

**GLOBALIZATION AND SECURITIES MARKET DEVELOPMENT  
TRENDS IN GEORGIA**

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**ABSTRACT**

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In the scientific article a great attention is paid to the development of financial markets development of the world tendencies and their basic problems, studying securities market mechanism and analyzing, forming effectively functioning of basic directions of securities market. The article concentrates on yield curve, definition of its economical meaning, as well as the defining factors of its form, using yield curve to value its interest rates. In addition, the article shows concrete recommendations for securities market working, regulations and further development.

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**Key words:** Interest rates, Regulation of securities market, Banking model, Nonbanking model, Securities market, Investment market, Development trends, Yield curve.

**Contribution/ Originality**

From the point of world tendencies of financial market development, the basic problems of securities are analyzed and their further development of directions are formed. We have studied for the first time the essence of the yield curve of Georgian national Lari, the defining factors of yield curve and percentage numbers have been formed.

**1. INTRODUCTION**

Financial markets and institutions, as economic categories, are of great interest of scientists and practitioners. At the same time, no large enterprises will avoid their activities under the conditions of market economy and in the extreme situation; it will not ignore current processes and operations of the financial markets. This is how they explain the conditions that financial manager shall know at least the principles of organization and functioning of financial markets and institutions.

Today, objective of financial management is to serve management of financial flows, initiation of these flows, satisfaction and organization of final purpose of each party involved (i.e. implementation, actual realization) i.e. announcement of the offer.

Initiation of the financial flows is provided by financial donors and recipients. The donors are able to represent financial resources, as for the recipients – they know how to dispose it; i.e. they have portfolio of flows. These latest are given opportunity to return resources attracted by investment and issuing dividends to the holders of the portfolio. Said phenomenon is well described by J. Madura: functioning of the

financial flows is implemented by means of organization-instrumental triad (markets, institutions, instruments) (Madura J., 2003). Accumulation of demand on investment and funding takes place at the market, together with particular recipients and donors of searching and settlement. Herewith, openness of market in large or small degree assists optimization of cash resources. Finding and bringing financial donors and recipients are performed by the organizations and financial institutions operating at the financial markets. Practical realization of offers\* (delivery) of investment and financial nature, i.e. organization of exchanging and mutually beneficial outflows of financial resources from their suppliers (donor) to the consumers (recipient), is implemented via market instruments. In this course, it is possible to satisfy purposes of particular participants of the operation in more effective form.

We will touch upon all three components of the said Triad separately in the Manuscript. According to the global experience, real market economy is represented at the financial markets without its instruments. This is the thesis neoclassic theory of finances is built actually in. Besides this, its confirmation may be obtained without any evidences in macro- and microeconomic studies. Particularly, in 1973, American scientist E. Shaw and R. McKinnon developed independently macroeconomic concepts of Financial Deepening and Financial Repression (Eugene F. Brigham; Michael C., Ehrhardt, 2005). The concept of Financial Deepening means that formation and development of financial markets and institutions is necessary term of economic development. Herewith, accumulation of financial assets shall be provided in higher rates than accumulation of non-financial assets. Financial Repression means systemic control (from the side of the state or oligopoly) \*, which is mostly implemented by means of regulation and control of the interest rate. In case when market economy is at the stage of formation, financial suppression takes place quite often, which is reflected in their role and obligations in organization of financial institutions, markets, assets and financial flows, as well as methods and objects of investments and finances. In such case investments in non-financial assets (gold, real estate) takes place very often; resources are inactive, enterprises lack financial resources, etc. Normal incomes into economic development is essentially complex. However, financial suppression is replaced with financial deepening by means of institutional development and improvement of economy.

Capital markets undoubtedly occupy dominating place for the subjects of global, national or regional economy in the system of strategic funding of large industrial subjects, especially those forming the system.

Activities of most of the companies, especially of large ones, is in close relation with various financial markets. Each of them is organizational and informal system of trading with financial assets and instruments. Exchange with money or its equivalent takes place at these markets, as well as issuing credits, mobilization of equity and etc.; i.e. different combinations of two typical financial procedures – mobilization and investment – are being realized. Decisive role here is played by the financial institutions, directing cash resources from the owners to the recipients of loans. Objectives of any market, as well as financial one, is making direct contacts between purchasers and buyers with financial resources.

Thus, the process of accumulation and placement of financial resources implemented in the system of financial management of the state and entrepreneurs is expressly related with the functioning of financial markets and financial institutions (Qoqiauri L., 2013).

If objective of the financial institutions is provision of the most efficient displacement of cash resources from owners to the borrowers, function of the financial market is organization of trading with financial assets and liabilities between purchasers and sellers of the financial resources. Solving this task in Georgia is becoming difficult due to particular objective and subjective reasons, as it is necessary foresee various, and sometimes diametrically reversed interest of the participants of financial market, important risks of performing financial liabilities and etc.

Thus, purpose of my work is emphasizing basic problems of development of financial markets in Georgia at the background of global trends, analyzing the situation existed at the financial markets in Georgia and, moreover, and forming basic lines of their further development.

We have separated the issue of the necessity to involve the essence of the yield curve of Georgian national unit – Lari at Georgian financial market. It was developed with the help of the experts of the Central Bank of Czech Republic, within the framework of the joint project with EBRD.

Purpose of the Manuscript conditioned setting and solving following principle tasks in the article:

- Role of financial management, modern trends of development of financial markets;
- Globalization and financial market;
- Complexities of issuing securities in Georgia;
- The essence of the important attribute of financial market – yield curve;
- The factors conditioning form of the yield curve;

## **2. MODERN TRENDS OF DEVELOPMENT OF FINANCIAL MARKETS**

developed in the Europe regarding creation of conglomerates of rendering financial services; 3) fear of some countries about losing its independent national monetary policy. Notwithstanding this, attempt of authorities regulating functioning of financial markets of different countries towards merging becomes more and more evident.

Important trend of the last years is more rapid growth of the market of derived securities. Derived security is known to be financial instrument, cost of which is the derivative of the price of “market” asset. Such securities may be used as for During last decades, financial markets suffered multiple changes. Technological progress in computer and telecommunication technologies and globalization of banking and commercial domains conditioned reduction of the influence of governmental authorities upon economical processes and this gave rise to the activation of competition worldwide. Result to this is more effective market with global ties. However, the market became much more complex than it was several years ago. Notwithstanding numbers of important positive changes, leading financial institutions faced new difficulties in many countries.

Twenty years ago, at one of the conferences, the Manager of US Federal Reserve System Mr. Alan Greenspan stated that modern financial markets influenced national economies from new and unexpected sides, and quite rapidly, and sometimes in a second. To his mind, central banks of every country should develop new procedures of evaluation and restriction of financial risks of global financial system functioning. Large amount of capital is rapidly dislocated in entire world in response to the variation of interest rates and exchange rates of currencies worldwide and this movement could damage national financial institutions and economies of strong states (Greenspan A., 2001).

Globalization and Market. Along with the growth of globalization of the markets, the necessity of great cooperation of regulatory authorities of separate states was formed at the international level. The factors, complicating coordination of their actions, include: 1) different structures of the national banking system and securities markets; 2) the trend reduction of risk, so – conclusion of speculative games. Good example of reduction of the risk of using derived securities is the fact that net profit of import merchant from Japan falls in the USA, along with the decline in US Dollars against Yen. However, the company-importer is able to reduce its risk if purchasing derived securities, their prices will rise in accordance with the depreciation of exchange rate. Such action is called hedging operation and its purpose is reduction of relation of incomes of the company towards risk. On the other hand, speculation with the derived instruments may be extremely profitable, but it also rises significantly the risk of investments. For example, the company Procter & Gamble lost 150 million US Dollars on the operations related with derived securities, and the company Orange County (California) was bankrupted because of the speculative operations on such securities by its treasurer.

Scales of using derived securities and related transactions create difficulties to the regulatory authorities, as well as groups of experts and members of congress. We will refer to the words of the Chairman of US Federal Reserve System Mr. Alan Greenspan, who stated that “theoretically derived securities shall allow companies manage risks better, though this shall be provided unnoticeably, to let

innovations overcome domestic sustainability of the global financial system at their markets” (Greenspan A., 2001).

Another important trend foresees variation of the ownership structure (composition of shareholders), shares of which are traded at the financial markets. Amount of the investors owning shares held by private shareholders is being increased; and rate of corporate securities is decreasing. How these two phenomenon take place simultaneously? We shall find the answer in contradiction of institutional and personal ownership of shares. Today more than 50% of household industry in developed countries is provided by investment in shares. In 1990 this index was 22%. Today, 60% of shares belongs to the pension funds, mutual funds and insurance companies. Therewith, more and more separate entities provide investment at the markets. Though they perform it indirectly by participation in the pension plans and mutual funds. In any case, efficiency of the equity market today influences greatly upon welfare of citizens, than it happened until today.

It is noteworthy that, today, the shares are owned by the institutional portfolio managers working in the above funds and companies. Also the fact that if the fund owns large package of shares of the given company, it may face significant fall of prices on such shares, when trying to sell them, in which they are not interested in. Thus, in particular, large institutional investors “freeze” packages of these shares in their portfolios. This phenomenon was named relationship investing, when managers of such funds are to act in the range of long-term strategic stockholders into the shares of the companies, with which they provide management. Different from the private passive shareholders, portfolio managers are able to influence actively upon the managers of the companies working badly and to make them work in accordance with the interests of such owners.

Important range of economical development of the country is securities market and its streamlined functioning. Such developed countries, as Georgia suffer existence of own resources, as for one of the best means for attraction of investment capital is activation of the securities market. Necessary precondition to development of the securities market is sustainable functioning of the organized equity market and its infrastructure (stock exchange, central depository). In the countries of developed economy, the state becomes of great importance. Securities market is necessary and important element of global economy, without which market economy is impossible to function normally.

Stock exchange of Georgia exists 15 years. Besides this, there are multiple problems in this sector and it is not doubtful that today Georgian stock exchange differs in extremely low activity. In 2011, volume of transactions concluded at the Stock Exchange made 2.5 million Georgian Lari; in 2012 – 8.9 million Lari. Stock Exchange of Georgia was established with the assistance of USAID and operates with the help of American experts within developed legislative framework. It offers effective investment mechanism as to the local, so – foreign investors. Electronic trading system of the stock-exchange of Georgia offer brokers trading with various shares from the working places, which are located as in the trading hall of the Stock Exchange of Georgia, so – in the brokerage offices via distance access.

As of April 1, 2014, securities of 129 companies are allowed to the trading system of the Stock-Exchange of Georgia, total market capitalization of which reached 1.14 billion US Dollars, and daily turnover – 3 255.42 Georgian Lari (Pitiurishvili I., Tevdorashvili N., 2015). Notwithstanding positive fluctuations, there are fundamental problems, preventing its effective functioning. Role of stock exchange in the process of privatization is in fact brought to 0 and the investors have no understanding of the role of stock exchange in the development their business.

Distributed forms of funding business in Georgia are related with extremely large risks. We mean such mechanisms as bank credit, direct foreign investments, and direct investments of local banking groups to the equity and IPO at the stock exchanges of foreign country. According to the Manager of the Stock Exchange of Georgia Mr. G. Loladze: “today, society in Georgia is divided into large proprietors of small amount and multiple employees so-called “Proletarians”. When entire business is in the hands of small group of proprietors and no their diversification is taking place, we receive the society based on the antagonism. In this case, we deal with non-inclusive development, when goodwill of the ownership of

large companies is not available to the wide masses of population. The sense of social injustice is an important problem in such case” (Loladze G., 2001).

One of the leading reasons for non-development of the securities market is skeptic attitude of population towards the Institute and their ignorance in this domain. According to the specialists, the state is necessary to develop strategic plan and legislation intended for the long-term perspectives of development of securities market.

The government shall support provision of investments into the corporate securities, which will make grounds for development of country economy in the future. Undeveloped financial market of Georgia makes it possible to attract foreign portfolio investments. Indexes of the stock-exchange make one of the most important indicators determining economical sustainability of the countries. When stock indexes are depreciated, this speaks of negative trends of the country’s economy. One of the principle means for attracting investment capital into the economy is activation of the mechanism of securities and development of this market. Development of securities market in Georgia is one of the most important conditions for development of economy. This market supports accumulation of financial resources and their inclusion into the process of economical development.

State of financial market today in Georgia. Problems. One of the means for attraction of investment capital is activation of the mechanism of securities. Shares, bonds, currencies, derivatives and bank credits may be traded at these markets. According to the analysts, with all measures, the years 2007-2015 were hard for the corporate securities market in Georgia. Particularly, three events of the years 2007-2008 shall be foreseen, which prevented realization of mature opportunities in the process of market construction. These phenomenon are: global financial crisis, August War and the “Third Phenomenon” – the package of radical variations of the law on securities market. Besides the fact that during that period these changes were provided in the context of “liberalization”, its obtaining was followed dramatic reduction of transparency of trading. Thus, in particular way, unfavorable state of securities market of Georgia is “self-provoking” as well. By means of the variations of 2007, the demand was removed for trading of securities allowed to the stock exchange only via stock-exchange.

The problem was not in the motivation of variations, but its defective implementation. The variations were not resulted in the liability of performing transactions obliging the brokers with the best condition, neither stock-exchange was given authority to request from the members implementation of transactions only at the stock-exchange. As a result, according to the specialists, the trading was dramatically transferred from the stock-exchange to non-stock market and to the registrars of securities. As of the end of 2014, 1.82% of the volume of commercial transactions is of stock exchange, 84.77% - non-stock and 13.41% conducted with the registrars of securities (Vardiashvili M., 2016).

Amendments of 2007 implemented in the law on securities market also reduced the amount of joint stock companies, who were requested to make reports publicly available.

Component of the term “accountable enterprise” – “any issuer, having more than 100 shareholder” – has been removed from definitions. This significantly reduced aspects of protection of investors in the law on securities market. The test served for neutralization of misbalance of the forces, existed between diversified and wide population of proprietors and managing team (the management). Consequently, we received the fact that transparency of joint stock companies of Georgia are under regress and not progress: herewith, according to the economists, the government shall be interested in the circumstances taking place at the financial market, including the issue of stock exchange; respective legislative changes shall be implemented immediately. Otherwise, only involvement of yield curve of Lari will not be able to provide stability of Georgian Lari and stability of exchange rate of the national currency.

### **3. ISSUING SECURITIES IN GEORGIA**

Georgian companies started issuance of securities. The companies under the lobbying of the Bank of Georgia are more active in this direction – Development Company M<sup>2</sup>, Georgian Water and Power.

Placement of bonds of these companies at the stock exchange was provided by the daughter company of the Bank of Georgia – Galt & Taggart. Bonds were issued by Finka Bank as well. According to the analysts, it is very important to develop securities market for attraction of investment. This process will sacrifice another function of the National Bank. They plan regulation function of securities from the National Bank of Georgia to the independent commission.

In 2015, the companies implemented investment of more than 20 million Georgian Lari each. 6 million Lari were issued by Georgian Water and Power. Nominal price of each bond makes 1 000 Lari and the term – 2 years. Amount of the coupon is determined in the following form – 7.5% margin added to the rate of refinancing of the National Bank. Consequently, effective price of the bond as of today makes annual 15%. Before issuance of bonds, Georgian Water and Power received BB rate from the rating company Fitch for obtaining confidence.

It is noteworthy that in March, 2015 representatives of Fitch held meeting with 15 leading private companies of Georgia. According to the summary description of the said meeting, Fitch made attractive offers to the companies in relation with the service fee. Of course, giving rating to the bonds by Fitch increases confidence of this system. Thus, activation of the securities market was started, though quite slowly. “The companies treat carefully this issue, as it is of high risk to issue bonds and make them non-marketable; i.e. they in fact were not demanded. At the same time, all these depends on the fact how investor believes in purchasing securities or not” (Tokmajishvili M., 2016)

It shall be noted, trust in the companies has been already expressed in successful placement of the bonds. He states that securities market of Georgia is in an embryonic state and in this direction the year 2016 shall be much more effective. Moreover when interest rates on the deposits in foreign currency were reduced and in case of correct regulations, the bonds become much more attractive.

“Financial market was dead because they did not do this earlier. We plan to implement pension reform. If the market is dead, where shall we invest this money? Due to this, some movements has started last period. Each large organization shall attract investments with issuance of securities, except bank. Today market is ready to purchase bond of every liquid company. One thing is to have low level of purchasing treasury obligations, and at the same time, we shall have the regulation of financial liabilities from the National Bank and we hope to have this process completed soon” (Jgerenaia E., 2016).

During last period, it became known that Bank of Reconstruction and Development of Europe starts issuance of denominated securities. To-year bond of 50 million Georgian Lari has been equally distributed between two leading local financial institutes, they are: BG Capital, subsidiary brokerage company of the Bank of Georgia and TBC Bank acting as leading managers and transaction guarantors. In regards with issuance of bonds, there were multiple of opinions regarding the fact that the bonds of 50 million Georgian Lari had been distributed between two banks. According to EBRD representatives, this is not much amount of money to them, as the institute had practice of issuing bonds of larger amount. Due to this, they considered distribution of the said sum between two banks to be purposeful at the International Financial Institute. According to Vakhtang Svanidze, this phenomenon has nothing common with the equity market, notwithstanding the fact that this event was broadcasted to be supporting issue for development of securities market. In the first place, terms and conditions of issuing these bonds go beyond market principles and, on the other hand, unfortunately, Bank of Reconstruction and Development of Europe did not selected in Georgia such civil form of issuance and placement of bonds, which had been provided in the neighboring Armenia two months ago via stock exchange and thus providing support to the development of local exchange market (Svanadze B., 2016).

#### **4. WHO MANAGES SECURITIES MARKETS IN GEORGIA?**

The issue of transferring the function of regulating securities from the National Bank of Georgia to the independent commission is being considered actively and this process shall be probably completed on 2016.

The authority assuming responsibility for regulation of the securities market has been changed several times during last 15 years. According to the law on securities market, adopted initially on 1998, National Securities Committee of Georgia was formed (NSCG). In June, 2007, functions of the National Securities Committee of Georgia have been transferred to the National Bank of Georgia, as the part of consolidation of regulation of financial system. In March, 2008 all functions except banking supervision were transferred to the newly established Agency of Financial Supervision. In October, 2009, functions of financial supervision were also transferred to the National Bank of Georgia. In 2015, National Bank deprived of the right to financial supervision and the Agency of Financial Supervision was formed. This decision was protested by the National Movement, it was supported by the Independent Democrats and on the basis of the action filed by them, and the Constitutional Court stopped operation of the newly formed agency. That time financial supervision was provided by the National Bank again.

At the same time, it's noteworthy that the National Bank of Georgia, as supervisor of the Securities Market of Georgia, is not IOSCO member. Another important thing is that Georgia is not the signatory of MMOU. According to the analysts, both facts noted have negative influence upon Georgia from the point of development of capital market.

Besides this, subject to the liabilities undertaken within the framework of the Association Agreement of European Union and Georgia, the Law on Securities Market shall be enclosed to approaches of European Union. This process foresees 22 directives and regulations.

It shall be noted that Georgia has no special laws on the warranted bonds or securitization. Specialists speak of immediate elimination of this legislative defect.

Numbers of countries attract their capital with development of securities market and Mikheil Tokmajishvili gives example of the USA to illustrate this.

“US Securities Market is developed and it is great competitor from the point of attracting investment of commercial banks. 90s gave particular provoking to the securities market in our country, though those times the society and companies were not ready for that”. (Tokmajishvili M.).

It is noteworthy that various financial instruments are represented at the US Securities Market, which is issued as by the private sector, so federal, state and local governments. Treasury securities issued by the federal government occupy dominant role at US Market. Particularly, more than half of total trading turnover of the US Market of bonds in 2012-2014 is occupied by the treasury securities; as for the sums attracted by using them is directed towards funding of the federal budget.

## **5. WHAT IS YIELD CURVE?**

National Bank of Georgia started publishing of yield curve of Georgian Lari. Yield curve is one of the most important attributes of financial market. Financial market is in fact degraded. More precisely, only bank sector was developed. As for other participants of the Market, they are being developed too slowly, or they die due to unhealthy environment. One of the examples to this are the phenomenon developed around stock exchange, which got into the hands of one large institute and existence of the competitive environment created at the financial market came under question. What does the yield curve of Lari means? At the National Bank they explain that they had developed the Curve by the National Bank of Georgia with the assistance of Czech experts, within the total framework of EBRD.

It shows risk-free interest rates for the instrument of each maturity tool. Participants of financial market may use it as indicator, ratio for determining and prediction of the price of Lari, securities at the primary or secondary market. “Yield curve of Lari is important step forward for development of capital market and rising attractiveness of capital in Georgia”, - declared at the National Bank.

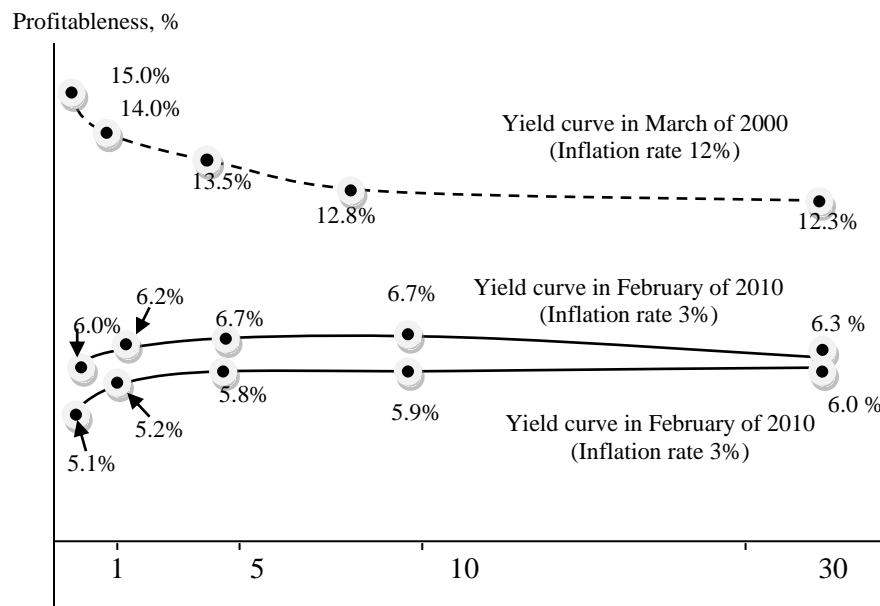
According to the former member of the Board of National Bank Mr. Mikheil Tokmajishvili, the companies exchanging treasury liabilities and bonds will be able to calculate their incomes better. “This is integrated method, with the help of which they calculate the income to be made by Lari for calculated

inflation and interest rate. Consequently, the customer makes more precise prognosis, then interest rate of treasury liabilities” (Tokmajishvili M., 2016).

Let us start from the fact that only banks have the right of purchasing state securities. Currently, one of the regulators of securities market is the National Bank, thus stopping state operation for development of securities market. Nobody is able to purchase any bonds or treasury liabilities without banks’ mediation. At the same time, stock exchange is in an embryonic state and the perspective of its healthy development with the existed legislation is under question as well.

## 6. TEMPORARY STRUQTURE OF INTEREST RATES.

Temporary structure of interest rates is characterized with independence between profitableness of short-term and long-term securities (usually, one or several issuers of almost similar credit ratings). This structure is important for financial analysts and managers. Based on them they shall decide to attract financial resources by issuing short-term and long-term securities or not. Temporary structure of interest rates also support investors in correct selection of the objects of investment, namely, they shall select where to provide investments, in short-term or long-term bonds. In both cases we shall remember following: 1) what is the relation between interest rates of long-term and short-term securities and 2) which factors determine this relation.



**Fig. 1. Yield curves of the bonds of US treasury for three different dates.**

The information about interest rates of various forward bonds is published by various publishers, such as: Wall Street Journal and Federal Reserve Bulletin; as well as at numbers of websites, such as: Bloomberg, Yahoo and CNN Financial. Based on the data received from these sources we may build temporary structure of rates for the given period of time. Chart of these data is given in the Fig. 1. The Chart is called yield curve for particular date\*.

After particular period of time, yield curve changes its state and slope. For example, interest rates in March of 2000 was generally high, though, the rates on the short-term bonds were high compared to the long-term bonds and the yield curve was angled down. Levels of the rates fell in August of 2010, though due to the fact that interest rates of short-term bonds fell much faster than those of the long-term bonds, yield curve appeared to be increasing. After six months, in February of 2009, the yield curve formed a hill;



the rates appeared high in relation with the average-terms compared to the short-term and long-term securities.

Besides particular exceptions, in the most cases interest rates are higher than long-term bonds compared to the short-term ones, and the yield curve remains to be rising. Due to this, normal yield curve is called rising yield curve and decreasing curve is called circulating – i.e. inverted, abnormal yield curve. Herewith, yield curve in the Fig 1 is inverted for the year of 2009, and it is normal for 2000.

## 7. WHAT DETERMINES THE FORM OF YIELD CURVE?

As we have said above, the premium for preterm repayment shall be positive. In such case, to have similar features of the bonds of different terms before repayment, profitableness of long-term bonds would be much higher than short-term bonds. However, profitableness of the bonds also depends on approximate level of inflation, and the risk of nonpayment and liquidity. All these factors may be varied in accordance with the term of repayment and with dependence on it.

Approximate level of inflation is of special importance in relation with the yield curve. We shall consider US treasury bonds for example, as treasury securities are free from insolvency and liquidity risks. Their profitableness may be calculated with the following formula:

$$K = K^* + IP + MRP$$

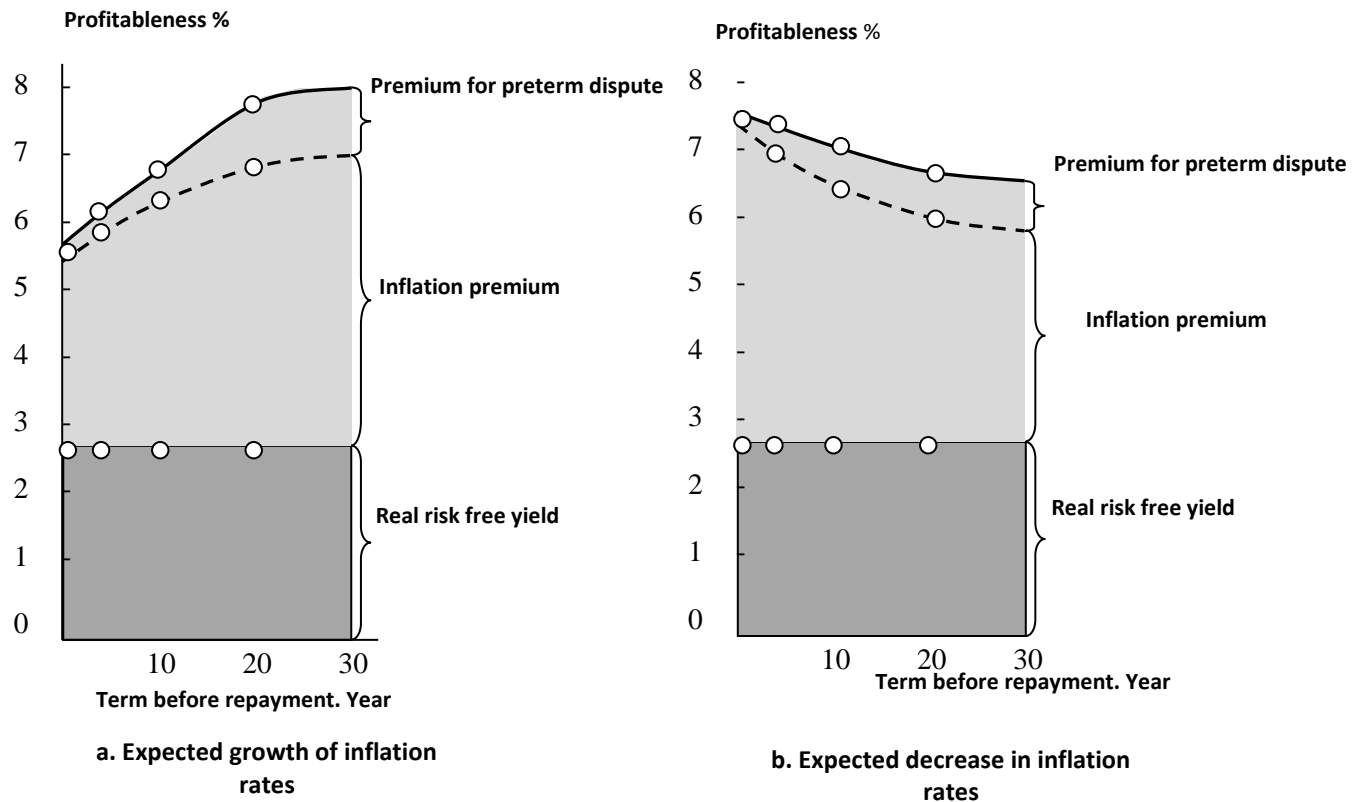
If real risk-free profitableness  $K^*$  is changed in relation with the time, with the influence of economic and demographic factors, these changes are of more random character, than predictable. Due to this,  $K^*$  is expected to remain averagely unchanged. In such case, the premium for inflation  $IP$  is essentially fluctuated, and in the amount subject to approximate prediction. Let us remember that premium for inflation is average expected rate subject to the term of the bonds. Thus, if agents of the market suppose growth in the future, the premium will be higher subject to the term of the bond. Similarly, if reduction of inflation rates is expected in the future, long-term bonds will have less inflation premium compared to the short-term bonds. The premium for the timely repayment is usually increased along with the growth of the said term, which is expected independently from the inflation.

Fig. 2a shows yield curve in case of expected inflation level. In such case, long-term bonds are high profitable due to two reasons: 1) much higher level of inflation is expected in the future, than in the close future, and 2) there is increasing premium for preterm repayment. Fig. 2b represents yield curve in case of sharp reduction of inflation rates. It may appear decreasing. Decreasing curves of profitableness is often the sign of economical difficulties, as periods of fall often coincides with the decreasing of inflation.

Let us consider yield curve for corporate bonds. We shall remember that their profitableness includes premium for insolvency risk (DRP) and liquidity premium (LP). Correspondingly, income from corporate bonds, term of repayment of which occurs after  $t$  year, may be expressed with the following formula:

$$K_c = K^* + IP + MRP + DRP + LP$$

The risks of non-payment and liquidity of corporate bonds are influenced with the term before their repayment. For example, insolvency risk for short-term credit liabilities of the company of Coca Cola is extremely low, as, this Company is actually impossible to be bankrupted in close future\*. However, this Company has 100 years for repayment of the bonds and the risk of non-payment regarding these bonds is much higher than short-term credit liabilities. It depends on the fact of using alcohol-free spirits of this kind by the population and this may be importantly changed during 100 years.

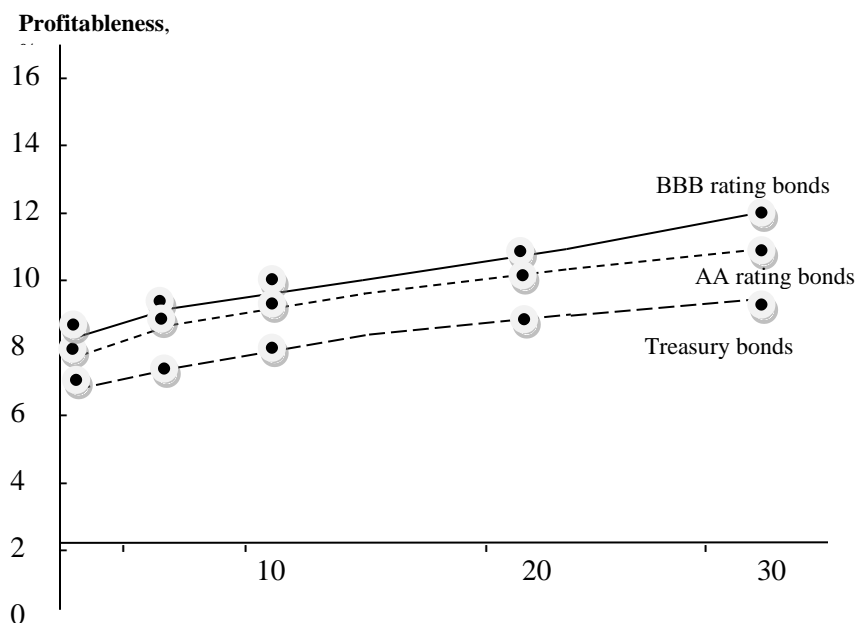


**Fig. 2. Examples of yield curves for treasury securities**

More long-term corporate bonds in the most cases are also less liquid compared with the short-term bonds. Correspondingly, premium for liquidity is increased as well along with the growth of the term of repayment. Main reason for this phenomenon is that, due to the above reasons, with short-term scale, liabilities are less risky in relation with non-payment and interest rates. Due to this, the investor may purchase them without diligent study of the issuer's creditworthiness, which may be necessary in relation with the long-term credit liabilities. Consequently, long-term corporate bonds are more often used only in relation with the large institutional investors (especially banks and pension funds). Separate private investors often purchase short-term bonds. Finally, they are more profitable. I.e. they are in need of less premium, compared with the liquidity and same long-term credit liabilities of the company.

Together with the yield curve of treasury securities represented in the Fig. 3 and 2, yield curves of two hypothesis corporate bonds are represented: they are AA high credit rating company, expressing minimal level of non-payment of debt and BBB companies of less rating, considering higher risk. In such case, we mean that sharp fall of inflation rates is not expected and due to this, yield curve of treasury securities is characterized with the growth trend.

It is evident that due to the additional risk of insolvency and liquidity, corporate bonds are always characterized in high liquidity, compared with the treasury bonds having same term of repayment, and BBB rating bonds are also high-profitable, compared with AA rating bonds and finally, they are much higher is the term of repayment is long. This takes place due to the fact that long-term corporate bonds are of high risk of non-payment and liquidity, compared to the short-term bonds. Herewith, the premium related with these two risks is zero for the treasury bonds, including long-term ones.



**Fig. 3. Yield curves of corporate and treasury bonds**

## **8. USING YIELD CURVE FOR EVALUATION OF THE FUTURE INTEREST RATES. \***

In the above Section we have spoken about the fact that the form of yield curve significantly depends of two factors: 1) probabilities of future changes of inflation and 2) relative risk level of securities of different terms of repayment. We also saw construction of the yield curve based on the risks of inflation and repayment term. In practice, this process works reciprocated. Investors and analysts initially build yield curves and after this, they use the information received from them to evaluate market expectation in relation with the future rates of inflation and risks.

This process of using yield curve for approximate future evaluation of the interest rates is direct if: 1) we concentrate on the treasury securities; 2) we mean all treasury securities to be of one and the same risks, i.e. there is no premium for the term before repayment.

It shall be noted that many representatives of academic circle and especially practicing traders state that second probability is completely considered with minimum understood approximation. Actually, according to their arguments, large professional dealers are in access at the bond market, who purchase and sell great amount of bonds of different term of repayment. Due to their dominating state at the market, yield rates of the bonds are mostly considered by such investors. However, they care only for the profitableness of their short-term investments and express less interest to the long-term risks of the bonds. Subject to these considerations, large traders do not care for purchasing 30-year bonds after three months, to resell three-month bill, or to purchase three-month bill before its repayment for the purpose of its maintenance. Consequently, according to the supporters of this opinion, the form of yield curve is determined only by market expectations in relation with the future interest rates. This system of opinions are called the theory of Pare expectation of mature structures of interest rates by the economists.

Pare expectation theory, which is often called 'expectations theory', considers the fact that the investor determine market price and interest rate of the bonds strictly on the basis of the expectations of future variation of the latest.\* If it is so, MRP would be zero, and interest rates of the long-term bonds would be equal to the current expected average weighted value of the short-term interest rates. For example, if profitableness of the treasury bills having repayment term below one year is 7%, they consider that after

one year these bills will make the income of 7.5%. Expectation of investors for the bonds having repayment term below two years, this index will equal to 7.25%.

$$K_{2cp}= \hspace{10em} = 7, 25\%$$

To understand logic of this principle, let us imagine what will happen if profitableness of the bond with the two years of repayment term is different from the mean value of yield of one-year bonds for the following two years. For example, let us assume that two-year bonds made only 7% income and not, instead of calculated 7.25. In such case, participants of the market could adopt following strategy of trading: to receive arbitrage profit, without investment of own resources and without assuming any risk. Particularly:

1. Rising debt of 7% of cash resources of two years,
2. Two times consecutive investment of resources received as loans in one-year bills.

In such case, mean annual profitableness of the resources invested in the bills will equal to 7.25%, while the resources borrowed by the arbitrageurs will cost only 7%. Distinction between these values is so-called ‘gifted profit’.

Herewith, participants of the bond market massively borrow money (submitting demand for equity) in the form of two-year credit and invest the sum (providing capital distribution) into the one0year bond. It is known that increasing demand on the equity gives rise to the interest rates, while increasing provision of the equity reduces them. It appears that the actions similar to the traders will give rise to the growth in the profitableness of two-year bonds, herewith reducing profitableness one-year bonds. (Fig. 4).

Market balance may be achieved with final results, in course of which, rates of two-year shares would be mean weighted value of the offered future rates of one-year bonds.

It is noteworthy that consideration given above is justified in case if the premium for the term of early repayment of the bonds equals to zero. However, actually, positive premium for pre-repayment term takes place at the market and due to this, it is necessary to foresee its importance as well.

Let us assume that profitableness of the securities having one and two ears of repayment term is 7% and 7.25%. At the same time, we shall foresee that the premium for preterm repayment equals to 0.1%. It means that the yield requested by the investor for two-year bonds (7.25%) is 0.1% more that the yield for one-year bonds (7.25%-0.1%=7.15). in such case, we may use following two-stage procedure in one year, for one-year securities to determine expected K interest rate.

Market A: Low risk securities

Market A: high risk securities

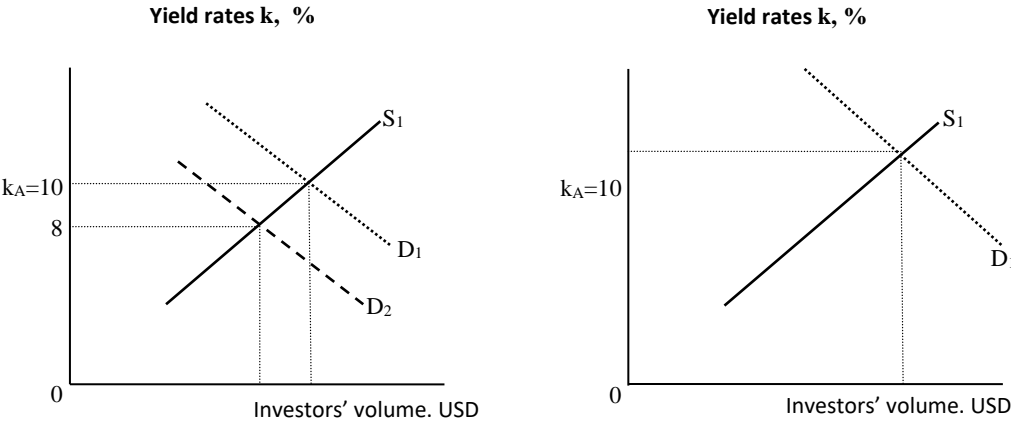


Fig .4. Interest rates, as functions of supply and demand on the equity

**First:**

Yield of two-year bond – MRP for two-year bond

$$= 7.25\% - 0.15 = 7.15\%$$

**Second:**

$$7.15 = 7\% + K\% \Rightarrow 7.3\%$$

In such case, profitableness of the following year for the Treasury bond is 7.3 and not 7.5%, as it is given in the example above.

**Foreseeing country-specific risks.** Except all above factors, the investors are to foresee other kinds of risk in course of planning implementation foreign investments.

Particularly, there is country-specific risk depending on the general economic, political and social situation in the country. The countries with stable economic, social, political and regulatory systems provide more reliable and safe investment climate and, respectfully, they are of low risk compared with the countries of less stable situation. As examples of country-specific risks we may name those related with indefiniteness of the tax rates, and local regulations (especially, using of labor and natural resources) and criminal risks. Besides this, due to the fact that ownership of foreign investors may be expropriated by some political regimes, without respective compensation, risk of expropriation is also considered in general country-specific risks together with the risk of political instability.

In course of implementing foreign investment, it is necessary to pay special attention to the subordination to the denomination of foreign securities, in the currency different from US Dollars, which conditions formation of the exchange rate risk. At the same time, the phenomenon that Dollar profitableness of foreign investments will depend on the profitableness of foreign security in local currency shall be considered, as well as changing exchange rates of securities in course of their existence and in relation with the inflation rates in different countries in local currency.

**Other factors influencing upon the level of interest rates.** Except inflation expectations, there are other factors, influencing upon level of interest rate, as well as the form of the yield curve. These comparative factors include: 1) Policy of the Federal Reserve Fund – US Central Bank; 2) federal budget deficit or surplus; and 3) foreign trade balance factors and interest rates in other countries.

## 9. INTEREST RATES AND DECISIONS IN BUSINESS.

The influence of the interest rates upon decisions about investments made by business and private the depositor-investors shall be noted separately. Yield curve in February of 2000 given in the Fig. 1 above, shows interest rates the US government referred to in course of rising loans during this month for the term of one, five, ten and etc. years. Of course, the borrowing companies were forced to pay more for using the credit.

Now let us assume that your company was to attract credit funding in the amount of 1 million US Dollars in February, 2000 to build new plant. This plant will work for 30 years. If you raise short term loan in 2000, for 1 year with % rate, interest fee for your credit will be 60 thousand US Dollars per year. On the other hand, if you use long-term (30 years) credit, the interests, to be paid by you will be 6.3% i.e. 63 thousand US Dollars. Consequently, at one glance you may assume that you shall use short-term loan.

However, using short-term loan would be great mistake. In such case, you will have to rise ne loan every year, and the creditors will request fee for each credit and this will influence upon the size of the interest rate, which is formed every year at the respective market. Particularly, interest rates may be

increased and you are quite possible to be obliged to pay 14% annually, i.e. 140 thousand US Dollars a year. Such interest rates will reduce significantly your profit and you may not receive any profit at all. Low profitability of your plant, in its turn, will give rise to the risk of your debt, which also makes the investor increase risk-specific premium of your bonds. This will make you pay higher interest rate, that finally will lead to the refusal of refunding of your loans by your creditors and they will request their repayment. This unfavorable situation may be completed with your bankruptcy.

On the other hand, if at the beginning you used long-term funding from the year of 2000, your interest rates will remain unchanged, 63 thousand US Dollars a year and not growth of interest rates in the economy will touch you. You may have opportunity to purchase some bankrupted competition property for the favorable price. Cases of bankruptcy take place quite often in course of rising interest rates mostly due to the fact that many companies are using multiple short-term liabilities.

Do everything said above mean that the companies shall avoid rising of short-term loans all the times. Of course, not, if inflation level during several years shall be decreased, interest rates will be reduced. If you borrowed money for long-term period for 6.3% a year in February of 2000, your company will lose, if it pays respective interest rate on annual basis, when your competitors (who rose short-term loans for low interest rate in 2000) will pay less for credits, 3 or 4%.

Variation of the interest rates also influence upon depositors. For example, if you have investments in the pension plan 401 (k) you may have desire to invest money into the equal fund of bonds. You may select the fund, mean term of repayment of the bonds of which is 25 years and etc. or invest money in short-term monetary markets for several months. What will be influence of your choice upon your incomes, or what your pension income will be? In the first place, this touches upon your annual interest income. For example, if yield curve is increased, which ordinarily takes place, you will make more interest income from the fund of long-term bonds; however, if you select such fund and your interest rates are increased, market price of the bonds of the fund will fall. For example, if you invested into the fund 100 thousand US Dollars, with mean term of repayment of 25 years and profitability of the bonds is 6% less with the fixed interest rate, and in such case the interest rates are increased up to 10%, market price of your fund will be reduced from 100 Laris to 64 thousand US Dollars. On the other hand, if interest rate is reduced, price of your bonds will be increased. In any case, terms of repayment selected by you is of great importance for your investments and i.e. your incomes.

## **10. CONCLUSION AND RECOMMENDATIONS**

Today, financial market of Georgia is in the stage of development. Though, important role in the development of economy of the country is granted to the effective functioning of the securities market. Developing countries suffer non-materiality of their own resources. As for one of the best means of attracting investment, capital is activation of the securities market.

Notwithstanding positive changes in Georgia, there are fundamental problems, preventing effective functioning. In the first place, main source of attracting financial resources for the market is the loans received from the commercial banks, while source of funding with the share capital is relatively unused. On the other hand, according to the Georgian economists, if we refuse centralized management and want to manage the country with the principles of market economy, main thing is to create such macro-environment, where economy will be self-managed, working in the regime of self-regulation. One of the supports of the market economy is corporate management, i.e. when the enterprise is not managed unilaterally or some orders, but under the dictation of the market to make decision on demand and distribution, as well as management. When there are no joint stock companies in the country, market price of the share is the most unbiased index. Price of share at the market is the combined index of multiple nuances, particularly: how much profitable the share is, how much interesting it is to the investor, how it rises or decreases price. Market price of particular share is the best support to the manager. The manager may check the listing in the morning and see what happens at the stock exchange regarding his company

and competitors, if the price of shares rise or fall, where to search for the defect or change something in the management.

Besides this, any fair investor shall have desire to have at least small percent of shares among population. Even of the amount not preventing him to manage the enterprise. Joint holders provide his lobbying and monitoring at the same time. In the most cases, it is the control from the side of the joint holders that makes the investor to work transparently. In the western countries, budget formation does not need to terrorize taxpayers and collectors and providing strict activities against them. However, there is a strange trend established in our country, that if we don't offer investor all hundred percent, he will refuse to work to any enterprise.

With such method of approach, we have population, each family who is able to invest 100 Georgian Lari in the profitable business, offside. When investment market is the offer of million in the form of this or that enterprise, no serious investor will provide such investment, if he fails to see that the enterprise costs or will cost much expensive. We'd be better to allow our population to waste some money and use the profit following this investment.

For activation and effective functioning of financial and securities markets in Georgia, I consider it to be purposeful to provide fundamental change of regulatory legislation of these markets and at the same time, regulation of the markets themselves. For this following is of extreme importance: 1. Deep analysis of multi-year period of development of securities market in Georgia at every stage of its existence, especially on the stages, when regulator is changed; 2. Analyzing main principles of international practice, and trends and regulations of development of foreign markets (within possible bounds); 3. Creating long-term strategy (concept) of development of capital market in the country on the basis of the said analysis, according to which formation of the architecture of the market model and legislative base shall take place.

It is the deep and comprehensive analysis of the market that helps evaluation of the rendered service or passed way, identification of the reserves needed for development of the exchange market, state reasons for fails and finally determine changes and orienteers and state approximate prognosis. Of course, it is difficult to make prognosis, as nobody knows (including authors of the initiated draft law) what will be the state of the exchange market in the future, as it depends on the multiple factors, though, due to the facts that in every economic-analytical study there is great amount of proviso, still it would give opportunity to developed so-called "road map" with the orienteers creating grounds to the evaluation of the effectiveness and success of the provided works.

As we have already stated, notwithstanding particular positive changes, there are other fundamental problems preventing effective functioning. Role of the stock exchange in the process of privatization is reduced. Investors have not understood the role of the stock exchange in the development of their business. Therewith, there is no material-technical base of international standards.

One of the main reasons for inactivity of the securities market is negative attitude of population towards the institute and their ignorance in this domain. The state shall develop strategic plan and such laws, which would be intended for the long-term perspectives of the financial instruments. The state shall support investment into the corporate securities, which will make foundation to the development of the economy of the country.

Regulation of securities market shall be provided by the authority developing necessary procedures for effective functioning of the market, providing public awareness, preparing regulatory legislation of the securities market and controlling financial state of the market. Principle problem is non-development of the financial market of Georgia, making it difficult to attract foreign investments.

For the purpose of developing securities it is necessary to determine, which model shall be preferred – banking model (German), which foresees participation of banking and credit establishments, or non-banking model (American), preferring investment banks and brokerage companies. It is noteworthy that in the latest model participation of banks in the field of issuance and monitoring of securities is brought to the minimum. Herewith, there is the combined model, which is participated by non-banking investment institutions together with the banks.

### Notices:

\* (pg. 2) Offer (lat. offero) – the offer to conclude agreement including all essential terms and conditions.

\* (pg. 2) it shall be noted, that oligopoly is the type of the market structure, characterized in the following signs: a) small amount of companies and great amount of purchasers; b) homogeneity or difference of products; c) complexity of entering market: Thomas Moore, a famous English nationalist (1478-1535) was first to involve the term and determined oligopoly to be “market of the minors”. He meant that the company-sellers may dictate to the purchasers their price policy. Some economists share the opinion, that oligopoly expresses ‘competition of the minors’.

\* (pg. 10) Fig. 1 represents yield curves of the securities markets of the treasury, though the curves may be built for the corporate securities as well. If we take these curves to the Fig. 1, it will appear that their yield curves are much higher, as profitableness of corporate securities includes positive premium on the risk of insolvency. At the same time, high more risk-consuming the bonds of the corporations are (the lower their ratings are), more curved their yield will be. Editor’s remark.

\* (pg. 10) This means the following: interest rates do not depend on the repayment as long-term bonds, compared with the short-term ones, are not considered to be the carriers of high risk here.

\* (pg. 11) It shall be noted that such considerations about risk-consuming and bankruptcy of the corporate bonds of the companies become known to the investors on the basis of the data of the companies and their auditors. These data may appear to be unreliable, which is confirmed with the crash of the corporation Enton. (Editor’s remark).

\* (pg. 12) given section is of technical nature and may be increased from the initial introduction of the book materials (the Editor’s remark).

\* (pg. 13) actually, in course of calculation of average profitableness of the bond, they often use mean geometric formula instead of the mean arithmetic one. In the given example, outcome will appear relatively less:

$$K_{2op} =$$

Calculation represented in the text is correct, if the only income of the investor is coupon rate of the bond. This is the income received by the investor from the bonds in the form of interest and he will not try to make income from sale and purchase of the bonds, until these bonds are in the portfolio.

In case of investing USD 1000 in the bonds, interest of USD 70 will be received in the first year (coupon yield 7.5%), and in the second year USD 75 (7.5%), average made income will equal to 7.25%.

\* (pg. 13) this may be provided only in case if the creditors are sure in the amount of extremely low risk for nonpayment of two-year treasury loan. The remark for our consideration is of essential nature: for large borrower’s insolvency risk in case of attracting resources in short terms is extremely low (editor’s remark).

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