets) that affect the *changes* in yields; to the above mentioned factors should be added the yield variability factor and the factor of using the option of state owned property purchase that we identified somewhat later. All these factors simply – by their strong joint action – cause the yield growth (fall in prices), i.e., by their weaker joint action they cause the fall in yields (rise in prices). None of the factors, however, can fully explain the yield levels and changes.

As far as the interest rate change risk is concerned, apart from rough approximations, it is impossible to accurately identify the interest rate that affects the range of prices (yields) on bonds in Montenegro, that is, the institution that this influence starts from.

# 4. In place of conclusion: Interest rate risk as investors' problem in Montenegro

In the end, it must be pointed out that the interest rate risk, at least so far, has not been the primary risk and a big problem of those who invest in bonds. The reason is simple: trading is low, a vast majority of investors chooses to keep the bonds until the maturity date. There is a large number of primary owners that decided to keep the bonds until their maturity date. Or, in the majority of other cases, a new buyer will keep them until theeir maturity date, or, using the 1:1 parity, buy portions of state property, or pay taxes, or electricity supply bills – and the option of resale and yield by capital gain comes last. (Resale can be a solution when the bond has left the deep discounts and its worth comes to  $\in 0.9$  or  $\in 0.95$ , with the maturity date far ahead, therefore it seems a better solution to sell at that price and recover liquidity, than wait for the maturity of the bonds. Or, as a last choice, a new buyer will sell the bonds if he finds himself in demand for liquid assets.)

As far as the financial sector in Montenegro is concerned (in the first place the banks, the investment funds, the pension funds, the dealers), the participation of FFCS, PiO and restitution bonds in their portfolios is negligible. And even among this small number of bonds they possess, the majority are "classified" as securities that are kept until the maturity date. In such a case, according to the International accounting standards (that is,"formally"), the investor is not obliged to adjust the change in the value of the bonds in balance statements, which is fully justified and is only a proof of the economic essence of the phenomenon.

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