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ANALYSIS OF INVESTMENT ATTRACTIVENESS OF RUSSIAN MARKET

Аннотация: в статье рассматриваются преимущества и недостатки инвестиций в определенных областях с позиции инвестора рынка России. Целью исследования является изучение необходимых параметров существующего уровня инвестиционной привлекательности для определения текущего состояния рынка и перспектив его развития. В рамках исследования авторы определяют рациональность вложения денег либо в облигации федерального займа, либо в акции компаний России путем расчета таких показателей, как спотовые и форвардные процентные ставки и определения рисков и возможностей выбранного портфеля.

Ключевые слова: инвестиции, облигации, спотовые ставки, форвардные ставки, портфель Марковица, цена Эрроу-Дебре

Abstract: *the article deals with advantages and disadvantages of investment in certain areas from the position of an investor concerning the market of Russia. The research is aimed on the study the necessary parameters of the existing level of investment attractiveness within the framework of an object to determine the current state of the market and prospects for its development. Within the study authors identify the rationality of investing the money either in federal loan bonds or in the stock market of Russia by the means of calculating such indicators as spot interest rates and identifying risks and opportunities of a chosen portfolio.*

Keywords: *investments, bonds, spot/forward rates, Markowitz portfolio, Arrow Debreu Prices*

1. Economic outlook

The Russian financial market cannot be attributed to the developed financial markets. The lack of stability, insignificant amounts of financial resources, high risks characterize the financial market as a developing one. The fluctuations of the Russian stock market were mainly caused by the escalation of Russian-Ukrainian relations. The development of the conflict in the East of Ukraine and the immediate reaction of Russia led to financial sanctions against Russia, which caused the loss in access to foreign loans and capital markets, and in possible investments.

During 2014, the risks of investing in financial assets were increasing as a result of the inflation growth, as well as the deterioration of the economic situation in the country. This contributed to the growth in the yield of OFZs and corporate bonds in 2014. At the end of 2014, as a result of the stabilization of the situation in the monetary and foreign exchange market of the country, reduction of sharp fluctuations of foreign exchange rates, there was a decline in the yield of OFZs and corporate bonds. It should also be noted that the Russian stock market, which was largely formed as a result of the privatization of state-owned enterprises, could not

become a source of massive capital raising because of a low level of trust in corporate governance. At the end of 2015, the capitalization of the Russian stock market amounted to 28.8 trillion rubles or 35.6% of GDP, which is significantly lower than the world average level of 82.3% of GDP. In 2016, the main indicators of the domestic financial market were moderately neutral to the negative political news. The first half of 2017 showed a weak recovery of the domestic financial market from external shocks.

Having considered the statistical data from in the Russian Bond market during the period of 2014-2017, we can identify a number of problems:

1) the Russian securities market exists in isolation:

The Russian stock market operates separately from the processes that take place in the country. The owners of companies do not care about the value of the companies on the stock exchange.

2) imperfection of the legal framework:

In Russia, there is no reliable judicial protection, optimal tax conditions and legislation protecting investors.

3) lack of interest of domestic investors:

The Moscow currency exchange market is practically the only major trading platform in Russia. Many Russian analysts are concerned with the fact that the share of non-residents in the Russian bond market is substantial. In order to increase market liquidity, it is necessary to introduce private investors on the exchange market and to create suitable conditions for them.

2. Analysis of Federal Loan Bonds market

2017 was the most disastrous for Russian funds since the introduction of sanction - the disappointment with Russian-American relations and the expectation of new sanctions forced foreign investors to withdraw almost \$900 million from Russia.

More than 10 Federal loan bonds with maturity date starting from the year 2018 till the year 2025 were taken into consideration in this part of our work. Each

of them has fixed coupons which are paid out ones a year and with the face value equal to 1000 RUB. Spot rates and forward rates were calculated for each of the OFZs and an average value was taken for us to better understand the situation on the Russian Federal Loan Bonds market in the period from December 2017 till April 2018. The results are presented in the figure below:

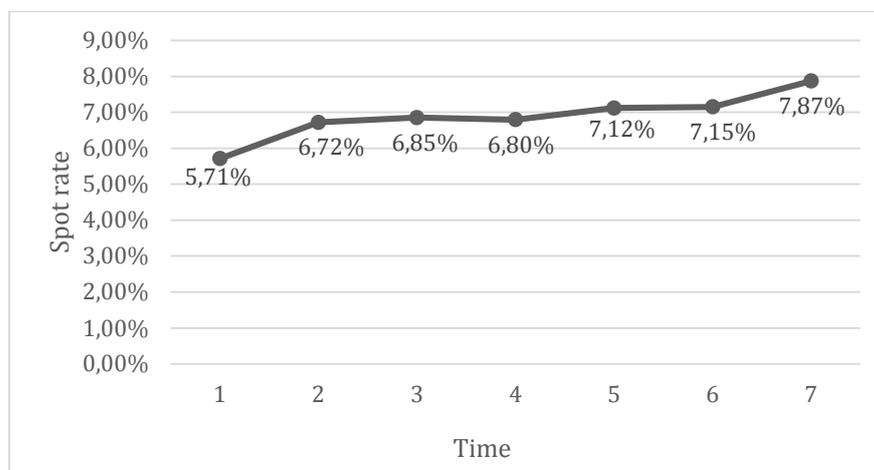


Figure 1. Average spot rate, 12.2017-04.2018

The figure distinctly shows that the average spot rate has a normal structure over the given period because the indicators are gradually increasing within the interval of 5.71% - 7.87%, as the time flows, which indicates the stabilization of the condition of the Russian market of government bonds. However, it should be noted that the spot rates on 27 of December 2017 have fluctuated, therefore the structure was inverse. Two days later the market stabilized. This can be explained by the fact that different federal loan bonds were used as a base for the analysis. On that basis we cannot fully judge the objectivity of the conducted analysis. Three month later the surveyed spot rates showed stable growth. Forward rates for the period were homogeneous.

Thus, we can conclude that we have achieved average value of spot rates amounting to 5.71% - 7.87% to have an ability to compare the profitability of investment in shares of the real sector of economy with the actual condition of the market.

3. Analysis of portfolio investment

The Russian stock market in April 2018 fell to its maximum since March 2014. The sharp drop in the Russian stock market has become a separate individual story. The fact is that the European stock markets show a generally positive dynamics in the range of 0.1 - 0.6%, and the US stock market opened with a growth of key indicators by 1.5 - 2.2%.

In this part of our article we have analyzed 25 stocks of different companies of Russia in different sectors of economy in order to increase the diversification of the investment portfolio and reduce its market risk. The most profitable variant of possible portfolio was chosen, which includes the shares of 5 companies: “KTK” (OJSC Kuzbasskaya Toplivnaya Company); Moscow Exchange; Gazprom Neft; Novorossiysk Grain Plant; Nauka Svjaz'. The prices for stocks are taken as at the beginning of each month starting from the 1st of January 2017 till the 1st of May 2018. The model of Markowitz was proposed for the analysis of the portfolio. On the basis of this data monthly returns for each share, expected value, standard deviation and variance of returns were calculated to determine the value of the risk of shares. It is worth noting that the average monthly yield on shares of Moscow Exchange and Nauka Svjaz' have a negative value, so they will need to be excluded from the portfolio.

In order to assess the risk level of the entire portfolio using the Data Analysis of Excel a covariance matrix of income variances presented below was calculated, where the total risk and the annual return of the portfolio with equal shares amounted to 4.84% and 13.59% respectively.

The following conditions have been adopted for the formation of an effective investment portfolio:

1. It is necessary to minimize the portfolio risk at a monthly yield of $r_p \geq 1\%$.
2. It is necessary to maximize the profitability of the investment portfolio at the risk level of no more than 10.00%.

With the help of the Solver of Excel, the necessary shares of stocks for the implementation of the tasks were determined. From the calculations we get that the

two portfolio projects got the risks equal to: 3.93% and 6.79% and yield equal to: 23.75% and 57.38% respectively. The solution for the first portfolio (1) suggest that the shares of five stocks should be divided as: 0,28; 0,38; 0,10; 0,18 and 0,06 (MOEX; KBTK; SIBN; NKHP; NSVZ) and by doing so we undergo the minimal risk. And the solution for the second portfolio suggests we should only invest into the second stock (KBTK) and thus get the maximum yield.

4. Conclusion

Concerning the market of stocks of Russian companies in such sectors of economy as: banking, agriculture, transportation, oil and gas, services and metallurgy, we can see that investing in banking and services is not profitable. Disputable sectors include metallurgy, oil, gas and transportation. Agriculture is the only observed sector that shows the most stable results. It should be noted that the situation is affected by the political and economic situation in the country. To sum up, on the basis of the conducted analysis, we have come to the conclusion that at the present time, taking into the account political and economic factors that affect the investment attractiveness of Russian market, one should invest in buying the stocks of an agricultural company.

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