Proceedings of the Faculty of Economics in East Sarajevo
Year 2014, Issue 8, pp. 83-95
Received: 31 October 2013

UDC 338.246.025.88(497.6RS)
DOI: 10.7251/ZREFIS1408083S
Conference paper

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Paper presented at the 2nd REDETE 2012 Conference: Economic Development and Entrepreneurship in Transition Economies: A Search for New Paradigms, Banja Luka, RS-BIH, 25-27 October 2012

THE CAPITAL PRICE INFLUENCING FACTORS IN THE REPUBLIC OF SRPSKA

ФАКТОРИ ОД УТИЦАЈА НА ЦИЈЕНУ КАПИТАЛА У РЕПУБЛИЦИ СРПСКОЈ

Summary: *Focus of the paper is on the capital price in the Republic of Srpska, which is composed of the price of shareholder capital and the price of debt. The purpose of the research is to compare the capital price before and after beginning of the financial crisis, that corresponds to the comparison of the interest rates levels before and after the establishment of development funds. The two hypotheses are going to be proven. The first one is that market share of developing funds has a tendency of increasing as the growth rate of the country is decreasing. The second hypothesis is that with introducing the development funds the average interest rate decreases and furthermore the lowest interest rate boundary in the economy is moved down. In conclusion, we are going to display the results of proving hypothesis and give the overview of loans conditions and capital price structure in the country.*

Key words: *capital price, interest rate, dividend rate, development funds, capital structure*

JEL classification: *G01, G12, E43*

Резиме: *Фокус овог рада је На цијени капитала у Републици Српској, која се састоји од цијене сопственог капитала и цијене дуга. Сврха истраживања јесте упоређивање цијене капитала прије и након почетка финансијске кризе, што одговара поређењу нивоа каматних стопа прије и након успостављања развојних фондова. Двије хипотезе ће се доказати. Прва је да тржишни удио развојних фондова показује тенденцију повећања како се стопа привредног раста у земљи смањује. Друга хипотеза је да се са увођењем развојних фондова, просјечна каматана стопа смањује и тиме се граница најниже каматне стопе спушта наниже. У закључку, презентоваће се резултати доказивања хипотеза и дати преглед кредитних услова и структуре цијене капитала у земљи.*

Кључне ријечи: *цијена капитала, каматна стопа, дивидендна стопа, развојни фондови, структура капитала*

JEL класификација: *Г01, Г12, Е43*

1. INTRODUCTION

The capital price (capital cost) is the cost of each financing component used by the firm to fund its projects multiplied by that component's percent of the total funding amount. The company has at its disposal several sources of funds. The liability accounts are classified as debt financing. Sources of company's debt financing are commercial banks, nonbank lenders, suppliers and bond holders. The owners' equity accounts, preferred shareholders, common shareholders and retailed earnings are called equity financing (Damodaran 2006). Selection of different financing components of debt and equity forms capital structure of the firm.

Preferred shares of the company are called hybrid equity financing. It is a hybrid form of equity financing because it is treated like debt, in terms of payment with the set rate annual dividend and like equity, because the principal is typically not repaired. Therefore, preferred shares are considered financing between debt and equity financing.

Accordingly, the capital of the company consists of three parts: debt, equity and hybrid equity, which have different costs. In the Republic of Srpska, the cost of debt is the most important part of the capital cost. Therefore, the debt financing and especially development funds are in the center of calculating the capital price in the Republic of Srpska.

This paper focuses on the comparison of capital prices before and after beginning of the crisis, which is related to the comparison of the interest rates levels before and after the establishment of development funds in the Republic of Srpska. In the paper, we claim that market share of the developing funds has a tendency of increasing as the growth rate of the country is decreasing. In addition, with introduction of development funds, the average interest rate decreases so the lowest interest rate boundary is moved down. In order to confirm this conclusion, we theoreticaly consider terms of the capital price, then impact of development funds in countries in the region, characteristics of loan financing and finally the structure of the capital price in the Republic of Srpska.

2. STRUCTURE OF THE CAPITAL PRICE

In order to calculate *Weighted Average Cost of Capital* (WACC) it is necessary to determine the cost of debt, the cost of equity capital and the cost of preferred shares. There is a cost associated with each type of debt that a company uses. If a company borrows money by selling bonds, the yield to maturity on bonds is the cost of bond. On the other hand, if the financing includes loans, cost of debt is the interest rate. Cost of equity capital or cost of common share can be defined as a minimum yield company has to achieve on certain investment funded from equity capital in order to keep market price of common share from decreasing.

2.1. The cost of a bond

The cost of debt for a publicly traded bond is estimated using the yield to maturity calculation. The yield to maturity is the discount rate that makes present value of the coupon and principal payments equal to the price of the bond. In order to find yield to maturity we should start at following equation (Brooks 2010, 320):

$$P_B = \frac{C_1}{1+i} + \frac{C_2}{(1+i)^2} + \frac{C_n + F_n}{(1+i)^n}; (1)$$

where P_B is the price of the bond, C is the coupon, F is the principal payments and $i = k_{Bond}$ is the cost of a bond.

We could use financial calculator and solve for i to find yield to maturity. The effective annual interest rate (EAR) must be calculated to obtain the actual annual cost of this debt:

$$EAR = (1 + \frac{k_{Bond}}{m})^m - 1; (2)$$

EAR is the annual rate of return required by the market on this bond, which is known as the effective annual yield on Wall Street.

2.2. The cost of a loan

Calculation of long-term bank loan cost or other private debt is not as direct as estimating the cost of bond because financial analysts cannot observe the market price of private debt. Anyway, this observation is not needed, so interest rate from a banker provides a good estimation of the cost of private loan. In many countries companies can deduct their interest payment for tax purposes. The after-tax cost of the loan is (Rodić and Filipović 2010, 232):

$$k_{Debt\ after\text{-}tax} = k_{Debt\ pretax} \times (1 - t); (3)$$

This after-tax cost of debt is the cost company uses to calculate WACC. The reason for this is that investors are interested in what they actually have to pay for capital and the actual cost is reduced by tax break that government provides.

2.3. The cost of a preferred share

The owner of a preferred share is entitled to receive perpetual constant dividend each year based on original par value of the preferred share and the contracted dividend rate. Also, this type of securities does not have an expiration date. Mentioned characteristics of preferred shares reveal that constant dividend model is suitable for the cash flow that owner of this share can anticipate receiving (Parino and Kidwell 2009, 446).

$$P_{ps} = D_{ps} / k_{ps}; (4)$$

where P_{ps} is the present value of the expected dividends, D_{ps} is the annual preferred share dividend and k_{ps} is the cost of the preferred share.

$$k_{ps} = D_{ps} / k_{ps}; (5)$$

This is a rate of return at which the present value of the annual cash flows equals the market price of preferred share. However, CAPM also can be used to estimate cost of preferred equity.

2.4. The cost of equity

CAPM (Capital Asset Pricing Model)

There are several methods to calculate a cost of common share. The approach a financial analyst chooses will depend on what information is available and how reliable the analyst believes it is. In CAPM, the cost we are referring to is the rate of return that investors require for investing in the share at a particular time, having in mind its systematic risk (Van Horne and Wachowicz 2007, 73).

$$E(R_i) = R_{rf} + \beta_i [E(R_m - R_{rf})]; (6)$$

where $E(R_i)$ is the cost of common share capital used by a company, $E(R_m - R_{rf})$ is the market risk premium, R_{rf} is the risk-free rate, $E(R_m)$ is expected return on the market and β_i is the measure of systematic risk. From previous, the equation, k_{es} is drawn out:

$$k_{es} = R_{rf} + (\beta_{es} \times \text{Market risk premium}); (7)$$

where k_{es} represents the cost of common share.

Constant-growth dividend model

If a dividend received by the owner of a share of common share is expected to grow at a constant rate in perpetuity, the value of that share today can be calculated using following equation (Parino and Kidwell 2009, 441):

$$P_0 = D_1 / (R\text{-}g); (8)$$

where D_1 is the dividend expected to be paid one period from today, R is required rate of return and g is annual rate at which dividends are expected to grow in perpetuity.

We can replace R in equation with k_{es} which is estimated expected rate of return for investing in common share or cost of equity. Then, k_{es} is the cost of common share (Krasulja 1977, 162):

$$k_{es} = (D_1/P_0) + g; (9)$$

This approach is useful when a company pays dividends and it is reasonable to assume dividends will grow at a constant rate, which can be estimated. Estimating the long-term rate of

growth in dividends can be related to long-term growth rate of economy (dividends cannot grow faster than growth rate of economy - inflation plus about 3%).

Multistage-growth dividend model

Using a multistage-growth dividend model in comparison with constant-growth dividend model allows varying dividend rates growth in the near term, followed by a constant long-term growth rate. General model for market valuation of common share could be translated into the next equation (Parino and Kidwell 2009, 442):

$$P_0 = \frac{D_1(1+g)^1}{(1+k_{es})^1} + \frac{D_1(1+g)^2}{(1+k_{es})^2} + ... + \frac{D_1(1+g)^t}{(1+k_{es})^t} = \sum_{t=1}^{\infty} \frac{D_1(1+g)^t}{(1+k_{es})^t}; (10)$$

where P_0 is current price of common share, g is annual rate at which dividends are expected to grow, D_1 is the dividend in first period, and k_{es} is the required rate of return on common share.

We could solve this equation for k_{es} using trial and error calculation. The major issues we have to be concerned about when using growth dividend model are: choosing the right model and estimating the reasonable growth rates.

In practice, most used model for estimating the cost of common equity is CAPM. CAPM tells managers what rate of return investors should require for equity having the same level of systematic risk that the company's equity has. Onwards, CAPM does not require financial analysts to make assumptions about future growth rates in dividends.

2.5. Calculating Weighted Average Cost of Capital (WACC)

Whereas the prices of each component in capital structure have been set, they have to be weighted according to certain criteria in order to obtain the weighted average cost of capital for the company as a whole. A specific problem of determining the average cost of capital is the selection of objective weights system (Brooks 2010, 562). The question is how the weights for different sources of capital should be defined: should these weights reflect the existing capital structure or base on optimal capital structure? Due to difficulties inherent in measuring optimal capital structure, it is usually taken that weights which anticipate existing capital structure can be satisfying, if that structure is not distorted. WACC is weighted average of company's after-tax cost of debt, cost of preferred shares and cost of common equity, presented in equation (Parino and Kidwell, 2009, 447):

$$WACC = x_{Debt}\, k_{Debt\ pretax}\,(1-t) + x_{ps}\, k_{ps} + x_{es}\, k_{es}; (11)$$

where $x_{Debt} + x_{ps} + x_{es} = 1$

The sum of multiplication of capital from each source and the cost of additional capital after tax gives weighted average cost of capital or capital price. Financial experts will use market value rather than the accounting book values of debt, preferred and common share to calculate the weights. The reason is that the basic principles of discounting process require the costs of the different financing sources are weighted by their relative market value.

3. IMPACT OF FINANCING FROM DEVELOPMENT FUNDS ON THE CAPITAL PRICE

Financing decisions require efficient planning, pragmatic solutions and innovative answers to the problems and challenges of the modern enterprises. Using resources from state development funds significantly lowers the capital price. However, in order to be able to apply for development funds resources, a company has to consider the conditions and limitations development funds set in granting their resources provided for investment financing.

Benefits of development funds for company entail easier access to loans with most favorable credit conditions and usually include the provision of technical assistence in preparing loan

applications. Benefits for a bank are reflected in reducing the investment risk, while local community providing targeted assistance to the SME, contributes to job creation, better filling of the budget and economic development of the community.

In the Republic of Srpska, legal conditions for establishment of credit guarantee funds were created by adoption of the Guarantee Fund Law of the Republic of Srpska (Official Gazette of the Republic of Srpska 2010). Ability to secure funding sources from development fund, which are basically cheaper than the market ones, leads to significant increase in profitability of planned investment and at the same time decreases the capital price in the company.

The following table lists the interest rates of development funds credit lines for bussiness and entrepreneurs in the Republic of Srpska, the Federation of Bosnia and Herzegovina, Serbia, Croatia and Slovenia.

Table 1: Comparative analysis of development funds interest rates in region

The Republic of Srpska Investment-Development Bank (IRBRS)	**Loans for legal entities and entrepreneurs, start-up loans and loans for micro business in agriculture**	
	* Basic interest rate	5.4%
	For the projects implemented in the territory of underdeveloped and extremely underdeveloped municipalities	4.9%
	* For projects from the field of processing and power generation industry	5.1%
	* For cluster members	5.1%
	* For projects encouraging tourism industry	5.1%
	* For export preparation (short-term loans)	4.4%
	* For processors of domestic agriculture products (short-term loans)	4.0%
	* Cumulative	4.6%
	Loans for agriculture	
	* Basic interest rate	5.1%
	* For the projects implemented in the territory of underdeveloped and extremely underdeveloped municipalities	4.6%
	* For cluster members	4.8%
	* For processors of domestic agriculture products (short-term loans	4.0%
	* Cumulative	4.3%
	Loans for agriculture and processing industry	4.0%
	Loans for small and medium enterprises	4.5% - 6.5%
	* Financing from project EAF funds	3.91% -
	* Financing from EIB funds	4.99%
The Development Bank of Federation of Bosnia and Herzegovina	**The credit line for long-term financing to boost employment from the funds of Federal Employment Institute**	
	* Industry, manufacturing and services	4.0%
	* Agriculture	3.0%
	The credit line for long-term financing of performed export	5.0%
The Development Fund of Republic of Serbia	**Loans for development of entrepreneurship**	
	* If a collateral for a loan is promissory note of commercial bank	2.0%
	* In other cases	3.0%
	Loans for legal entities	
	Short-term loans	3.0%
	Investment loans	
	* If a collateral for a loan is promissory note of commercial bank	2.5%
	* In other cases	4.0%
	Loans for permanent working assets	
	* If a collateral for a loan is promissory note of commercial bank	2.8%
	* In other cases	4.0%
	Loans for incentive and development in insufficiently developed units of local government– legal entities and entrepreneurs	
	* If a collateral for a loan is promissory note of commercial bank	1.0%
	* In other cases	2.0%
	Start-up loans – legal entities and entrepreneurs	
	* If a collateral for loan is promissory note of commercial bank	2.0%
	* In other cases	3.5%
	Financing of old artistic crafts	2.0%
	Loans for female entrepreneurship	
	* If a collateral for loan is promissory note of commercial bank	1,5%
	* In other cases	2.5%

The Croatian Bank for Reconstruction and Development	**Program for financing of invention**	2.0% or 4.0%
	Agriculture	
	* Program for financing of agriculture and small business in the area of special state concern	2.0% or 4.0%
	* Loans for preparation of agriculture production	3.00%
	* Major projects in agriculture	2.0% , 4.0% or 6.0%
	Export	
	* Loans for financing exporters from IBRD funds	Six-months LIBOR for EURO + margin of 240 bp.
	* Loan for financing suppliers in export transactions and credit lines for banks of foreign buyers	CIRR + margin 0.2% – 2.0% or LIBOR/EURIBOR + margin
	Tourism	2.0%. 4.0% or 6.0%
	* Major projects in tourism	Three-months EURIBOR + 3.75%
	* Program for financing the preparation for the tourist season	Six-months EURIBOR + margin of 195 bb.
	* Financing exporters in tourism sector from IBRD funds	
	Loans for legal entities	2.0%, 4% or 6%
	Small and medium enterprises	
	* Female entrepreneurship	2.0%
	* Loans for financing development of small and medium enterprises	2.0% or 4.0%
	* Loans for financing agriculture and balanced development	2.0% or 4.0%
	* Financing projects of IPA SME candidates	2.0%
	Loans for projects of environment protection, energy efficiency and renewable energy	4.0%
	Infrastructure	
	* Program for communal infrastructure financing	4.0%
	* Credit line for financing projects of water supply and sanitation in Croatia	3.0%
	* Program for financing energetic reconstruction of buildings	4.0%
	Start-up loans for entrepreneurs	4.0%
	Loans for Financial Restructuring	
	* Agriculture	5.0%
	* Other legal entities	6.0%
	Working assets	
	* Loans for improving liquidity	4.0%
	* Program for financing permanent working assets for empowering business	4.0% or 6.0%
	* Loans for preparation of agriculture production	3.0%
	* Program for productionfinancing	4.0%
	* Program for financing the preparation for the tourist season	Three-months EURIBOR + 3.75%
The Slovenian Export and Development Bank	**Financing of small and medium-sized enterprises operating - financing working assets of SME**	Six-months EURIBOR + 2.7%
	Financing internalization of small and medium-sized enterprises	EURIBOR + 2.0% max
	Financing SME investment in environmental protection	EURIBOR + 2.0% max
	Financing investment in research, development and innovation	EURIBOR + 2.0% max
	Financing of medium and large enterprises – preparation of export financing	Six-months EURIBOR + 2.7%
	Loans to suppliers – export financing	Market interest rate, including LIBOR/EURIBOR
	Loans to buyers – financing foreign buyer of Slovenian goods and services	Market interest rate, including LIBOR/EURIBOR

Sources: The Croatian Bank for Reconstruction and Development 2013;
The Development Bank of the Federation of Bosnia and Herzegovina 2013;
The Development Fund of the Republic of Serbia 2013;
The Republic of Srpska Investment-Development Bank 2013 and
The Slovenian Export and Development Bank 2013

When we compare IRBRS and the Development Bank of Federation of Bosnia and Herzegovina, it is obvious that the second one offers lower basic interest rate, 4.0% in comparison to 5.4% for IRBRS. This is compensated with a shorter period of repayment of the loans in Federation of BiH. Further, neither development fund in Bosnia and Herzegovina has highly branched structure of interest rates by the types of loans. The Development Fund of the Republic of Serbia offers loans for development of entrepreneurship and loans for legal entities by much lower interest rate than our domestic development funds. The difference in height of interest rates is especially noticeable with loans for stimulating balanced regional development in Serbia. The interest rate for investment in insufficiently developed units of local government is 1.0% if collateral for a loan is promissory note of commercial bank, which is the lowest interest rate in the region.

The Croatian Bank for Reconstruction and Development has the largest number of loan types. The lowest rates are in program for financing of agriculture and invention – from 2.0% to 4.0%. Croatian development fund paid special attention to small and medium entrepreneurship. Loans for small and medium businesses with the support of the EU are related with the EURIBOR movements. Likewise, loans for financing export and tourism vary in correlation with movements of EURIBOR or LIBOR.

In Slovenia, interest rates in programs for financing legal entities are mainly linked to EURIBOR, LIBOR or CIRR, which is not the case with development funds in the Republic of Srpska, Federation of Bosnia and Herzegovina and Serbia mostly fix their interest rates. Majority of loans offered by Slovenian export and development bank have deadlines from 10 to 12 years. It should be noted that the Croatian Bank for Reconstruction and Development gives their companies longer repayment periods, similar to the Republic of Srpska Investment-Development Bank, while the Development Fund of the Republic of Serbia and the Development Bank of Federation of BiH limit these periods to a maximum of 7 years.

Hence, harmonization of financial structure is of the crucial importance from the point of forming a capital price as a financial standard for evaluation of investment project effectiveness and company's value. Only financial structure that provides the minimum average cost of capital is the optimal financial structure (Jolly and Burmajster 2009). Optimal capital structure enables an efficient use of total capital, which not only affects the maximization of company's value as a primary business goal, but also increases the welfare of a society in whole.

4. EMPIRICAL STUDY: THE CAPITAL PRICE IN THE REPUBLIC OF SRPSKA

The financial system in Bosnia and Herzegovina is specific in the sense that, in the country with population of approximate 3.5 million citizens, there exist two separate stock exchanges (Banja Luka Stock Exchange-BLSE and Sarajevo Stock Exchange-SASE) and two agencies for monitoring banking sector (the Banking Agency of the Republic of Srpska and the Banking Agency of the Federation of BiH).

The analysis in this paper is based on data for the Republic of Srpska and has been performed with the private companies that have publicly issued shares on Banja Luka Stock Exchange. As it is mentioned, a cost of capital consists of a dividend rate and an interest rate that companies pay on debt. In accordance with that, the research part of the paper will be organized. The intention is to give an overview of dividend rates and interest rates in the period 2007-2013. This time period has been chosen because the financial crisis began in 2007, and data are relevant nowadays. Furthermore, all available data sources are comparable until the 4th quarter of 2006. Before this date, there were not publicly available statistical data and summary financial statements.

Publicly available data have been gathered from three sources: the Banking Agency of the Republic of Srpska, the Central Bank of Bosnia and Herzegovina and from financial statements of companies listed at the BLSE. There have been 773 different securities listed at BLSE on 28th October 2013 with 707 shares among them, including regular and preferred shares (other securities are t-bills and bonds). It is possible to trade with 463 shares, while others are suspended. The reasons for suspension are: initiated process of liquidation, initiated process of bankruptcy or not-submitted financial reports. Data concerning financial reports contain information about 534 companies other than financial institutions. Financial institutions are not subject of our inquiry, since we have intention

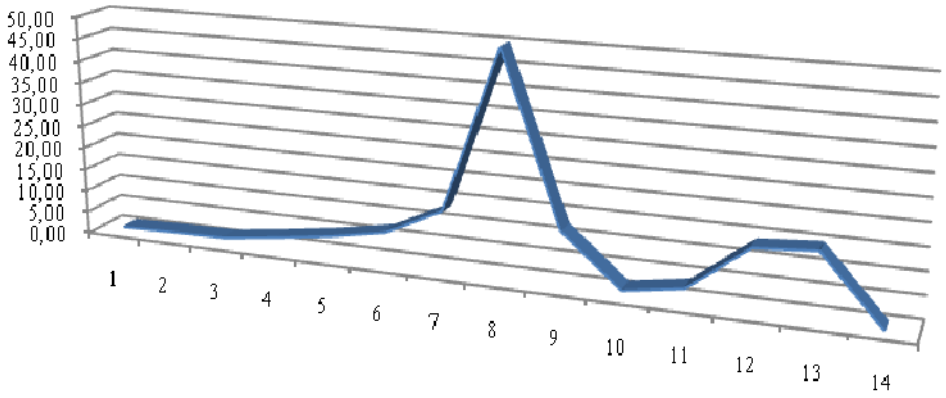
to give an overview of the capital price in real economic sector. All companies, regardless of the initiated process of liquidation or bankruptcy, are subject of inquiry.

4.1. Dividend Yield

Dividend Yield is the ratio between dividend per share and current market price. It measures investor's dividend revenue. There have been 101 dividend payments since 2006 in the capital market of Republic of Srpska, out of which 84 cash dividends payments and 17 shares dividend payments.

Dividends are paid on preferred and common shares listed at BLSE. Banks and insurance companies have been paying dividends on preferred shares, mostly because of state support against global crisis. Namely, state developing funds (organized as the IRBRS) have possibility to invest in the preferred shares of financial sector, whose minimal annual dividend rate has to be 8%. Consequently, in 2012 there were 3 dividend payments on the basis of 8% annual dividend rate. Omitting those 3 payments, 14 companies paid dividends on regular shares in 2012. Average dividend rate is 9.2% including one extremely high dividend rate of 49.99%. When this number is omitted, the average rate is 6.06%.

Figure 1: Dividend Rate on Regular Shares in 2012



Source**:** Authors' survey of data from Banja Luka Stock Exchange 2013

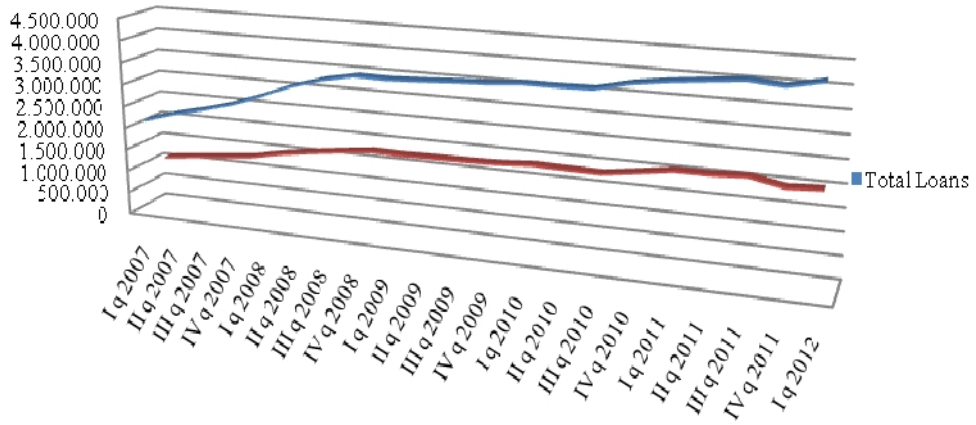
As it is mentioned, the dividend is paid on only 17 out of 707 shares. It suggests that inquiry of interest rate is much more needed in developing countries. In theory, only big companies pay dividends, but comparing asset value, companies that have been paying dividends are not the biggest among the listed companies, except one.

Facts below are enough to conclude that the financial market in the Republic of Srpska is banking orientated and not capital market. Our further analysis is focused on research of the interest rates.

4.2. Credit Market in the Republic of Srpska

Banks in the Republic of Srpska have obligation to submit quarter reports to the Banking Agency of the Republic of Srpska. Based on analytical data, the Agency publishes reports with aggregated data for the disbursement of the banks located in the Rebulic of Srpska. According to the Reports on the Banking System in the Republic of Srpska, made quarterly, credit replenishment to the private sector can be compared to the total credit replenishment.

Figure 2: Loan Amount in the Republic of Srpska in the Period 2007-2012



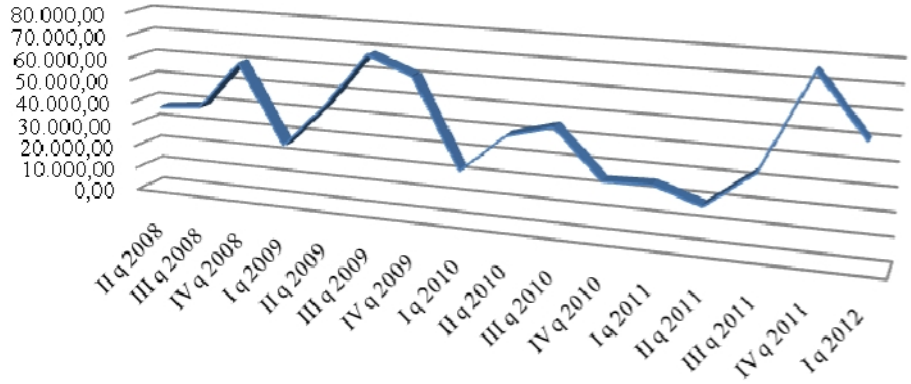
Source: Authors' survey of data from Banking Agency of the Republic of Srpska 2007-2012

The trend of total loans and loans to the private enterprises has recorded growth during total observing period. Loans to the private enterprises participate in the total loan amount less than 50%. This suggests that loans are mostly used for the final consumption.

Development funds were established in 2007 from the asset retained in the privatization process.

Lending from these sources became operative in the second quarter of 2008 (The Republic of Srpska Investment-Development Bank 2013).Unfortunately, available development funds are limited and they depend on the cash inflow of privatization of the companies (which are less than in previous decade since the most of the companies are sold) and on the returns of loans. The demand for those funds is high, which is supported by the fact of plan realization by more than 100%. Unfortunately, there are no available data concerning the demand on loans which is not possible to meet. Financing from development fund is shown in the next figure.

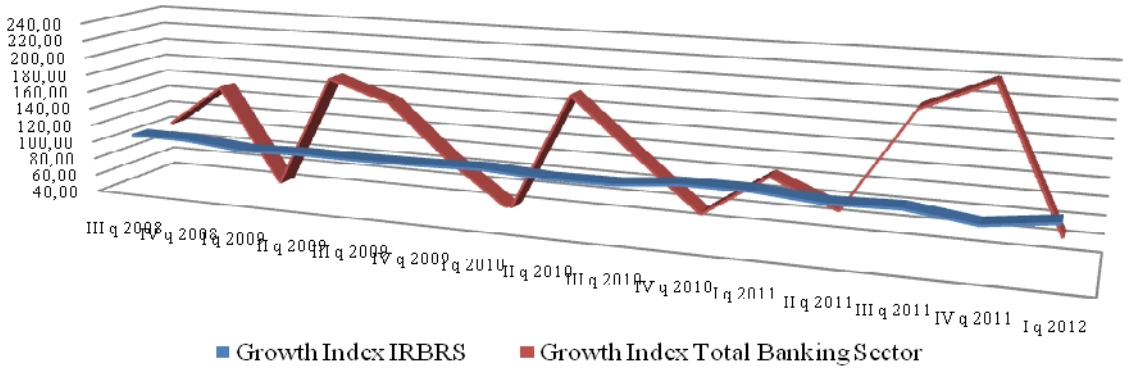
Figure 3: Development Funds Replenishment



Source: Authors' survey of data from The Republic of Srpska Investment-Development Bank 2013

Observing changes in replenishment of development funds on quarter basis, it is not possible to conclude in which direction next quarter replenishment will move. The growth index of total banking sector replenishment has been moving in a range from 92.78 to 111.06, while the growth index of development funds replenishment has been moving in a range from 36.88 to 220.60. No data could be used to predict future available sources of development funds or the future level of replenishment.

Figure 4: Growth Index IRBRS and Growth Index of Total Banking Sector



Source: Authors' survey of data from Banking Agency of the Republic of Srpska 2007-2012

We have mentioned in the abstract that we would prove the hypothesis: market share of the developing funds has a tendency of increasing as the growth rate of the country is decreasing. Next, we compare the growth rate of real GDP with the growth index of replenished development funds.

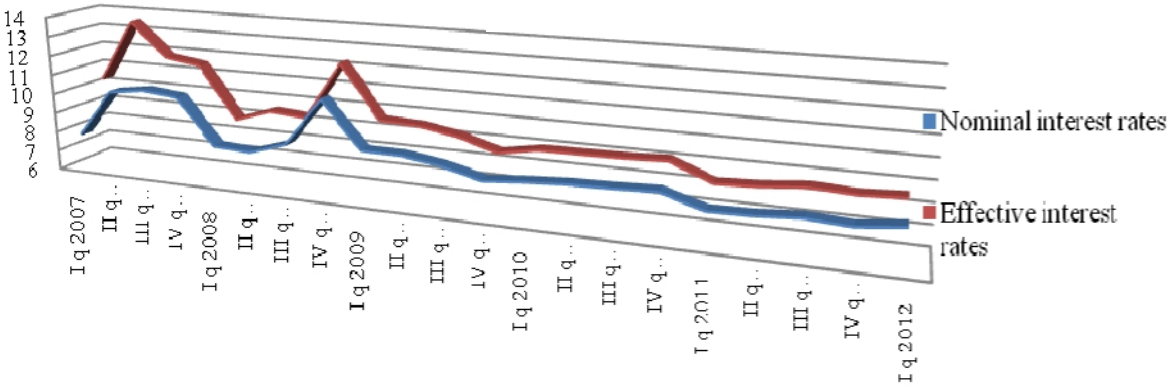
Table 2: Comparative analysis of development funds growth index and GDP growth rate

Year	IRBRS Disbursement in 000 BAM	Index	Real GDP (growth rate in percents)
2008	136,610	N/A	5.6
2009	199,499	1.4604	-2.9
2010	180,827	0.9064	0.7
2011	153,298	0.8478	1.3
2012	165.980	1.083	-0.7

Source: The Republic of Srpska Investment-Development Bank 2013

It is obvious from the data that as GPD decreases, the replenishments increase. In order to illustrate the cost of loans, we gathered data from quarter reports published by the Banking Agency of the Republic of Srpska.

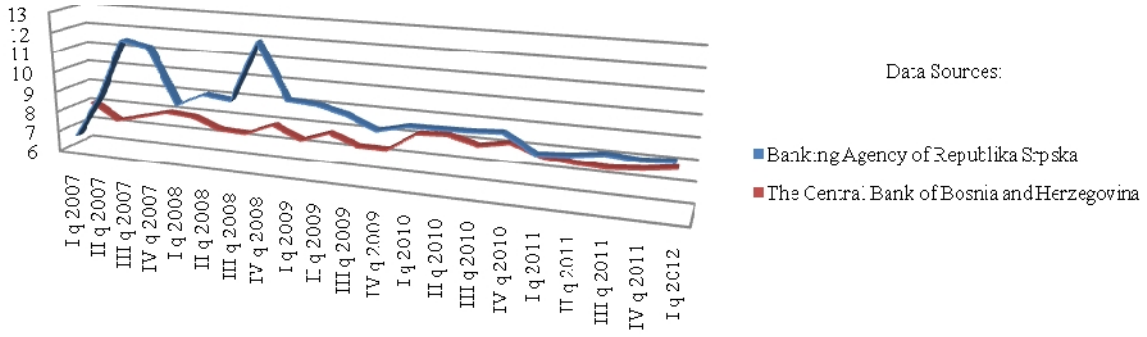
Figure 5: Interest Rates of Long-term Loans in the Republic of Srpska



Source: Authors' survey of data from Banking Agency of the Republic of Srpska 2007-2012 and Central Bank of Bosnia and Herzegovina 2007-2013

Interest rate fluctuation decreased since the second quarter 2009. The spread between effective and nominal interest rate also dropped from 1.5 to 0.54, but the provisions on the loans are still significant. Intending to use several data sources, we extracted data from the quarter reports of the Banking Agency of the Republic of Srpska and from the statistic review of active deposit money bank interest rates on the web site of the Central Bank of Bosnia and Herzegovina.

Figure 6: Interest Rates of Private Companies Long-term Loans



Source: Authors' survey of data from Banking Agency of the Republic of Srpska 2007-2012 and the Central Bank of Bosnia and Herzegovina 2007-2012

The discrepancy between data from two sources is far most obvious in recent years. We assume that the difference derives from different methodologies in data summing. The discrepancy became less significant since the first quarter of 2010. The discrepancy in the last available quarter has the smallest recorded amount of all observed data. It amounts to 0.54 percentage points. From that fact, we could assume that both data sources are relevant nowadays.

On the other hand, there are financial reports of companies which contain data relevant for lending analysis. Available for usage are financial reports submitted to the BLSE, and there are 534 reports accessible for 2013. From summarized financial reports, we extracted data for interest expenses from the income statement, and the short-term and long-term loans from the balance sheet. Out the population of 534 units, 104 companies have zeroes on the three explored positions, pointing out that there are no lending activities in those subjects. The data which are surprising refer to existence of the interest expenses in the statements of 128 companies while zeroes are in the position of the short-term and long-term loans. The reasons could be either companies have not properly obeyed bookkeeping policies or they have accrued interest on the statement position even if the law on banks does not allow lending with the interest rates to other institutions other than banks. For information, the number of companies with the interest expenses higher than 1,000 BAM and without any loans, is 70, while those with the interest expenses higher than 10,000 count 31. The highest is the interest expense of 5.875.411 BAM, while the observed company has no indebtedness. Out of 534 companies, 364 operated without short-term indebtedness in 2012 while 333 of them operated without long-term indebtedness.

In order to calculate average interest rate paid according to the financial statements, from the population of 534 units, we have extracted 294 units with data concerning indebtedness that have figures in the position of the interest expenses and the short-term or long-term loans. After that, we have introduced the ratio the interest expenses to sum of the short-term and long-term loans, representing the interest rate paid on debts. Averaging the mentioned ratio for the 294 units, we have got a number of 32.29%. The sample contains extremely high positions (for example the interest expense of 43,631 BAM, while the sum of short-term and long term debt amounts to 2,502 BAM, giving the ratio of 1,743.84%). In the ratio calculation, 53 figures have value greater than 20%, which we consider as extremely high percentage. Omitting the ratios for 38 companies whose ratio amounts to percentage higher than 20, we have got the average ratio of 10.40% (241 companies are included in the calculation).

From the previous paragraph, we could conclude that the companies' financial statements indicate average ratio of 10.40% that could be regarded as the average interest rate.

The goal of the previous analysis was to show that the interest rates for the loans from developing funds are lower that the rates publicly declared by the Central Bank and the Agency. Moreover, mentioned interest rates are much lower than the interest rates derived from the financial statements.

5. CONCLUSION

Analyzing the capital price in the Republic of Srpska, we could conclude that the capital price consists mostly of the interest costs. Only 14 companies paid dividends on regular shares in 2012, while 3 companies paid dividends on preferred shares. Average dividend rate on regular shares is 9.2% including one extremely high dividend rate of 49.99%. When this number is omitted, the average rate is 6.06%. The dividend rate on preferred shares is 8%.

The next stage of analysis is an inquiry into the interest rates. In 2012 average nominal rate on long-term loans to nonfinancial companies was 7.53%, while effective rate was 8.11%. Average nominal rate on mentioned loans in the first six months of 2013 amounts to 7.44% while effective rate amounts to 8.08% (Banking Agency of the Republic of Srpska 2013). Interest rates vary from quarter to quarter, depending on economic situation, amount of loans, period of repayment and ratio of fixed and variable part of interest rate.

We could conclude that the companies' financial statements indicate average ratio of 10.40% that could be regarded as the average interest rate by this source.

Summing up all data concerning interest rates, and comparing them to interest rates on loans from developing funds, favorableness of the last is more than apparent. The hypothesis that market share of the developing funds has a tendency of increasing as the growth rate of the country is decreasing is proven by the fact of decreasing GDP in comparison to increasing development funds replenishments.

The second hypothesis: by introducing the development funds the average interest rate decreases and furthermore the lowest interest rate boundary is moved down, is also proved. The lines in the figure 6 dropped sharply after 2008, which is concerned as the beginning of the crisis. Moreover, the development funds have been introduced for the first time in the Republic of Srpska.

Evidently, the high demand for the loans from development funds is not met. Summarizing all mentioned above, the interest rates for entrepreneurship are at the level at which the demand is higher than available funds. Consequently the focus must be on the providing new sources of favorable funds in the future.

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