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***PERSON RESPONSIBLE FOR PUBLISHING***

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## *CONTENTS*

## *FOREWORD*

To the great pleasure of scientific and expert public, the new thematic monograph under the title Finance, Insurance and Investment has been published, in which the authors have invested significant research efforts in the direction of looking for appropriate solutions, that rely on quality scientific and research studies and projects, which demanded a multidisciplinary approach, that is, harmonized creation which includes cooperation of more disciplines like business economics, finance, insurance, investments etc.

Having an insight into the contents of expert and scientific papers, it is my opinion that a significant scientific contribution has been made to the development of finance and financial management as scientific disciplines which are of great importance in the developed countries.

Theoretical and empirical results that authors of these papers reached represent continuance of scientific process which started three years ago, when the first international conference was held under the title Employment, Education and Entrepreneurship. This is how we provided continuity in building the scientific analysis and study of areas of finance, insurance and investments, important segments of social and economic development in the Republic of Serbia.

At the beginning of this millennium, our country came into process of transition. Economies of countries in transition must undergo inevitable changes in structure and to endure the competition at the world market. In our country it is necessary to create a precondition for inflow of fresh capital, but also the conditions for activating human resources and their potential. Integration of the domestic financial market into a world financial market conditions harmonization of monetary and fiscal politics and exchange rate and interest rate politics with the partner countries. Bank monetary system has to have a central place in strategy of renewing the production and development. Secure and real stabilization program has to have an accented developmental character. Economic policy should take over the reforms of health system and pension insurance, through building appropriate market institutions. For the development of modern entrepreneurship, the appropriate support of the state is necessary, through building appropriate market institutions. For development of modern entrepreneurship the appropriate support from the state is necessary, an adequate financing system and developed financial market. These are just some of the topics that will be discussed at the conference.

I expect that participants' papers at this conference will draw the attention of scientific and expert public, students and other readers who will, through this monograph, see the significance and the role of finance, insurance, investments, possibilities for their management and their development. At the same time this conference and monograph are in the function of continuous promotion of scientific and research results, especially the encouragement of the young to conduct researches, make reports and publish their results, but also to interpret their results at this and scientific conferences similar to this one.

Goran Kvrgic PhD

Editor of thematic monograph Finance, Insurance and Investment

# *IMPACT OF GLOBAL FINANCIAL CRISIS ON EXCHANGE RATE VOLATILITY: A COMPARISON BETWEEN DEVELOPED AND CEEC COUNTRIES*

*Sinisa Miletic,PhD*[1]

*Marijana Ziravac-Mladenovic,PhD*[2]

## *ABSTRACT*

*The aim of this study is to envisage the impact of global financial crisis (GFC) on foreign exchange markets of selected developed (EU, Japan and Great Britain) and emerging countries in Central and Eastern Europe (Czech Republic, Hungary, Romania, Poland and Serbia). The daily returns of exchange rates on EU euro (EUR), Japonica yen (JPY), Great Britannia pound (GBP), Check Republic koruna (CZK), Hungarian forint (HUF), Romanian lei (ROL), Polish zloty (PLZ) and Serbian dinar (RSD), all against the US dollar are analyzed during the period 03. January 2000 to 15.April 2013 in respect. To examine the impact of global financial crisis dummy variable were adopted. Estimated obtained by our calculation imply that global financial crisis increased enhanced volatility on exchange rate returns of GBP and JPY in case of developed countries and PLZ and HUF in case of CEEC countries and that this impact is stronger in CEEC countries.*

***Keywords**: Exchange Rate Volatility, Global Financial Crisis, GARCH models, Developed Countries, CEEC Countries*

***JEL Classification**: F31,F37, C14, C22, C52*

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[1]Sinisa Miletic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, sikimil72@gmail.com

[2]Marijana Ziravac Mladenovic, University for Business Engineering and Management, Banja Luka, Bosnia and Hercegovina, marijana.mladenovic@univerzitetpim.com

## *INTRODUCTION*

Foreign exchange market is the world's largest financial markets with no opening or closing hours, functioning 24 hours a day and 7 days a week. An investors' confidence to invest in particular country is inversely related to high volatilities in exchange rate. This is the basic reason that volatility models are used to explain the enduring and significant instance in the foreign exchange rate movements (Kamal et al., 2012).Poon and Granger (2003) asserted that financial volatility has significant influence on the economy while the policy and decision makers depends heavily upon the volatility modelling anticipate on the vulnerabilities of financial markets and economy.

Modelling exchange rate volatility has gained a great importance particularly after the collapse of the Bretton Woods agreement when major industrial countries has chosen to shifted towards floating exchange rate from fixed exchange rate regime. Since then, there has been an extensive debate about the topic of exchange rate volatility and its potential influence on welfare, inflation, international trade as well as its role in security valuation, profitability and risk management and investment analysis. Consequently, a number of models have been developed in empirical finance literature to investigate this volatility across different regions and countries (Suliman, 2012)

The traditional measure of volatility as represented by variance and standard deviation is unconditional and does not recognize interesting patterns in asset volatility, e.g., time-varying and clustering properties (Olowe,2009). Researchers have introduced various models to explain and predict these patterns in volatility. One such approach is represented by time-varying volatility models which were expressed by Engle (1982) as autoregressive conditional heteroskedasticity (ARCH) model and extended by Bollerslev (1986) into generalized ARCH (GARCH) model. These models recognize the difference between the conditional and the unconditional volatility of stochastic process, where the former varies over time while the latter remains constant (McMillan,Thupayagale, 2010).

Recent global financial crisis is a major turmoil event which permeated all over the world irrespective of developed or emerging countries. The magnitude of the turmoil appears all the more severe since it is not confined to a certain region or country. It was rooted when the Information Technology bubble burst, causing the federal government to deregulate and cut interest rate. Cheap credit enabled even subprime borrowers with low creditworthiness to become homeowners. Profit-driven investors recklessly traded various derivatives such as Mortgage Backed Securities since US housing prices grew rapidly for years. However, excessive securitization of mortgages caused a bubble in the housing market and aggravated the difficulty of risk assessment. The bubble inflated further when interest rates rose, resulting in a surge in defaults by subprime borrowers. The companies that traded structured products backed by mortgages experienced massive loss as the

bubble burst. Various financial institutions were hit by the crisis, which by then was no longer merely a problem of the US. The collapse of US financial institutions dealt a critical blow to other industries. The US housing market went into a recession and financial institutions that dealt in mortgage-backed derivatives defaulted. Furthermore, overseas financial institutions with direct or indirect investment in derivatives fell into a crisis of their own. As financial institutions rushed to withdraw investment, emerging economies highly dependent on foreign capital were distressed and appreciation of dollar. The capability of emerging economies to return short-term foreign debt decorated, forcing Iceland, Ukraine, Hungary and Pakistan to turn to the IMF for bailout. To emerging economies heavily depend on foreign capital and export-driven economies, the rise of dollar loomed as a grave threat (Chang et al., 2010).

Financial crisis affecting the sudden and unexpected fluctuations in exchange rates and emphasize the importance of measuring the foreign exchange rate volatility. The volatility of foreign exchange rates results in increase of exchange rate risk and adversely affects the international trade and investment decision (Kamal et al., 2012).

The aim of this study is to envisage the impact of global financial (GFC) on foreign exchange markets of selected developed (EU, Japan and Great Britain) and emerging countries in Central and Eastern Europe CEEC countries (Czech Republic, Hungary, Romania, Poland and Serbia). The paper applies symmetric GARCH and three asymmetric GARCH models, which are EGARCH, TGARCH and APARCH with variations in their mean equations: AR(1), MA(1), and ARMA(1,1), ARCH in mean that capture most stylized acts about exchange rate returns such as volatility clustering and leverage effect. The exchange rate volatility is measured throughout the period during global financial crisis to find out whether these crises affect the exchange rate volatility in selected developed and CEEC countries.

The paper is organized as follows. Literature review is presented in the second chapter. In third chapter GARCH type methodology is presented. The fourth chapter presents the results of empirical analysis. Finally, concluding remarks are given in the fifth chapter.

## *LITERATURE REVIEW*

This chapter is survey of related work on exchange rate volatility in developed and emerging countries.

Hsie (1988) using daily data on five nominal U.S. dollar rates, finds out that means and variance of exchange rate series change over time. Hsie employs ARCH, GARCH and EGARCH models for five foreign currencies using 10 years of daily data. Author finds that GARCH(1,1) and EGARCH (1,1) models are extremely successful at removing conditional heteroscedasticity from daily exchange rate movements.

Moreover author claims that EGARCH is fitted to the data slightly better than GARCH model using a variety of diagnostic checks. Mundaca (1991) modeled the NOK/USD exchange rate through ARCH and GARCH models. Author point out that results supported that three out of four analyzed series fitted better through GARCH then the ARCH model. Jonhston and Scott (2000) examined the British Pound, Canadian Dollar, German Mark and Japanese Yen against the US Dollar through 1978 to 1992 period, applying the GARCH models. Authors finds that foreign exchange rate time variation were not the only reason of overall volatility but the fact that after removing the GARCH effect, the frequency distribution still showed the existence of independence. Authors find that GARCH models with normality assumption were unable to provide good description of exchange rate dynamics.

Although there have been an extensive empirical studies focusing on modeling and estimating exchange rate volatility in developed countries applying different specification little attention has been paid on emerging countries.

Chong et al. (2002) investigate application of GARCH models to capture exchange rate volatility in Malaysian Ringgit/Pound Sterling, for 1990-1997 periods. Results of empirical investigation suggest the possibly reject the hypothesis of constant variance model, arguing that the GARCH models were better once than native random walk models. Longmore and Robinson (2004) applied linear GARCH and asymmetrical volatility models on Jamaican Dollar for 1998-2003 period and found long memory process for the exchange rate with effects of shocks being asymmetric, while in terms of explanatory power, the non-linear GARCH model performed well.

Olowe (2009) used a number of GARCH models to investigate the volatility of Naira/US Dollar exchange rate in which the hypothesis of leverage effect was rejected by all asymmetric models, though all the coefficients of the variance equations were significant, the TS-GARCH and APARCH models proved to be the best models. On the other hand, EGARCH model showed that in Nigerian foreign exchange market, with all variances being non-stationary, the volatility is highly persistence. Suliman (2012) considers the GARCH approach in modeling exchange rate volatility in a panel of 19 of the Arab countries using daily observations over 2000 to 2011 periods. Author applies both symmetric and asymmetric models to capture most common stylized facts about exchange rate returns such as volatility clustering and leverage effect. The results show that based on GARCH (1,1) model, that for ten of nineteen currencies sum of the estimated persistent coefficient exceed one implying that volatility is an explosive process. Furthermore, the asymmetrical EGARCH (1,1) results provide evidence of leverage effect for majority of currencies, indicating that negative shocks imply a higher next period volatility than positive shocks.

Exchange rate volatility in CEEC's countries is analyzed by several authors. Kočenda and Valachy (2006) find that exchange rate volatility generally increased with the introduction of more flexible exchange rate arrangements. Fidrmuc and Horvath (2007) examined the daily exchange rate dynamics in selected new EU member states (Czech Republic, Hungary, Poland, Romania and Slovakia) using GARCH and TARCH models between 1999 and 2006. Authors find that the low credibility of

exchange rate management implied higher volatility of exchange rates when it substantially deviated from the implicit target rates for all countries. Furthermore, authors find significant asymmetric effects of volatility of exchange rates in all analyzed countries.

Todea and Platon (2012) investigated sudden changes in volatility of four Central and Eastern European foreign exchange markets (Czech Republic, Hungary, Poland and Romania) using the Iterated Cumulative Sums of Squares algorithm and re-examines the volatility persistence during the period 1999 to 2009. Authors determined that the identification of sudden exchanges is associated with local financial, economic and political events, with the exception of the financial crisis as a global factor. Accounting for these sudden shifts in volatility in the GARCH models significantly reduces the persistence of volatility or long memory in the Central and Eastern Europe foreign exchange markets.

## *GARCH TYPE MODELS*

The GARCH type models successfully capture several characteristics of financial time series, such as thick tailed returns and volatility clustering. A general GARCH(p,q) model proposed by Bollerslev (1986) can be written in the following form:

$$
\begin{aligned}
& y_t = a_0 + \sum_{i=1}^{m} a_i y_{t-i} + \varepsilon_t - \sum_{j=1}^{s} b_j \varepsilon_{t-j} \\
& \varepsilon_t = z_t \sigma_t, \ \varepsilon_t | I_{t-1} \sim N\left(0, \sigma_t^2\right) \\
& \sigma_t^2 = \alpha_0 + \sum_{i=1}^{q} \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^{p} \beta_j \sigma_{t-j}^2 \\
& \alpha_0 > 0, \ \alpha_i \geq 0, \ \beta_j \geq 0, \ i = 1,...,q, \ j = 1,...,p
\end{aligned}
\tag{1}
$$

The first equation actually describes the percentage level of return, $y_t = 100*r_t$, which is presented in the form of autoregressive and moving average terms, i.e. ARMA(m,s) process. Error term εt in the first equation is a function of $z_t$, which is random component with the properties of white noise. The third equation describes the conditional variance of return, $y_t$, which is function of q previous periods and conditional variance of p previous periods. The stationary condition for GARCH (p, q) is $\sum_{i=1}^{q} \alpha_i + \sum_{j=1}^{p} \beta_j < 1$.

Size of parameters α and β in the equation determines the observed short-term volatility dynamics obtained from series of returns. The high value of coefficient β indicates that shocks to conditional variance need a long time to disappear, so the volatility is constant. The high value of the coefficient α mean that volatility reacts intensively to changes in the market.

If $\sum_{i=1}^{q} \alpha_i + \sum_{j=1}^{p} \beta_j < 1$, for a sufficiently long horizon forecasts conditional variance ofGARCH (p, q) process:

$$\sigma_t^2 = \alpha_0 \left(1 - \sum_{i=1}^{q} \alpha_i - \sum_{j=1}^{p} \beta_j\right)^{-1} \tag{2}$$

is called unconditional variance of GARCH (p, q) process.

By standard arguments, the model is covariance stationary if and only if all the roots of $\sum_{i=1}^{q} \alpha_i + \sum_{j=1}^{p} \beta_j = 1$ lie outside the unit circle. In many applications with high frequency financialdata the estimate for $\sum_{i=1}^{q} \alpha_i + \sum_{j=1}^{p} \beta_j$ turns out to be very close to unity. This provides an empirical motivation for the so-called integrated GARCH(p,q), or IGARCH (p,q), model (see Bollerslev et al.,1994). In the IGARCH class of models the autoregressive polynomial in equation (2) has a unit root, and consequently a shock to the conditional variance is persistent in the sense that it remains important for future forecasts of all horizons. A general IGARCH (p, q) process can be written in the following form:

$$\sigma_t^2 = \alpha_0 + A(L)\varepsilon_t^2 + B(L)\sigma_t^2, A(L) + B(L) = 1 \tag{3}$$

where A(L) and B(L) are lag operators.

In order to capture asymmetry Nelson (1991) proposed exponential GARCH process or EGARCH for the conditional variance:

$$\log\left(\sigma_t^2\right) = \alpha_0 + \sum_{i=1}^{\infty} \pi_i g\left(\frac{\varepsilon_{t-i}}{\sigma_{t-i}}\right) \tag{4}$$

Asymmetric relation between returns and volatility change is given as function $g\left(\frac{\varepsilon_t}{\sigma_t}\right)$, which represent linear combination of $\frac{\varepsilon_t}{|\sigma_t|}$ and $\frac{\varepsilon_t}{\sigma_t}$:

$$g\left(\frac{\varepsilon_t}{\sigma_t}\right) = \theta\left(\left|\frac{\varepsilon_t}{\sigma_t}\right| - E\left|\frac{\varepsilon_t}{\sigma_t}\right|\right) + \gamma\left(\frac{\varepsilon_t}{\sigma_t}\right) \tag{5}$$

where θ and γ are constants.

By construction, equation is a zero mean process (bearing in mind that $z_t = \varepsilon_t / \sigma_t$). For $0 < z_t < \infty$, $g(z_t)$, is linear function with slope coefficient $\theta + \gamma$, while for $-\infty < z_t \leq 0$ it is linear function with slope coefficient $\gamma - \theta$. First part of equation, $\theta\left(|z_t| - E|z_t|\right)$, captures the size effect, while second part, $\gamma(z_t)$, captures the leverage effect.

Zakoian (1994) proposed TGARCH (p,q) model as alternative to EGARCH process, where asymmetry of positive and negative innovations is incorporated in the model by using indicator function:

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^{q}\left(\alpha_i \varepsilon_{t-i}^2\right) + \sum_{i=1}^{q}\left(\gamma_i d\left(\varepsilon_{t-i} < 0\right)\varepsilon_{t-i}^2\right) + \sum_{j=1}^{p}\left(\beta_j \sigma_{t-j}^2\right) \tag{6}$$

where $\gamma_i$ are parameters that have to be estimated, $d(\cdot)$ denotes the indicator function defined as:

$$d\left(\varepsilon_{t-i} < 0\right) = \begin{cases} 1, & \varepsilon_{t-i} < 0 \\ 0 & \varepsilon_{t-i} \geq 0 \end{cases} \tag{7}$$

TGARCH model allows good news, ($\varepsilon_{t-1} > 0$), and bad news, ($\varepsilon_{t-1} < 0$), to have differential effects on the conditional variance. For instance, in the case of TGARCH (1,1) process, good news has an impact of $\alpha_i$, while bad news has an impact of $\alpha_i + \gamma_i$. For $\gamma_i > 0$, the leverage effect exists.

APARCH (p,q) process, proposed by Ding, Granger and Engle (1993), includes seven different GARCH type models (ARCH, GARCH, AGARCH, TGARCH, TARCH NGARCH and Log-GARCH):

$$\sigma_t^{\delta} = \alpha_0 + \sum_{i=1}^{q}\alpha_i\left(\left|\varepsilon_{t-i}\right| - \gamma_i \varepsilon_{t-i}\right)^{\delta} + \sum_{j=1}^{p}\left(\beta_j \sigma_{t-j}^{\delta}\right) \tag{8}$$

where $\alpha_0 > 0$, $\delta \geq 0$, $\beta_j \geq 0$, $j = 1,..., p$, $\alpha_0 \geq 0$, $-1 < \gamma_i < 1$and $i = 1,..., q$. Parameter $\delta$ in the equation denotes exponent of conditional standard deviation, while parameter $\gamma$ describes asymmetry effect of good and bad news on conditional volatility. Positive value of $\gamma$ means that negative shocks from previous period have higher impact on current level of volatility, and otherwise.

## *RESULTS OF EMPIRICAL ANALYSIS*

The dataset consists of the daily returns of exchange rates on EU euro (EUR), Japonica yen (JPY), Great Britannia pound (GBP), Check Republic koruna (CZK), Hungarian forint (HUF), Romanian lei (ROL), Polish zloty (PLZ) and Serbian dinar (RSD), all against the US dollar obtained from national stock exchange websites. The study covers the period 03. January 2000 to 15.April 2013, 03.January 2003 to 15.April 2013 for RSD/USD and 03.January 2005 to 15.April 2013 for ROL/USD in respect. As in most of empirical finance literature, the variable to be modelled is percentage daily exchange rate return which is the first difference of the natural logarithm of the exchange rate, i.e. $r_t = (\log P_t - \log P_{t-1}) * 100$. Plots of the data are presented in Figure 1.

Since the focus of this research is to examine the impact of global financial crisis dummy variable will be adopted. The decision to create dummy variable which represents the crisis periods will be subjective and it depends on author's argument. The paper set the global financial crisis at September 2008. The reason for this is that the Lehman Brothers collapse in mid-September, 2008. Therefore, a

dummy variables take 1 for the period from September 2008 to December 2009 defined as financial crisis period, otherwise 0 (Miletić et al., 2013).

Plots of the data are presented in Figure 1. Consistent with prior literature each currency series follows a stochastic trend and exhibits no clear pattern.

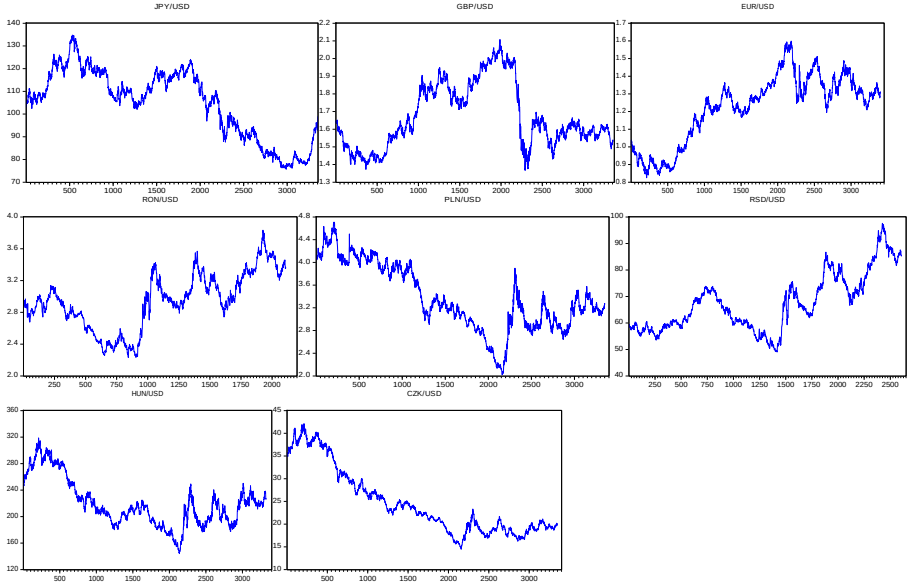



*Figure 1: Daily Exchange Rates vs US Dollar*

## *PROPERTIES OF DATA*

Bearing in mind that the one-time structural breaks may lead to erroneous statistical conclusions, in all eight cases we indicate the most prominent non-standard values and then regress series of returns on constant and dummy variable that take non-zero values for the observations with the most prominent nonstandard values. New adjusted series of daily exchange rate returns are used in empirical analysis (see Figure 2). Volatility clustering is clearly visible in all cases. The effects of global financial crisis also appear to have strong influence on the exchange rate variability in those countries. All diagrams of Figure 2 show increase in the amplitude of its variability, which coinciding with the collapse of Lehman Brothers on September 15th. Note also that the magnitude of these effects was similar in both developed and CEEC countries.

The quintiles of an empirical distribution are plotted against the quintiles of a normal distribution. From the Figure 3 it is clear that QQ plot is not linear and that empirical distribution differs from the hypothesized normal distribution. The plot poses the characteristic S-shape indicating that there is no significant skewnees, but the tails are heavier than a normal distribution (Andersen et al., 2000).

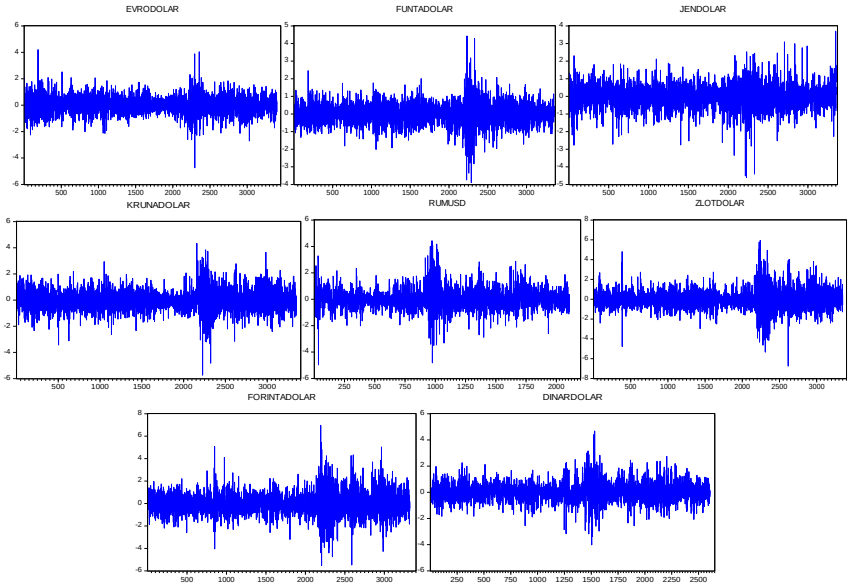



*Figure 2: Volatility of Daily Exchange Rate Returns*

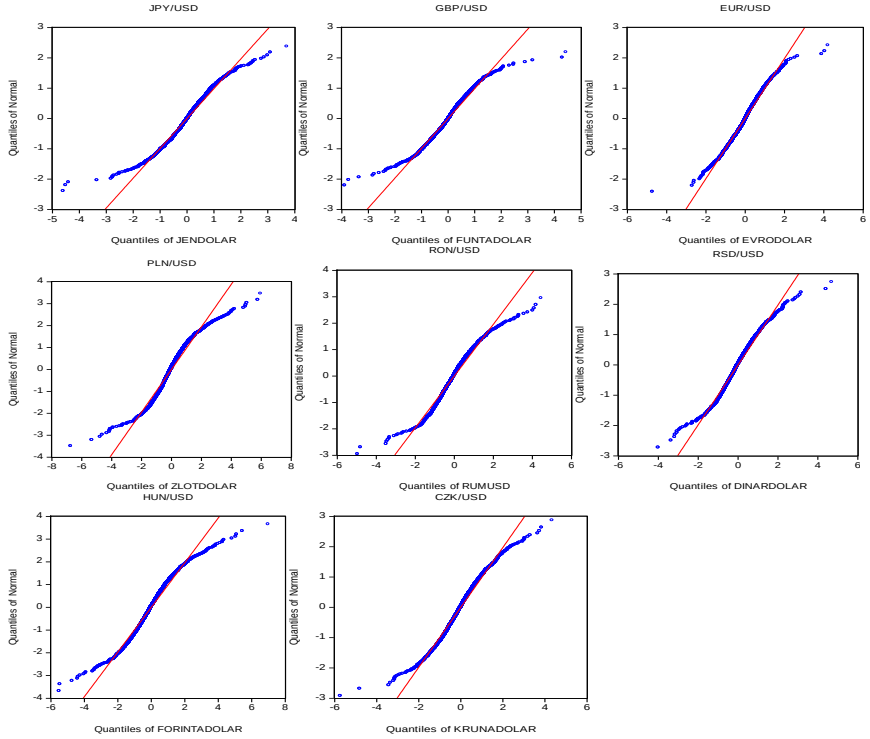



*Figure 3: Quantile-Quantile Plots of Daily Exchange Rate Returns*

Table 1 indicates that the daily exchange rate returns are not normally distributed. In most cases skewness is evident; kurtosis is in all cases greater than 3 and the Jarque-Bera statistics are highly significant. Negatively skewed distributions are reported for daily exchange rate returns of developed countries which indicate appreciation of the currency, while positively skewed distribution are reported for daily exchange rate returns of CEEC countries which indicate depreciation of the currency. The coefficient of excess kurtosis is in all cases greater than 3 indicating the distribution of the returns is leptokurtic, which means that the distribution has fatter tails. The largest coefficient of excess kurtosis is reported for British pound in case of developed countries and Polish zloty in case of CEEC countries and highlights that these exchange rates account for larger deviations in their returns. The results confirm the presence of fat tails, which suggest that the assumption of a normal distribution is not satisfied. ARCH-LM test indicates presence of time varying volatility, and Box-Ljung statistics indicate evidence of autocorrelation in squared standardized residuals.

*Table 1: Descriptive statistics of Daily Exchange Rate Returns*

| | EUR/USD | GBP/USD | JPY/USD | CZK/USD | ROL/USD | PLZ/USD | HUF/USD | RSD/USD |
|---|---|---|---|---|---|---|---|---|
| Skewness | -0.002 | -0.042 | -0.291 | 0.044 | 0.300 | 0.357 | 0.297 | 0.151 |
| Kurtosis | 5.428 | 7.000 | 6.641 | 5.571 | 6.474 | 7.651 | 6.379 | 5.472 |
| JB | 835.52 (0.00) | 2237.70 (0.00) | 1900.87 (0.00) | 1073.27 (0.00) | 1091.89 (0.00) | 3060.08 (0.00) | 1629.63 (0.00) | 673.73 (0.00) |
| $Q^2(10)$ | 449.52 (0.00) | 1026.5 (0.00) | 138.02 (0.00) | 653.81 (0.00) | 576.12 (0.00) | 1757.9 (0.00) | 1321.0 (0.00) | 745.84 (0.00) |
| $Q^2$ (30) | 848.62 (0.00) | 2508.8 (0.00) | 357.68 (0.00) | 1811.2 (0.00) | 1323.8 (0.00) | 3438.0 (0.00) | 2380.8 (0.00) | 2067.0 (0.00) |
| ARCH-LM (10) | 258.70 (0.00) | 482.94 (0.00) | 107.80 (0.00) | 321.45 (0.00) | 274.63 (0.00) | 578.90 (0.00) | 494.25 (0.00) | 332.54 (0.00) |
| ARCH-LM (30) | 333.02 (0.00) | 624.72 (0.00) | 210.47 (0.00) | 471.13 (0.00) | 361.94 (0.00) | 733.99 (0.00) | 566.85 (0.00) | 479.23 (0.00) |

*Source: Author's calculations. Note: P values of corresponding test statistics are given in parentheses. JB represents Jarque-Bera statistics for normality testing; Q2 represents Box-Ljung statistics for testing autocorrelation in squared standardized residuals, while ARCH-LM test is test of autoregressive conditional heteroscedasticity.*

Table 2 shows the results of unit root test for daily exchange rate returns series. The Augmented Dickey-Fuller test and Phillips-Perron test statistics for all exchange rate returns are highly significant, i.e. the values are less than their critical values at 1%, 5% and 10% level, thereby suggesting the rejection of null hypothesis of the presence of unit root in the return series. Therefore, it is appropriate to examine the return volatility using the original level of the series, i.e. there is no need to difference the data.

*Table 2: The Augmented Dickey-Fuller Test and Philips-Perron Test for Stationarity in Daily Exchange Rates*

| | Augmented Dickey-Fuller test | | | | Phillips-Peron test | | | |
|---|---|---|---|---|---|---|---|---|
| | Statistic | Critical values | | | Statistic | Critical values | | |
| | | 1% level | 5% level | 10% level | | 1% level | 5% level | 10% level |
| EUR/USD | -58.539 (0.00) | -3.432 | -2.862 | -2.567 | -58.539 (0.00) | -3.432 | -2.862 | -2.567 |
| GBP/USD | -56.102 (0.00) | -3.433 | -2.862 | -2.567 | -56.089 (0.00) | -3.433 | -2.862 | -2.567 |
| JPY/USD | -59.695 (0.00) | -3.432 | -2.862 | -2.567 | -59.793 (0.00) | -3.432 | -2.862 | -2.567 |
| CZK/USD | -55.929 (0.00) | -3.432 | -2.862 | -2.567 | -55.950 (0.00) | -3.432 | -2.862 | -2.567 |
| ROL/USD | -43.098 (0.00) | -3.433 | -2.862 | -2.567 | -43.018 (0.00) | -3.433 | -2.862 | -2.567 |
| PLZ/USD | -58.415 (0.00) | -3.432 | -2.862 | -2.567 | -58.435 (0.00) | -3.432 | -2.862 | -2.567 |
| HUF/USD | -59.159 (0.00) | -3.432 | -2.862 | -2.567 | -59.176 (0.00) | -3.432 | -2.862 | -2.567 |
| RSD/USD | -46.495 (0.00) | -3.432 | -2.862 | -2.567 | -46.535 (0.00) | -3.432 | -2.862 | -2.567 |

*Source: Author's calculations. Note: P values of corresponding test statistics are given in parentheses. The appropriate lags are automatically selected employing Schwarc information criterion.*

## *EMPIRICAL RESULTS*

Bearing in mind that Box-Ljung autocorrelation test for squared standardized residuals and ARCH/LM tests indicate presence of ARCH effects, we estimate models of conditional autoregressive heteroscedasticity (GARCH type models). Model selection was done according to modified Akaike criteria. Model parameters are calculated using maximum likelihood estimation method. Maximum likelihood estimates of the parameters are obtained by numerical maximization of the log-likelihood function using the BHHH algorithm.

Since the aim of this study is to find the impact of global financial crisis on foreign exchange markets of selected developed and emerging countries in Central and Eastern Europe (CEEC) countries this study included an explanatory variable of global financial crisis in the mean and conditional variance equation with intention to find the impact of crisis on the exchange rate returns and volatility. Conducted empirical test indicate that the return distributions are not characterized by normality. Our results of estimation show that such GARCH type models assuming both distributions of standardized returns have similar results. Results of estimating ARMA (m,s)-GARCH (p,q) model, and different types of asymmetric ARMA (m,s)-GARCH (p,q) model with assumption that the residuals follow normal or Student's t distribution suggest the following conclusion (Table 3 and 4).

## *DEVELOPED COUNTRIES*

EUR/USD exchange rate return series best describes GARCH (1,1) model regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution. Exchange rate return does not characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern, value of β shows magnitude variance on the current variance and shows magnitude of volatility clustering. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in EUR/USD exchange rate return. This volatility clustering reveals that once volatility persists it takes long time to become smooth. Last coefficient of this model is concerned with recent global financial. The coefficient of global financial crisis is not significant in influencing exchange rate volatility regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution.

JPY/USD exchange rate return series best describes APARCH (1,1) model with assumption that residuals have normal distribution and EGARCH (1,1) model with assumption that residuals follow the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern, APARCH (1,1) model fit JPY/USD exchange rate return with assumption that residuals follow normal distribution. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in JPY/USD exchange rate return. Value of γ coefficient is statistically significant which show that there are asymmetric behavior and presence of leverage effect. Positive sign of the coefficient δ indicate that higher risk brings higher return. The EGARCH (1,1) model fit JPY/USD exchange rate return with assumption that residuals follow Student's t distribution. The EGARCH variance equation indicates that there exists the asymmetric behavior in volatility which means that positive shocks are effecting differently, then the negative on volatility. The coefficient of global financial crisis is positive and significant. Results indicate that recent global financial crisis positively hit volatility of exchange rate return by 1% with assumption that residuals follow normal distribution and 2.2% with assumption that residuals follow Student's t distribution.

GBP/USD exchange rate return series best describes TGARCH (1,1) model regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern, the value of β coefficient is highly significant which shows that persistence

volatility clustering prevails in GBP/USD exchange rate return. Value of γ coefficient is statistically significant and has positive sign which indicate that asymmetry information impact exist in this exchange rate return series and negative shock has stronger impact on the volatility than the positive shock. The coefficient of global financial crisis is positive and significant with assumption that residuals follow normal distribution which indicates that recent global financial crisis positively hit volatility of GBP/USD exchange rate return by 0.8%.

*Table 3: GARCH Models Parameters Estimates from Daily Exchange Rate Returns for Developed Countries*

| | Normal distribution | | | *Student's t* distribution | | |
|---|---|---|---|---|---|---|
| | EUR/USD | GBP/USD | JPY/USD | EUR/USD | GBP/USD | JPY/USD |
| Mean equation | | | | | | |
| Constant | | | | | | |
| AR(1) | | | | | | |
| MA(1) | | | | | | |
| Σ | | | | | | |
| Dummy GFC | | | | | | |
| Volatility equation | | | | | | |
| c | 0.001 (0.00) | 0.004 (0.00) | 0.048 (0.00) | 0.002 (0.02) | 0.003 (0.00) | -0.096 (0.00) |
| A | 0.032 (0.00) | 0.020 (0.00) | 0.051 (0.00) | 0.032 (0.00) | 0.022 (0.00) | |
| B | 0.962 (0.00) | 0.943 (0.00) | 0.900 (0.00) | 0.962 (0.00) | 0.949 (0.00) | 0.972 (0.00) |
| Θ | | | | | | 0.089 (0.00) |
| Γ | | 0.038 (0.00) | 0.618 (0.00) | | 0.032 (0.00) | 0.022 (0.03) |
| Δ | | | 0.429 (0.00) | | | |
| Dummy GFC | | 0.008 (0.03) | 0.010 (0.00) | | | 0.023 (0.03) |
| Number of degrees of freedom | | | | | | |
| $\nu$ | | | | 13 | 13 | 6 |
| Specification tests | | | | | | |
| Q2(30) | 23.17 (0.80) | 32.11 (0.36) | 28.69 (0.53) | 23.03 (0.81) | 31.31 (0.45) | 23.25 (0.80) |
| Q(30) | 26.32 (0.65) | 27.97 (0.57) | 30.16 (0.45) | 26.46 (0.65) | 28.20 (0.55) | 28.89 (0.52) |
| JB | 82.65 (0.00) | 40.12 (0.00) | 544.76 (0.00) | 84.20 (0.00) | 43.53 (0.00) | 726.78 (0.00) |
| ARCH (10) | 3.86 (0.95) | 7.95 (0.63) | 10.89 (0.36) | 3.76 (0.95) | 7.28 (0.69) | 11.28 (0.33) |

*Source: Author's calculations*

## *CEEC COUNTRIES*

CZK/USD exchange rate return series best describes GARCH-M (1,1) model regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. The conditional standard deviation (σ) coefficient is significant and positive, suggesting that there is an effect of the risk on the mean return that could be better captured by this standard deviation method, i.e. there is trade-off

between foreign exchange risk and return. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern, value of β shows magnitude variance on the current variance and shows magnitude of volatility clustering. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in CZK/USD exchange rate return. This volatility clustering reveals that once volatility persists it takes long time to become smooth. Last coefficient of this model is concerned with recent global financial. The coefficient of global financial crisis is not significant in influencing exchange rate volatility regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution.

ROL/USD exchange rate return series best describes TGARCH (1,1) model with assumption that residuals have normal distribution and IGARCH(1,1) model with assumption that residuals follow the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern TGARCH (1,1) model fit ROL/USD exchange rate return with assumption that residuals follow normal distribution. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in EUR/USD exchange rate return. Value of γ coefficient is statistically significant which show that asymmetry information impact exists in this exchange rate return series and that negative shock has stronger impact on the volatility than the positive shock. IGARCH (1,1) model fit ROL/USD exchange rate return with assumption that residuals follow the Student's t distribution as both the α and β are statistically significant at 5%level. The IGARCH model also shows that variances are stationary and persistence of volatility will remain forever. Last coefficient of this model is concerned with recent global financial. The coefficient of global financial crisis is not significant in influencing exchange rate volatility regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution.

PLZ/USD exchange rate return series best describes TGARCH (1,1) model with assumption that residuals have normal distribution and APARCH(1,1) model with assumption that residuals follow the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern TGARCH (1,1) model fit PLZ/USD exchange rate return with assumption that residuals follow normal distribution. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in PLZ/USD exchange rate return. Value of γ coefficient is statistically significant which show that asymmetry information impact exists in this exchange rate return series and that negative shock has stronger impact on the volatility than the positive shock. The APARCH (1,1) model fit PLZ/USD

exchange rate return with assumption that residuals follow Student's t distribution. The APARCH (1,1) show that there exists the asymmetric behavior in volatility which means that positive shocks are effecting differently, then the negative on volatility. Positive sign of the coefficient δ, indicate that higher risk brings higher return. The coefficient of global financial crisis is positive and significant. Results indicate that recent global financial crisis positively hit volatility of exchange rate return by 6.9 % with assumption that residuals follow normal distribution and 4.9 % with assumption that residuals follow Student's t distribution.

HUF/USD exchange rate return series best describes TGARCH (1,1) model with assumption that residuals have normal distribution and APARCH(1,1) model with assumption that residuals follow the Student's t distribution. Exchange rate return does characterize neither AR nor MA component. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern TGARCH (1,1) model fit HUF/USD exchange rate return with assumption that residuals follow normal distribution. The value of β coefficient is highly significant which shows that persistence volatility clustering prevails in HUF/USD exchange rate return. Value of γ coefficient is statistically significant which show that asymmetry information impact exists in this exchange rate return series and that negative shock has stronger impact on the volatility than the positive shock. The APARCH (1,1) model fit HUF/USD exchange rate return with assumption that residuals follow Student's t distribution. The APARCH (1,1) model show that there exists the asymmetric behavior in volatility which means that positive shocks are effecting differently, then the negative on volatility. Positive sign of the coefficient δ, indicate that higher risk brings higher return. The coefficient of global financial crisis is positive and significant. Results indicate that recent global financial crisis positively hit volatility of exchange rate return by 3.8 % with assumption that residuals follow normal distribution and 4.5 % with assumption that residuals follow Student's t distribution.

RSD/USD exchange rate return series best describes IGARCH (1,1) model regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution. In the mean equation autoregression component of the first order is significant, but estimated value of the autoregression parameter is very small. With the respect to the mean equation, coefficient of global financial crisis suggests that the existence of global financial is not significant in influencing exchange rate returns. As far as conditional variance equation concern, the value of coefficients α and β are statistically significant at 5%level. The IGARCH model also shows that variances are stationary and persistence of volatility will remain forever. Last coefficient of this model is concerned with recent global financial. The coefficient of global financial crisis is not significant in influencing exchange rate volatility regardless of whether it is assumed that the residuals have a normal distribution or the Student's t distribution.

*Table 4: GARCH Models Parameters Estimates from Daily Exchange Rate Returns for CEEC countries*

| | Normal distribution | | | | | *Student's t* distribution | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | CZK/USD | ROL/USD | PLZ/USD | HUF/USD | RSD/USD | CZK/USD | ROL/USD | PLZ/USD | HUF/USD | RSD/USD |
| Mean equation | | | | | | | | | | |
| Constant | -0.092 (0.00) | | -0.028 (0.03) | | | -0.106 (0.00) | | -0.046 (0.00) | | |
| AR(1) | | | | | 0.074 (0.00) | | | | | 0.073 (0.00) |
| MA(1) | | | | | | | | | | |
| σ | 0.128 (0.02) | | | | | 0.143 (0.00) | | | | |
| Dummy GFC | | | | | | | | | | |
| Volatility eq Uation | | | | | | | | | | |
| c | 0.005 (0.00) | 0.010 (0.00) | 0.024 (0.00) | 0.021 (0.00) | | 0.003 (0.02) | | 0.020 (0.00) | 0.030 (0.00) | |
| α | 0.037 (0.00) | 0.073 (0.00) | 0.109 (0.00) | 0.086 (0.00) | 0.042 (0.00) | 0.038 (0.00) | 0.059 (0.00) | 0.081 (0.00) | 0.066 (0.00) | 0.053 (0.00) |
| β | 0.953 (0.00) | 0.924 (0.00) | 0.880 (0.00) | 0.916 (0.00) | 0.957 (0.00) | 0.955 (0.00) | 0.940 (0.00) | 0.894 (0.00) | 0.898 (0.00) | 0.956 (0.00) |
| θ | | | | | | | | | | |
| γ | | -0.028 (0.01) | -0.056 (0.00) | -0.059 (0.00) | | | | -0.140 (0.04) | -0.348 (0.00) | |
| δ | | | | | | | | 1.775 (0.00) | 1.725 (0.00) | |
| Dummy GFC | | | 0.069 (0.00) | 0.038 (0.01) | | | | 0.049 (0.03) | 0.045 (0.03) | |
| Number of degrees of freedom | | | | | | | | | | |
| $\nu$ | | | | | | 10 | 10 | 8 | 10 | 12 |
| Specification tests | | | | | | | | | | |
| Q2(30) | 26.66 (0.64) | 28.25 (0.55) | 22.41 (0.83) | 33.76 (0.29) | 40.35 (0.07) | 25.89 (0.68) | 29.50 (0.49) | 22.41 (0.83) | 32.29 (0.35) | 36.66 (0.09) |
| Q(30) | 22.90 (0.81) | 31.17 (0.40) | 19.95 (0.91) | 21.80 (0.86) | 30.91 (0.37) | 22.86 (0.82) | 33.15 (0.31) | 19.95 (0.91) | 21.91 (0.85) | 30.98 (0.36) |
| JB | 341.40 (0.00) | 111.10 (0.00) | 205.24 (0.00) | 155.97 (0.00) | 57.75 (0.00) | 380.66 (0.00) | 128.06 (0.00) | 205.24 (0.00) | 153.03 (0.00) | 58.69 (0.00) |
| ARCH (10) | 6.71 (0.75) | 14.00 (0.17) | 4.08 (0.94) | 15.36 (0.11) | 10.19 (0.42) | 6.36 (0.78) | 15.81 (0.10) | 4.08 (0.94) | 14.67 (0.14) | 9.64 (0.47) |

*Source: Author's calculations*

## *CONCLUSION*

The aim of this study is to envisage the impact of global financial (GFC) on foreign exchange markets of selected developed (EU, Japan and Great Britain) and emerging countries in Central and Eastern Europe CEEC countries (Czech Republic, Hungary, Romania, Poland and Serbia). The dataset consists of the daily returns of exchange rates on EU euro (EUR), Japonica yen (JPY), Great Britannia pound (GBP), Check Republic koruna (CZK), Hungarian forint (HUF), Romanian lei (ROL), Polish zloty (PLZ) and Serbian dinar (RSD), all against the US dollar. Analysis was conducted for the period 03. January 2000 to 15.April 2013, 3.January 2003 to 15.April 2013 for RSD/USD and 03.January 2005 to 15.April 2013 for RON/USD in respect. Econometric methodology is based on different

version of GARCH specification. The influence of global financial crisis in model has been seen by the use of dummy variable.

Overall results imply that global financial crisis has no impact on exchange rate returns in selected developed and CEEC countries. Estimated obtained by our calculation imply that global financial crisis increased enhanced volatility on exchange rate returns of GBP and JPY in case of developed countries and PLZ and HUF in case of CEEC countries. Moreover, results of empirical analysis imply that this impact has stronger influence in volatility on exchange rate returns in CEEC countries.

## *REFERENCES*

[1] Andersen, T. G., Bollerslev, T., Diebold, F. X., & Labys, P. (2000). Exchange Rate Returns Standardized by Realized Volatility Are (Nearly) Gaussian. Multinational Finance Journal, 4 , 159-179.
[2] Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity. Journal of Econometrics 31 , 307-327.
[3] Bollerslev, T., Engle, R., & Nelson, D. (1994). "ARCH Models", Handbook of Econometrics, Volume IV. Amsterdam: North Holland: ed. Engle, R; McFadden, D.
[4] Chang, K.-H., Cho, K. Z., & Hong, M.-G. (2010). Stock Volatility, Foreign Exchange Rate Volatility and the Global Financial Crisis. Journal of Economic Research, 15(2010) , 249-272.
[5] Chong, C. W., & Chun, L. S. (2002). Modeling the volatility of currency exchange rate using GARCH model. Petranka Journal of Social Science & Humanities, 10(2) , 85-95.
[6] Ding, Z., Granger, C. W., & Engle, R. (1993). A long memory property of stock market returnes and a new model. Journal of Empirical Finance 1 , 83-106.
[7] Engle, R. F. (1982). Autoregressive Conditional Heteroscedasticity with Estimates of the Variance of United Kingdom Inflation. Econometrica 50 , 987-1007.
[8] Fidrmuc, J., & Horvath, R. (2007). Volatility of exchange rates in selected new EU members: evidence from daily data. CESifo working paper, No. 2017.
[9] Hsie, D. A. (1989). Modeling Heteroscedasticity in Daily Foreign-Exchange Rates. Journal of Business & Economic Statistic, 7(3) .
[10] Johnston, K., & Scott, E. (2000).GARCH models and stochastic process underlying exchange rate price changes. Journal of Financial and Strategic Decisions, 13(2) .
[11] Kamal, Y., Hammmad-Ul-Haq, Ghani, U., & Khan, M. M. (2012). Modeling the exchange rate volatility, using generalized autoregressive conditionally heteroscedastic (GARCH) type models: Evidence from Pakistan. African Journal of Business Management Vol. 6(8) , 2830-2838.

[12]Kočenda, E., & Valachy, J. (2006). Exchange rate volatility before and after regime shift: A new measure and new evidence from transition. Journal of Comparative Economics, 34, 727-753.
[13]Longmore, R., & Robinson, W. (2004). Modeling and Forecasting Exchange Rate Dynamics: An Application of Asymmetric Volatility Models. Bank of Jamaica, Researche Services Department, Working Paper WP 2004/03.
[14]McMillan, D. G., & Thupayagale, P. (2010). Evaluating Stock Index Return Value-at-Risk Estimates in South Africa: Comaparative Evidence for Symmetric, Asymmetric and Long Memory GARCH Models. Journal of Emerging Market Finance, 9 , 325-345.
[15]Miletić, S., Korenak, B., & Vukosavljević, D. (2013). Impact of global financial and european sovereign debt crisis on CEEC stock markets: an application of symmetric and asymmetric GARCH type models. XL Symposium on Operational Research, SYM-OP-IS 2013, (pp. 23-29). Zlatibor, 8-12 September 2013.
[16]Mundaca, B. G. (1991). The volatility of the Norwegian currency basket. Scandinavian Journal of Economics, vol.93, No.1 , 53-73.
[17]Nelson, D. B. (1991). Conditional Heteroscedasticity in Asset Return: A New Approach. Econometrica, 52(2) , 347-70.
[18]Olowe, R. A. (2009). Modelling Naira/Dollar Exchange Rate Volatility: Application of GARCH And Asymmetric Models. International Review of Businesss Research Papers, Vol.5, No.3 , 377-398.
[19]Poon, S., & Granger, C. (2003).Forecasting Volatility in Financial Markets: A Review. Journal of Economic Literature, Vol.41 , 478-539.
[20]Suliman, Z. S. (2012). Modeling Exchange Rate Volatility using GARCH Models: Empirical Evidence from Arab Countries. International Journal of Economics and Finance, Vol.4, No.3 , 216-229.
[21]Todea, A., & Platon, D. (2012). Sudden Changes in Volatility in Central and Eastern European Foreign Exchange Markets. Romanian Journal of Economic Forecasting - 2/2012 , 38-51.
[22]Zakoian, J. M. (1994). Treshold Heteroskedastic Models. Journal of Economic Dynamics and Control 18, 931-955.

# *SYNERGY CENTRAL BANK OF SERBIAN AND MACROPRUDENTIAL POLICY IN ENSURING FINANCIAL STABILITY*

*Momirovic Dragan,PhD*[3]

*Mrdak Gordana,PhD*[4]

## *ABSTRACT*

*The failures of the adopted consensus, before and during the recent crisis, have launched a new "post - consensus "that the central bank should expand its mandate and policies of financial stability. Expanding the mandate includes the joint application of central bank policy and macroprudential policy and greater responsibility for ensuring financial stability. In practice, it has established a new framework for the integration of financial stability. Institutionally, the partial integration has been established under the same roof, the Bank of England, with a particular branch of separate macroprudential policy integration within the EU, the establishment of an independent body to ensure financial stability. Serbia's central bank, despite implicitly accepted goal of ensuring financial stability should accept partial integration under one roof, similar to the Bank of England, with a particular branch of macroprudential policy. Central bank would receive an explicit role in ensuring financial stability. Communication and coordination between monetary and macroprudential policy would provide the joint operation of both policy and lead to the harmonization of goals and setting instruments. At the same time the behavior of both policies would have a positive effect on the elimination of conflicts between the objectives and activities of the central bank in implementing its key objective of price stability and financial stability of the assigned target.*

***Keywords:*** *Macroprudential Policy, The Central Bank, Integration, Coordination, Communication, Financial Stability*

***JEL Classification****:E32, M58, G01, E61*

***UDK: 336.711:338.2(497.11)***

[3]Dragan Momirovic, Faculty of Business and Industrial Management, Mladenovac, Serbia,draganmomirovic@ymail.com

[4]Gordana Mrdak, Higher Professional School of Applied Studies, Vranje, Serbia, gordanavranje@gmail.com

## *INTRODUCTION*

The recent financial crisis has launched a wide-ranging discussion about the role of central banks in financial stability policies and to the execution of these functions influences the management of the central bank (Blancherd,2010). All are agreed that price stability, micro-prudential supervision and financiaml market efficiency is not enough to ensure financial stability (Borio,2009,Carosio,2010). The crisis has shown that the central bank is unable to explicitly fulfil simultaneously two objectives price stability and financial stability.

This knowledge has initiated wide activities relevant institutions (G20, FSB, BCBS, IMF, and EU) to reform the existing and construction of new financial stability framework. Initiatives were devoted to issues of greater responsibility and the expansion of the mandate of the central bank of ensuring financial stability and the implementation and development of macroprudential policy. Macroprudential policy (Borio,2010) of the post-crisis period is seen as a key holder of the security stability of the financial system as a whole (Svein,2010).

The consensus was that policies, central bank policy and macroprudential policy act synergistically in promoting and ensuring financial stability. In this context, the already established formalized arrangements. The Bank of England under its roof housed both policies, monetary and macroprudential. The EU has established a European Committee for systemic risk (ESRB-European Commission for systematic risk), an independent institution for monitoring and macroprudential ESFS for micro-prudential supervision.

Coordination (Mersh,2013) and communication between the two policies are in place. In addition, we work intensively on finding new tools and ways to adjust them for achieving a common goal, is ensuring the financial stability of the whole system (Alberola,Vega,2011). Much of this kind of concept of the project is defined, but is still searching for the joint development of key policy actions in order to achieve efficient management, potentially, a possible future crisis. (Kawai, Morgan, 2012)

The focus is on joint action policies of central banks and macroprudential policy (Canuto,Cavallari,2013) in order to build a sustainable framework for the effective management of financial stability. The synergy of both policies is primarily focused on early detection and mitigation of systemic risk (Caruana,2010) and the episodic shocks caused by externalities in the light of international integration with strong international post-ante implication (Kawai, Pomerleano,2010).

Central Bank of Serbia is following the experiences and best practices in the world security and the strengthening of financial stability, in addition to its primary objective of price stability, expanded its mandate to macroprudential policy of regulation and supervision. It has the explicit authority on the case of financial distress, and systemic risk using macroprudential tools.

It is the aim at this paper is to highlight the need to strengthen the common policy of the central bank (as lender of last resort) and macroprudential policies and their institutional adjustment in securing and maintaining financial stability.

## *CENTRAL BANK BEFORE AND DURING THE CRISIS*

Before′s the crisis 2007 the consensus, in which the central bank assigned a key role in ensuring price stability. The Central Bank, in addition to these roles, she was responsible for micro-prudential regulation and supervision of the banking sector. At the same time, she was awarded the independence of certain discretionary power as the main prerequisites for the achievement of the main objective. In the realization of key objectives, price stability, most central banks have adopted the popular strategy of inflation targeting′s. Great dedications, central banks in many countries have achieved its key objective, price stability before and during the crisis. It also achieved financial stability of the banking sector. However′s price stability and micro-prudential supervision of the banking sector before the crisis, were not enough to hinder and prevent the building of financial instability, which is almost ten years has been on the rise.

Adopt by consensus not clearly defined and differentiated role of central banks in ensuring financial stability. The mandate and objectives of central banks in financial stability in the majority of cases are generally relatively defined. Moreover the financial stability of the entire financial system was not under the jurisdiction of the central bank. Its role has been marginalized. There are strong beliefs that efficient financial markets can it to ensure financial stability. Every action in the direction of more regulation and oversight would stifle the freedom and efficiency of financial markets. It was believed that the central bank should not react to the appearance of bubbles in asset prices. It was felt that it should be given exclusively, the main objective of price stability and micro-prudential supervision and the regulation and supervision of financial institutions left to government agencies. Overcame the famous Gripsonova doctrine "to bubbles in asset prices can be difficult to identify because, they are not in the domain of the central bank, that they do not have the appropriate tools′s and that they can clean up the “mess “ when the “ bubble explodes.” This position is asymmetric, because′s initially marginalized the role of central banks of the period of construction and the accumulation of bubbles and advance to determine its role in saving the face of the bubbles. Nevertheless′s, the central bank has a mandate to act on the accumulation of property price bubbles, raising interest rates and the impact on market conditions and interventions are lacking. Cleaning the "mess" by the central bank is shown together with the high cost of a Gripsonova doctrine passed into history.

Pre-crisis is not enough appreciated the potential impact on global spillovers of monetary policy. At the international level, the discrepancies between the different monetary policy regimes produce the strengthening of cross-border spillover. At the same time cross-border cooperation and connectivity financial markets are not considered dangerous source of potential spillovers of financial contagion. However′, s the crisis has shown that the global spillover was one of the key transmission channels of spreading contagion of financial distress.

Also, there was the belief that if the central bank ensures price stability and the stability of the banking sector in their competent jurisdiction to be a positive, as a rule, not see, "automatically" affects the stability of the international financial system.

Widely accepted consensus, before and during the crisis showed many flaws and gaps in the implementation of the policy of financial stability. On this they all agreed and many are prone to the emergence and escalations of the crisis criticize the central bank, by declaring them as the main culprit.

Basically, the critical review, the role of central banks, is focused on too narrow a mandate that has been able to identify limited and mitigate the occurrence of systemic risk.

## *REASONS FOR INVOLVEMENT OF THE CENTRAL BANK POLICY FINANCIAL STABILITY*

The failure of the pre-crisis consensus and broad defects are manifested by, the general public, triggered a serious debate about the future role of the central bank of part of a broader architecture of the new armature's financial stability. In this context, it is achieved by a new "environmental hypothesis" that the central bank of addition to the traditional goal of the mandate should extend its mandate and the objectives of financial stability. Although′s it is difficult to define and operationalize the concept of financial stability, it is important that central banks have a formal mandate. ECB defines financial stability as financial stability can be defined as a condition in which the financial system – comprising of financial intermediaries, markets and market infrastructures – is capable of withstanding shocks, thereby reducing the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities.

There are several reasons why the central bank should expand its formal mandate and to play a significant role in the politics of financial stability. Lessons learned suggest:

- The financial crisis had a negative effect on the macro-economic environment,
- That the central bank last resort liquidity,
- The central bank has important information about significant macroeconomic data related to the financial system and is crucial for the implementation of macroprudential policy.

The crisis has shown the need to develop specific, specialized organs of management's financial stability. The argument with the development of specific organs and t separation of certain functions (goals) stems from the belief that the tools are too blunt in interest rates for pursuit of financial stability.

## *MACROPRUDENTIAL POLICY*

Following the escalation of the financial crisis and the collapse of broad consensus, Easter is almost forgotten, the old, and now a new idea that time has come, it is macroprudential policy. On it is so much to talk and debate, it is a prominent proponent of this idea fought observed, “to paraphrase Milton Friedman, “we are all macroprudentialists now” "(Borio,2009, p 32). Old, new ideas loose a "phoenix from the ashes" in order not only to fill the vacant regulatory and supervisory framework, their tools and measures, together with other policies, contribute to providing the necessary financial stability. Its mission is to work together with micro-prudential policy and build a coherent, consistent and respectable prudential system and synergistic with the policies of central banks and governments, to build a sustainable and stable financial system in the domestic and global levels. Macroprudential policy is belief or perspective of regulatory and supervisory arrangements (Borio, 2009, p 3).

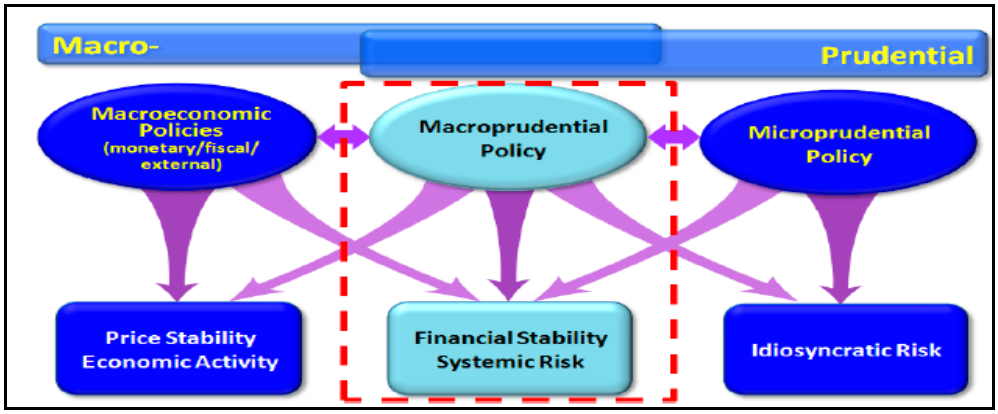



*Figure 1:Relating macroprudential and other policies*

*Source: IMF 2013*

Macroprudential policy is focused on the interaction between financial institutions, markets, infrastructure and the broader economy (Committee on the Global Financial System 2010, p 2). In particular, it focuses on systemic risk and the risk factors that can be exposed to all the financial institutions at the same time, and the risk factors of a financial institution that infection may spill over to other financial institutions within the national or the integrated international financial markets (Momirović,2011, p 96). Systemic risk can be broadly thought of as the failure of a significant part of the financial sector – one large institution or many smaller ones – leading to a reduction in credit availability that has the potential to adversely affect the real economy. (Viral, 2011, p 1) FSB, BIS and G20 provide the following working definition of systemic risk, "the risk of disruption to financial services that is caused by damage to the whole or individual parts."

It the practical application of macro prudential policy objectives can distinguish two conceptual targets. First, it focuses on a strong focus to strengthen the resilience of the financial system to economic downturns impact on externalities and excessive episodes. Second, the prevention, and early detection, containment and mitigation build-up of financial risk, also known as "lean on the financial cycle." The objectives of macro prudential policy are not mutually exclusive and conflicts. Their use requires adaptation and adjustment macro prudentialinstrument. Customizing implies their calibration and adjustments that can be used to target one or more sources of system travel. For example, the excessive power, liquidity gap, excessive interconnectedness and too big volume of short-term financing.

*Table 1: Macroprudential objectives within the general scope and instruments: stylish comparisons*

| | **Aim** | |
|---|---|---|
| | **To enhance financial system resilience to shocks** | **To moderate the financial cycle** |
| General approach to achieving aim | Recalibrate micro tools taking into account systemic risk | Use tools dynamically in response to the financial cycle |
| Key features of instruments | May be macro-or micro-style (i.e. institution-specific elements in application and calibration) | Tend to be macro-style: broad application, egg across all banks or market |
| Frequency of adjustment | Generally less frequent or might be one-off (egg in response to structural changes in the financial system), but frequent review and adjustment also possible) | Tend to be periodically reviewed and more frequently adjusted, in response to fluctuations in the financial cycle |

*Source: Report submitted by the Committee on the Global Financial System, Macroprudential instruments and frameworks: a stocktaking of issues and experiences CGFS Papers No 38 May 2010, p 5*

Instruments of macroprudential policy can be used in the dimension of time series or cross-sectional dimension. The first dimension refers to the systematic behaviour over time (procyclicality), where it is important to strengthen the risk of interactions within the financial system and between the financial systems of the real economy. The focus is on the evolution of risk of time, which may have an impact on the real economy. The principle of this approach is to build in a time of prosperity buffers that may be used in the contraction period. Cross-sectional dimension reflects the allocation of risk of a given point of time and focuses on the risks arising from the correlations and common exposures of financial institutions. The principle of this approach is that

the regulation and supervision of financial stability may be performed at any time. Within the framework of macroprudential policy, the ideal would be to apply a top-down approach. It focuses on oversight of above, with an emphasis on systematically important institutions of exposure to various shocks. Within this approach, first identifying the risks of the system, then determine the contribution to each institution identified risks and finally select and apply appropriate tools.

Within this context of the objective of strengthening the resistances of the overall financial stability of the micro-prudential policy have a wider dimension. Micro-prudential policies should strengthen its regulatory and supervisory functions from the standpoint of strengthening the capacity of individual institutions that can absorb the loss, but at the same time that he and "discourage generate systemic risks and negative externalities.

## *ACTIVITIES IN TRANSLATION NEW POLICY FINANCIAL STABILITY*

Identified gaps and cracks and micro-prudential monetary policy in ensuring financial stability have launched major activities and actions of relevant international bodies and organizations in the search for a reorganization of existing and construction of new architecture of financial stability. Basel Committee on Banking Supervision (BCBS) in September 2010 God proposed reforms of the international regulatory framework. Proposal BCBS summit in Seoul, the same year, supported by the G20. In addition to the significant strengthening micro-prudential policy was agreed to apply and strengthen the regulatory and supervisory measures macro prudential policy

Despite the agreement reached and the entire growing consensus on the need for a new framework of financial stability still being discussed on the implementation, particularly on rules versus discretion. However, major challenges in the implementation of the entire growing consensus in the translation of new policies in the operational frameworks and their practical realization. Challenges arise:

- In ways to integrate macro prudential policy in the general policy framework of the financial system,
- Ways implementation of macro prudential policy due to the mutual interaction of conflict and conflict with other policies within the financial system, especially monetary policy,
- Ways institutional settings and define the policy framework of financial stability.

Although each of these challenges is important in its own right, the probability of success will be greatly enhanced if implemented in a consistent and coherent manner, both within individual countries and globally. Indeed, many of these challenges involve central banks, but also regulators and governments, suggesting that effective collaboration will be essential for success (Lipsky, 2010, p 8).

## *IMPLEMENTATION AND SETTING A NEW FRAMEWORK-AVOIDANCE CONFLICT AND EXPERIENCES*

The current crisis has initiated extensive discussions on all the responsibility and role of the central bank in ensuring financial stability. Consensus that central banks are responsible for the stability of the banking sector is not in dispute. However, there is disagreement on the explicit role of the central bank of ensuring financial stability. The explicit assignment to roles central banks of ensuring financial stability of the entire financial system would quickly be eroded through the complex procedures of the use of financial instruments and the objectives of the present contradiction between monetary and macro prudential policies (Momirović,2011,p 98). Challenges to the explicit allocation of roles central banks of ensuring financial stability should be seen by the very breadth of the definition of financial stability, then, how is explicitly included in the financial stability objective of central banks, whether there is a joint or sole responsibility of the central bank in ensuring financial stability, you have a central Bank of adequate tools and instruments to ensure financial stability and how the goal of financial stability undermines the independence of central banks. Assigning an explicit role in ensuring financial stability would be unnecessary and burdensome for the central bank. This would undoubtedly undermine the achievement of the objectives of the standard central banks, price stability, growth in production and employment.

Implicitly, one of the possible solutions, a practice already confirmed, to avoid the conflicts and contradictions of monetary and macro prudential policy is application consolidation. It includes a new architecture design that targets both centralized policy placing under one roof. A single institution could also avoid conflicts and coordination problems between separate policy authorities, which might be particularly pronounced in a crisis and in a multi-country setting. (Cœuré,2013,p5) The crisis was initiated and gave new impetus to the "new environment hypothesis" (Subbarao,2010, p 6) according to which central banks should primarily focus on their main objective of price stability and to extend its mandate beyond the framework of price stability. Argument, both policies under the same roof is based on an expanded mandate of the central bank.

The arrangement of both policies of the roof of the central bank has its own implication. The central bank of conducting monetary policy is independent of the choice of objectives and instruments. It has clear and measurable objectives of low inflation and relatively simple mechanisms, and operational tools. Independence also means responsibility and transparency. Unlike monetary, macro prudential goals are quite blurred and difficult measurable.

In practice, both policies under the same roof are the first conducted the Bank of England. Deficiencies and serious flaws of their tripartite regulatory system have accelerated the reform requirements in order to overcome the identified shortcomings and gaps and establish a new regulatory framework design. Similarly, in July 2010 year proposed reform within the tripartite model that was the basis for the formation of a new committee for financial stability within the Bank of England. Reform; have been transferred to current legal authority and operational responsibility for the prudential

supervision of the Financial Services Authority in the new branch of the Bank of England. Formed the Committees for Financial Policy (FPC-Financial Policy Committee) within the Bank of England with a mandate to care and be responsible for financial stability. The key objective of the newly formed committee is responsible for maintaining financial stability. The primary role of the FPC is to identify, monitor and take action to remove or reduce the risks that threaten the overall resilience of the financial system in the UK. FPC under the law acts through recommendations and guidelines, but also has other special powers.

Committees of the Bank of England to maintain financial stability cooperates with close international authorities and bodies responsible for supervision macro prudential. The aim at the reform of the regulatory framework of the UK that under the same roof, the Bank of England put both policies, prudential regulation and supervision within a single institution, the central bank. A committee for Financial Stability (FPC) within the central bank is separated from the monetary policy committee (MPC) and has a total of 11 members. Five members of the Board are outside the bank, one of them is representatives of the Treasury. The head of the board are governor and deputy governor responsible for monetary policy and financial stability, and a new governor for prudential regulation.

Under the same roof are a new policy and a new regulatory framework that will ensure coordination between monetary and micro-and macro-prudential policy. Coordination between the two committees is facilitated by placing the governor in charge.

Second, the implicit solution to avoid conflict between the goals of both policies is the establishment of an independent body to conduct macro prudential policy. The argument is that the central bank with its main goal of price stability and targeting micro-prudential policies to ensure financial stability of the entire financial system is not sustainable. On the premise of the above argument, the conclusion is that the central bank should maintain current mandate macro prudentialsupervision and regulation of individual banking institutions, but to supervision and regulation of the entire financial system should be assigned to a special body for macro-prudential policy.

In this view, there are two arguments, the first, , regardless of the building a new regulatory and supervisory structures not disputed that the central bank will remain a last resort liquidity and the main creditors of the financial system. His last role providers of liquidity, the central bank, and the crisis have clearly shown can perform more effectively by expanding its mandate to non-bank financial institutions. This is possible if the central bank has responsibility for supervision of the banking sector. Another argument stems from the attitude to mutual synergy monetary (micro-prudential supervision) and macroprudential policy. Synergistic exchange and flow of information from macroprudential supervision of banking institutions can be valuable for macroprudential policy and vice versa. However, there is a strong argument with micro-prudential control the central banks of the banking institutions, which refers to the possibility of moral hazards.

The EU is based on a report Larosiere Commission (2009), and the proposed recommendations of the European Commission in September 2009, have adopted

legislative proposals on the implementation of the new structure of financial supervision in the EU. The aims of the new legislative proposals for strengthen regulation and supervision of financial institutions and facilitate the establishment of new bodies for macro prudential and micro-prudential supervision. December 2010, entered into force the Law on the Establishment of the ESRB. ESRB became an independent body responsibly for macro prudential L supervision of the financial system within the EU.

Work ESRB is based on the operating activities of the establishment of interconnections, analysis and information on possible sources of systematic risk, the use of existing and establishment of new analytical tools and indicators are constantly improving macro prudential standards, mutual information and transparent implementation of the selected policy. Therefore, the Central Bank within the EU, linked-up with the aim of investigating macro prudential regulation and supervision policies, known as "Mars." (ESCB's-Macro prudential Research Network) Analysis of systematic risk will be based on an estimate of macro prudential data collected from all member states, which will be included by the European Central Bank (ECB), which will be submitted to the ESRB, macroeconomic and other important information. Also, the merged data will be presented to the European supervisory authority, the supervision of financial institutions. In addition, it will be used and the information about the market of the real sector which are of importance of macro prudential analysis.

Analysis of the data collected will contribute to making certain conclusions. These conclusions will be submitted in the form of warnings and recommendations to member states for quick and effective corrective action. The European financial system super Auditors (ESFS) will focus on micro-prudential supervision. He will "bring together the actors of financial supervision at the national level and at EU level, to act as a network." (Official Journal of the European Union L 331/1, 15.12.2010) Direct supervision will perform the relevant state regulatory and super-audit institutions, except credit rating agency, which will be under the direct control.

## *POLICY COORDINATION CENTRAL BANK AND MACROPRUDENTIAL POLICY*

Regardless of the form of conceptual and institutional organization, it seems inevitable that the activities of the central bank and macro prudential process of supervision and regulation increasingly relied upon on each other in order to achieve a common financial stability. The controversy about different approaches to both policies can solve mutual coordination when taking certain measures, leaning on each other. This would avoid the possible gaps and overlaps. Despite these possibilities, it would probably both policy makers primarily worried about their own goals. Therefore, it will be increasingly necessary coordination at the local, but especially at the international level between macro prudential policy and monetary policy of the central bank.

Central banks have a share in macro prudential policy. "First, they are seen as important a bearer of responsibility for financial stability, no matter, what it is used implicitly. Second, the objectives and instruments of macro prudential policy are part of the overall economic and financial stability policy which includes monetary policy" (Session 6929, 2010). Increased efforts of much politics can influence each other to stabilize the economy, regardless of differences. The objectives, frequency and monetary policy of the central bank and macro prudential policies differ. Despite these differences, there are still those with strong mutual influence. Both policies operate the transmission of similar processes, but not with the same intensity, with respect to both operate on the same economic variables. So in the future so as not to repeat the current events, the central bank should oversee, price stability and financial stability. Selection aims or choice of instruments.

In this case, the instrument interest rate would be used solely for the policy of price stability, while macro prudential instruments demand for capital and credit limits to be used for the maintenance of financial stability policy. In the real world, macro prudential policies would not be sufficient to maintain financial stability and the necessary support monetary policy. It is important that the central bank creates such a monetary policy that will inevitably take into account the impact macro prudential processes of financial innovation and the search for yields. The result is that interest rates may affect the supply of credit through the bank lending a channel and travel through the search for yield, which directly affects the pace of financial innovation. When it comes to asset prices and credit cycles, they are not seen as endogenous, since they are under the direct influence of the central bank. A more symmetrical approach is needed: monetary policy should not act only when the bubble bursts, leading to a macroeconomic downturn; it should also act pre-emptively to limit the preceding phase of expansion (Caruana,2005, p 8). This suggests that the central bank should not only focus on the main objective of inflation control in the short term. "Rather it must also take account of credit growth and asset information with the goal of promoting financial and macroeconomic stability over the medium term. In some circumstances, central banks may need to respond directly to this additional information, even if inflation deviates from its objective in the short run. This is because the trade-off between financial stability and monetary stability may be more apparent than real when the appropriate time horizon is considered. In the long run, the two goals are indeed likely to be complementary"(Caruana, 2010, p 8).

In a broader sense, the choice of instruments depends on the financial weakness and institutional adjustment of each country. Initially, the central bank should use the micro-prudential analysis, supervision, establishing communication with potential carriers of the risk of a way that enables their involvement in supervision or changes in regulation. In addition, it is important that central banks consider macro prudential regulations governing capital, liquidity and asset quality during periods of high risk loans. The significance of these effects would probably depend on the macroeconomic environment, financial conditions, and the share of bank-based intermediation in the financial system, and the level and distribution of capital and liquid assets within the banking system (Report, CGFS, 2010, p 8).

## *CENTRAL BANK OF SERBIAN AND MACROPRUDENTIAL POLICY*

The escalation of the global financial crisis by the Serbian government adopted a fairly inert and even "optimistic". The famous two "experts" that has gone into the history of bad economic concepts has even claimed that the global financial crisis development opportunity Serbia and those investors will leave the neighbouring countries and rush in Serbia. No one seriously understood the crisis until she ran rampant and extended its activities windblown "sovereign" debt.

Lessons are initiated amendments to the Law on the National Bank of Serbia, which is an expanded mandate to secure financial stability. National Bank Serbia was placed in the authority, without prejudice to its primary objective, contributing to the preservation and strengthening of the financial system of the Republic of Serbia, as well as to define and implement actions and measures in this regard (www.nbs-rs).

Central Bank of Serbia has received a legal mandate to "to preserves and strengthen the stability of the financial system, which means explicitly, authorized to use macro prudential instruments. Taking these instruments law is entrusted to the highest executive body of the National Bank of Serbia-Executive Committee "(www.nbs-rs).

Assign explicit roles of the Central Bank of Serbia to the use of macro prudential instruments to ensure financial stability of the entire financial system carry a serious risk. The danger lies in the procedure of the complex procedure of use of financial instruments and the objectives of the present contradiction between monetary and macro prudential policies. Challenges facing the Central Bank of Serbia in ensuring the financial stability of the whole system needs to be seen through the breadth of the definition of financial stability, then how is explicitly included in the financial stability of the NBS, is there a common or her sole responsibility, and how the goal of financial stability undermines the independence of the NBS.

## *PRACTICAL IMPLEMENTATION*

National Bank of Serbia is defined to financial stability - financial intermediaries, financial markets and financial infrastructure-not only enables the efficient allocation of financial resources and the achievement of key macroeconomic functions in normal conditions, but also in terms of financial imbalances or earthquakes in the domestic and international environment (www.nbs-rs). The definition includes financial intermediaries, financial markets and financial infrastructure. However, in the area of legislation and regulatory measures in the area of financial stability NBS is solely focused on the financial stability of the banking sector through a series of decisions involving credit facilities, short-term loans in dinars and swap buying and selling of foreign currencies. In the part of regulatory measures adopted by the NBS programs to preserve the financial stability of banks and has signed an important cooperation agreement in order to preserve the financial stability of the entire financial system in Serbia. From this agreement we conclude that NBS is not explicitly included in the financial stability of the NBS. The argument with our conclusion is found in Annex 1 and Annex 2 of the Agreement. Agreement on cooperation in order to preserve financial stability in the Republic of Serbia includes a tripartite agreement with the National Bank of Serbia, the Government of Serbia and the Deposit Insurance Agency. The agreement specified the participants committed themselves to cooperate and take appropriate measures in accordance with established legal responsibilities for early detection, prevention and mitigation of internal and external financial shocks. At the same time, each party to the agreement will strictly undertake to measure and activities within their jurisdiction. Thus, the NBS will regulate and supervise the banking sector (micro-prudential supervision) and other financial institutions under its jurisdiction, payments and keep the exchange rate policy. The RS government's fiscal and economic policies and propose regulations that would regulate the financial sector, while the Agency will carry out statutory duties.

Communication between the parties to the agreement established through the commitment to continuous communication and exchange of information on significant macro-economic and other effects of individual decisions or implemented measures that relate to situations that can cause extensive and significant financial troubles, situations that require extensive financial support needed changes existing regulations and the like.

In order to provide easier and more efficient implementation of certain measures of agreement, determined by the working definition of "financial crisis", which includes: (www.nbs-rs)

- Serious business of individual financial institutions (banks) or banking group may threaten financial stability;
- Serious business financial groups consisting of financial institutions (such financial group does not include banks) who may threaten financial stability;
- Other systemic shocks, including those relate to payment systems or financial markets in general.

The agreement provides that the NBS coordinates and in this sense the decision was made on the establishment of the Committee for Financial Stability.

## *TRANSITIONAL SOLUTIONS*

NBS Agreement, the Government of the Republic of Serbia, the Deposit Insurance Agency and the Commission on the Security formed the Committee for Financial Stability September 2013 year. The aim at this body is to contribute to strengthening and preserving the stability of the financial system in Serbia. The Committee will have an advisory role. He will review and evaluate all the issues and possible measures to be taken in order to maintain financial stability. The committee will coordinate and harmonize all the key actors in this process. Data and information exchange and harmonization and coordination of policies and measures to contribute to the early detection, assessment and monitoring of systemic risk. This will permanently strengthen the resilience of the financial system to impact financial trouble. At the same time will be provided at a timely manner with appropriate measures to prevent the spread of financial contagion to the real economy. The cooperation is based on the principles of efficiency, expediency and exchange of information. Such an approach will enable the integrated management of the crisis. The Committees consists of the Governor of the NBS, the Minister of Finance, Directors of both agencies, the Director of the Supervision of Financial Institutions, State Secretary in the Ministry of Finance, NBS vice Governor in charge of financial stability and General Manager of the Bank Supervision Department of the NBS. Committees chaired by the Governor of the NBS and the sessions will be held at least once every three month.

Model body established to ensure and maintain financial stability in Serbia is similar to the Bank of England. Under the same roof, there are two branches. The first, for conducting monetary policy and second the other managing for macro prudential policy. Coordination and communication between the two policies is established governance structure. The Governor is responsible to care for the achievement of the main objective of the central bank, the preservation of price stability, and the expected inflation rate and the target, which is derived from the extended mandate to preserve financial stability.

The law stipulates that the Executive Board may use macro prudential instruments. However, it does not define which the instruments are. Tinbergen rule requires a single policy instrument. It is known that the interest rate effective in the management of monetary policy, but it's pretty blunt tool in ensuring financial stability. So it is not and cannot be an adequate instrument for ensuring financial stability. What are these tools? Who will be responsible to develop these instruments? How will avoid conflict between the two policy instruments? The Committee acts as prevention, advice and guidance. How is he strong and authoritative? What if these tips do not accept or ignore those who are knowledgeable? Many question many dilemmas. Certainly before the Central Bank of Serbia, there are still many unknowns a dilemma when it comes to the implementation of macro prudential policy.

## *TRANSFORMATION OF INTERIM SOLUTION TO THE FINANCIAL STABILITY OF THE EUROPEAN UNION*

The establishment of the Committees for Financial Stability should be accepted as a temporary solution that aims to fill the regulatory and supervisory gaps in the financial system of the Republic of Serbia and promote the financial stability of the entire financial system. The recession that continues to smoulder in the EU and the second wave of sovereign debt carries potential dangers of vampire existence of financial trouble. Political crisis in Ukraine and slow easing of tensions in the Middle East continue to attack foreign sources of externalities. Alarming domestic budget deficit and fragile macroeconomic stability are chronically potential sources of internal financial contagion. Achieving its primary objective, price stability and micro-prudential regulation and supervision of the banking system NBS undoubtedly contribute to ensuring the stability of the financial system. A hypothesis of efficiency of financial markets are too early to speak, because the Serbian financial markets no key local players and what the riches of securities poor and shallow. Government within their jurisdiction, with the assistance of the Fiscal Council, IMF and other relevant financial institutions begin to implement fiscal reform.

Institutional Committees for the establishment of financial stability and inclusion of relevant institutions in cooperation with the EU institutions in the field of macroprudential regulation and supervision is a good sign and start to quickly and effectively respond to any occurrence which could cause systemic risk. At the same time the cooperation to gain experience and knowledge of relevant EU institutions. Serbia has begun a serious and concrete negotiation on EU accession. Conclusions of the negotiations and the entry of Serbia into the EU will automatically Committees for Financial Stability stop working. Serbia will join the European system to ensure financial stability. It will be obliged to accept and respect the decision of the European Commission for systemic risk (ESRB-European Commission for systematic risk) an independent body responsible for macroprudential supervision of the financial system within the EU and other bodies responsible for ensuring financial stability. NBS will become a member of the family of European Central Banks (ESCB European System of Central Bank) and have a mandate to implement its main objective price stability.

## *CONCLUSION*

The central banks should be based on their experiences in implementing the financial stability to be an important player in the macro-analytical and prudential policy, though; it should not neglect the primary objective, the responsibility for the preservation of price stability. Macro prudential policy on the future should have a very important role in the direction of preserving stability, especially when it comes to operation and identification of the source of the crisis. Privacy macro prudential perspective on many countries is at an early stage of implementation. Mainly, apply for the framework policy of the central bank of a mandate liquidity management and institutions. Macro prudential interventions are on the process of adjustments and adaptation to or are part of the tools used for micro-prudential liquidity management. Experience shows that the use of macro prudential policy more focused on improving the resilience of the financial system, but on the overall financial cycles, without defining sound policies and methods of use of such instruments. Currently, macro prudential instruments are used to limit loans to individual sectors that are prone to excessive credit expansion, especially in the sphere of real estate and development. Also, some countries with emerging markets are used to reserve requirements to prevent and neutralize domestic imbalances arising from volatile global capital flows.

Also, there is justifiable concern that the formalized these arrangements over time work. It is still early to say that post crisis deals represent a new model of best practice. Explicit assigning financial stability for central banks is unsustainable. The partial model is feasible, but he has time to build your own authority and achieve success. But it will take some time, depending on the length of a typical financial cycle in which episodes of severe shocks may occur at intervals of ten years or more. It is a long time to test the success of the new arrangements until the next cycle. A decentralized model is also a real possibility. Important is the correct coordination and exchange of information, without preference anybody.

There is a growing consensus, or perhaps the sight post new wide crisis "neo-consensus" that is a key element to improve the protection for financial instability, just to reinforce synergies central bank policy and macroprudential policy perspective. The new policy of financial stability should be a serious attempt, maturity and determination to establish an integrated policy that will have a far wider significance and aims not only at national but also at the global level. At the global level, the crisis has shown that only an internationally coordinated initiative is a precondition for effective action against vulnerability and risk globally interrelate financial system. Basically, the new policy is not easy, but there are real prospects and opportunities that lead to a significant improvement, and provide a greater commitment of the central bank in coordination with macroprudential authorities in the area of financial stability.

The implementation of the new framework, the National Bank of Serbia is a new challenge and important changes in the organization and practice. At the same time the central bank appears as the architect of the new policy of financial stability at the international level.

## *REFERENCES*


[1] Alberola, E., Trucharte, C., Vega, J. (2011), Central Banks and Macroprudential Policy some Reflection from the Spanish Experience, Documents Occasional N. º 1105 Spanish, pp 1-26

[2] Blancherd, O., Giovanni Dell'Ariccia, G. (2013), Mauro P., Rethinking Macro Policy II: Getting Granular, IMF, Staff Discussion Note, pp 1-19

[3] Borio, C. (2010), Implementing a Macroprudential Framework: Blending Boldness and Realism", Keynote Address for the BIS-HKMA research conference on "Financial Stability: Towards a Macroprudential Approach," Hong Kong SAR, pp1-18

[4] Borio, C. (2009) Implementing the macroprudential approach to financial regulation and supervision" Banque de France • Financial Stability Review • No. 13 – The future of financial regulation, pp 31-41

[5] Carosio G. (2010). Speech Financial Stability and Macro-Prudential Supervision: Challenges for Central Banks. Paper for OeNb - 38th Economic Conference, Vienna

[6] Caruana J. (2010), Systemic risk: how to deal with it?" Melbourne Centre for Financial Studies as its 4th International Distinguished Lecture. Bank of International Settlements, pp 1-11

[7] Caruana, J. (2005), Monetary policy, financial stability and asset prices, Documentos Ocasionales", no 0507, Bank of Spain, pp 1-32

[8] Cœuré, B.(2013),Monetary policy and Banking Supervision, Speech at the Institute for Monetary and Financial Stability, Symposium: "Central Banking: Where Are We Headed?" in honour of Stefan Gerlach's contribution to the Institute for Monetary and Financial Stability, Goethe University, Frankfurt, 7 February 2013 Goethe University Frankfurt

[9] Committee on International Economic Policy and Reform (2011), pp 8-31

[10]Kawai, M., Morgan, P.( 2012), Central bank for Financial Stability in Asia, Policy Research Institute, Ministry Finance, Japan, Public Policy Review, Vol. 8, No3, 215-245

[11]Lipsky, J. (2010), Road Ahead for Central Banks: Meeting New Challenges to Financial Stability, Speech at a High-Level International Conference on Central Banks and Development of the World Economy: New Challenges and a Look Ahead, Russia,

[12]Mersh, K. (2013), Speech at the 6th Policy Roundtable of the European Central Bank: "The future of global policy coordination" Member of the Executive Board of the ECB,

[13]Momirović D. (2010), Makroprudencijalne perspektive i novi izazovi za centralne banke", Finansije, vol 65, Beograd br. 1- 6, str. 270-296

[14]Official Journal of the European Union L 331/1, 15.12.2010

[15]Report submitted by the Committee on the Global Financial System, (2010) „Macro-prudential instruments and frameworks: a stocktaking of issues and experiences" CGFS Papers No 38, pp 1-32

[16]Svein, G.(2010), The macroprudential approach to financial stability, Speech conference "Monetary Policy and Financial Stability", hosted by the Oesterreichische National bank in Vienna

[17]Subbarao, D., (2010) Challenges for Central Banks in the Context of the Crisis* Governor, Reserve Bank of India, at the International Research Conference on 'Challenges for Central Banks in the Context of the Crisis', Mumbai, pp 1-16.

[18]The De Larosiere Report (2009): High-Level Group on Financial Supervision in the EU, Brussels, February 25

[19]Viral, A. (2011), Systemic Risk and Macro-Prudential Regulation, New York University Stern Scholl of Business, pp-59

[20]http:/www.nbs.rs, 9.4.2014

# *INTERDEPENDENT CORRELATION BETWEEN DEBT SECURITIES AND TOTAL PUBLIC DEBT IN THE REPUBLIC OF SERBIA*

*Ljiljana Zipovski,MSc*[5]

*Goran Kvrgic,PhD*[6]

## *ABSTRACT*

*The development of debt securities of the Republic of Serbia has seen a strong trend of growth since 2009. The expansive growth of public debt demanded diversification and issue of securities with a wide range of maturity, followed the policy rate of the local currency, which has a significant impact, particularly for foreign investors whose presence in selected capital markets requires a positive carry trade.*

*This paper will point out potential threats of two-way market impact of debt securities on the exchange rate of the local currency i.e. inter-bank foreign exchange market of the Republic of Serbia. On the other hand, it will point to conclusions resulting from empirical analysis of the Serbian market of debt securities, interbank foreign exchange market, and the impact of cheap money from the U.S. market, whose main source is driven by Fed policy through quantitative easing. One focus of the work will be the impact of the policy of quantitative easing on the local currencies of the CEE and their sensitivity to changes arising from the policies of the US central bank and inferences and projections that could be related to the Republic of Serbia. Furthermore, the paper will examine advantages and disadvantages of the policy of controlled floating exchange rate of local currencies, such as applied in the Republic of Serbia, pointing out the potential dangers and opportunities of the government borrowing in the local market and alternative sources of financing in international markets.*

***Keywords:*** *Debt Securities, Yield, Primary and Secondary Trade Market, Exchange Rate Policy of the Local Currency, Carry Trade*

***JEL Classification:*** *G10,F31,H63*

***UDK: 339.72.053.1(497.11)***

[5]Ljiljana Zipovski, Banca Intesa a.d., Belgrade, Serbia, ljiljana.zipovski@bancaintesa.rs
[6]Goran Kvrgic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, goran.kvrgic@vspep.edu.rs

## *INTRODUCTION*

Public debt is seen as the factor of economic growth nowadays. From the theoretical point of view, public debt can be defined as the total amount of obligations of consolidated sector of the state at a certain moment. We also define it as a sum of all the previous budget deficits. Public debt is also a form of income realized by the state because of achieving certain goals. So it can be seen as a sum of various forms of loans that the state makes with the purpose of realizing the budget goals i.e. for financing of public expenses (Ristić, Komazec, 2007, pp384).

To understand the notion of public debt we will firstly define the elements that determine it and show what it comprises:

- Notion of the state: central organ of authority-Republic, regional organ of authority-autonomous region, local organs of authority-city, municipality and funds of social security
- Public non-financial enterprises and public financial institutions
- Immediate direct debt is the public debt
- Issuing guarantees represents indirect obligations

According to the internationally accepted concept of public debt, it is the same as the gross debt of the state sector as a whole. Therefore, the public debt is the direct debt of the general state and activated guarantee of the state. According to the Law on public debt of the Republic of Serbia, public debt comprises only direct and indirect debt of the central state, without other levels of authority. At the same time Law on budget system defines that the debt of the general level of the state comprises the direct debt of the general level of the state and guarantees of the general level of the state issued (indirect debt), according to the domestic and foreign creditors. Public debt does not comprise the legal obligations for certain payments in the future (pensions, rights of the social care, health care), although there are opinions that the public debt should include the current value of these implied obligations.

In financial theory there is a difference between the public loan and the public debt. Nowadays, we could make a difference between the mentioned notions in relation to the subjects which describe them. Public debt is usually formed at the central bank or abroad, while the public loan is formed mostly at the means of subjects like enterprises, business banks etc. ( Ristić, Komazec,2007,pp384).

Public loan is mostly taken by the state when it needs the means in a very short period of time for meeting certain expenditure. Public loan is paid back annually through previously determined timeframe most often from the regular income (e.g. taxes, tariffs etc.).

The criteria for classification of public debt are numerous. Most often division is to the following groups:

- According to the theoretical principle: internal and external

- According to the methods that the state uses to get to the funds - voluntary and forced
- According to the time period in which they are formed – short-term and long-term
- According to the way of payment and the guarantee - annuity, rent, debts with and without payment of interest rates
- According to whether the state undertakes the obligation to provide some kind of collateral as a guarantee, public debts are divided into ones with collateral and the ones without (Komazec,Ristić,1996).

When a state gets into debt, within the country itself, with the sector of population, business banks or enterprises then we are talking about creating an internal public debt. When a state gets into debt with foreign banks, international institutions or governments of other countries, than we are talking about forming external public debt. The state most often gets into debt abroad, because of the monetary situation of the country, because there is a lack of capital necessary for the economic growth, as well as because of the deficit in balance of payments i.e. the need for its financing.

According to the methods that a state is using to get to the means we have voluntary and forced public debt. Voluntary public debt is created by the state when it gets into debt with certain subjects, but there is the existence of mutual interests like higher interest rates or tax exemptions. Forced public debt is created when a state has the need for certain amount of means, but the subjects are not ready to grant that.

According to the time frame of forming, public debt can be short-term and long-term. Short-term debts are formed for the period of several months to a year. Long-term public debt is formed for the period of a year to several years. Modern practice shows that short-term public debt is dominant. They are used for very quick gathering of resources without the clearly defined goal, and most often they are used to fill in the so-called "holes in the budget". The reason why the securities are issued. Maturity of securities issued is from several weeks to a year. Short-term public debt can appear in three forms (Ristić,Komazec,2007,pp395):

- Public debt with the Central Bank
- Public debt with business banks
- Public debt in the form of treasury loans

The most often form of creating public debt is with the business banks is by treasury bills. Treasury bills are risk free securities that provide security to business banks for their idle capital. Bank gets appropriate interest rate for the period of maturity. If the short-term loans are not serviced on time an additional emission of money can happen or it can grow into long-term or consolidated debt.

Long-term or consolidated public debts can be seen as amortization or annuity debts. Amortization debts most often represent classic commitment of the state to pay total debt, in appropriate annuity (principal and interest), within several years (1-20 years). Annuity debts oblige only the payment of the interest. Payment of the

debt is done when the state marks the budget surplus without accepting any commitments in advance. Nowadays, annuity debts are more often in developed economies. Securities issued based on such debt are the subject of buying and selling at stock markets and they have a high level of liquidity.

Action and effects of the public debt can be seen from several aspects (Ristić,Komazec,2007,pp.403):

- Monetary aspect
- Development action
- Stability action
- Specific actions.

Forming the public debt based on securities issued implies certain effect on the amount of money i.e. money mass. By selling the treasury bills withdrawal of financial means is realized, which limits purchasing power but consumption as well. Paying back the debt increases the money mass, purchasing power and the liquidity of economy. Buying and selling the state securities has an effect on inflation as well. Selling the securities decreases the amount of circulating capital and it stabilizes the inflation rate because it is known that the cyclic increase in the amount circulating capital encourages the inflation expectations.

Using the same method one can gather the means that should stimulate the economic activity, but then again it is also the instrument through which the means are absorbed that could lead to inflation at the market.

Public debt can have a stabilizing effect also. We can ask ourselves in which way? If the gathered means are spent on payment of the previous debt or investing in appropriate projects than we can say that the public debt has a deflation and developmental effects. If the means are invested in the current consumption (wages for the public sector, pensions etc.) the public debt will not have a stabilization effect.

## *PUBLIC DEBT-LAW REGULATION IN SERBIA*

Law on public debt of the Republic of Serbia was adopted in 2005. This law regulates the terms, way and the procedure of getting into debt of the Republic of Serbia, the unit of territorial autonomy and local self-government, Republic fund for health insurance, republic pension and disability insurance and National employment service, as well as the public enterprises and other legal entities whose founder is the Republic, the way and the procedure of managing the public debt and taking notes on the public debt (http://www.trezor.gov.rs,Law on public debt.pdf,19.06.2014.)

In accordance with the Law on public debt, the public debt is considered to comprise the following:

- Debt of the Republic which is created upon an agreement that the Republic makes
- Debt of the Republic based on the securities
- Debt of the Republic based on contracts, i.e. agreements that reprogram the obligations that the Republic undertook in previously signed contracts as well as securities issued according to the special laws.
- Debt of the Republic which is created based on the guarantee
- Debt of the local government (http://www.trezor.gov.rs, Law on public debt.pdf, 19.06.2014.)

Under getting into debt the Law implies taking loans and issuing the securities for financing the budget deficit, deficit in current liquidity, for refinancing the public debt, for investing and giving the guarantees of counter guarantees. The state can get into debt in the state or abroad in domestic and foreign currency which means that it can issue securities in dinars or Euros. The buyers of state securities can be domestic and foreign legal and physical entities.

The Republic can get into debt because of financing the state deficit, deficit of the current liquidity, refinancing the unsettled debt, for capital investments, obtaining the financial assets as well as for realizing the obligations according to the guarantees given. Whether and to which extent the Republic will get into debt is upon National Assembly of Serbia to determine, while the Government of the Republic of Serbia is in charge for making decisions on eventual issuing of state securities except if the law says differently. Minister of finance or the person that he authorizes has the right to, in the name of the government of the Republic of Serbia, make agreements on loans or to make the decision on issuing of state securities (http://www.javnidug.gov.rs,24.06.2014.).

Law on public debt defines the regulations and the way of public debt management. The goal of managing public debt is to decrease the expenses of getting into debt of the Republic of Serbia in accordance with appropriate level of risk (http://www.javnidug.gov.rs,24.06.2014.). Minister is the person who manages the public debt and makes appropriate strategy in order to regulate this area.

The topic of the section 6, of the Law on public debt is securities. The government defines the general terms when it comes to issuing and selling securities. It is also strictly said that the state securities are supposed to be issued in the non-material form. The Minister of finance or a person that he authorizes brings the decision on clearing and offsetting in the primary issue of state securities, which can be traded with at the foreign financial market. Clearing and offsetting of securities issued at the domestic market is done by the Central register of securities (http://www.javnidug.gov.rs,24.06.2014.).

Article 2. Of the Law on public debt regulates the issues of payment of securities. The state securities are paid upon the day of maturity which is determined in the act of issuance. If the maturity day is a non-working day, the

payment is done on the first working day. The Securities act can foresee that the securities can be paid before their maturity date.

Law on public debt also defines the founding a special Management for the public debt within the Ministry of finance. The responsibilities of this Management are the following: following the negotiations about the debt, securities, managing the inflow based on public debt, decrease of the risk, monitoring and analyzing the state and changes at the domestic and foreign financial markets, preparing the strategy of public debt, monitoring the debt of the local governments, monitoring the debts of legal entities when the guarantee is asked for, keeping record of accounting operations on public debt and financial reporting, managing the financial information system, proposing the ban on participating in buying the state securities at the primary market and conducting other business operations defined by the law (http://www.javnidug.gov.rs,24.06.2014.).

Concluding regulations of the Law on public debt refer to penalty provisions. The fines in the amount from 300,000 to 3,000,000 dinars for every legal entity that does not fulfil all its obligations based on the offer on buying the state securities. The same fine is defined for legal entities that, before the primary selling of securities make any kind of arrangements that could affect the price of the securities (http://www.javnidug.gov.rs, 24.06.2014.).

Besides the Law on public debt these are also many subordinate regulations that closely define the mentioned area. Subordinate regulations are: Regulation on the general terms and conditions for the issuance and sale of government securities in the primary market, the Regulation on the general conditions for the issuance and sale of government securities on the international financial market, the Regulation on the general conditions for the issuance and sale of short-term securities in the primary market, Decision on establishing the criteria for the selection of banks, which will perform sales and other financial services in connection with the issuing of long-term securities in the international financial markets and the Regulations on reporting and implementation of projects and programs funded by sources of financing 11-incomes from foreign borrowing (http://www.javnidug.gov.rs, 24.06.2014.).

Regulation on the general terms and conditions for the issuance and sale of government securities in the primary market defines the general terms for issuance and selling of the state securities issued by the Republic of Serbia. The Regulation defines the place and the way of selling the government securities. Regulation on the general conditions for the issuance and sale of government securities on the international financial market defines the general terms of issuance and selling of long-term government securities. In this way it is strictly defined that the long-term securities issued by the Republic of Serbia, are bonds. Bonds, in accordance with the Regulation, can be issued in domestic and foreign currency in order to finance the budget deficit, refinance the public debt, finance investment projects and fulfilling obligations towards given guarantees. Regulation on the general conditions for the issuance and sale of short-term securities in the primary market defines the general terms for issuance and selling of the short-term securities. This regulation defines who has the right to

participate in trading with the mentioned securities and under which conditions. Decision on establishing the criteria for the selection of banks, which will perform sales and other financial services in connection with the issuing of long-term securities in the international financial markets defines the criteria for selecting the banks that will do the services of selling and other financial services connected to the issuing of long-term securities at the international financial markets. The government chooses at least two and at most five banks that will conduct these services with a unique compensation(http://www.javnidug.gov.rs, 25.06.2014.)

## *STATE OF THE PUBLIC DEBT IN THE REPUBLIC OF SERBIA*

Inevitable fact at the very beginning is that the public debt of the Republic of Serbia is growing every year. The problem of the budget deficit is growing larger and larger and the servicing of the obligations is getting harder. The table 1.shows the state of the public debt of the Republic of Serbia on 31.03.2014 in Euros.

*Table 1: State of public debt in the Republic of Serbia on 31.03.2014.in eur*

| Level of authority | Amount |
|---|---|
| Central level of authority | 20,507,032,901 |
| Local level of authority | 690,670,778 |
| Development fund | 47,679,457 |
| Total | 21,012,242,050 |

*Source: http://www.javnidug.gov.rs,2014.*

On the mentioned date the public debt of our country is 63.8% which is far from acceptable.

The table 2.shows the movement of public debt from 2011. to 2014. In order to see the constant growth of it.

*Table 2: State of public debt/GDP*

| Year | State of the debt in mil EUR | GDP in % |
|---|---|---|
| 2011. | 15,398.6 | 50.2 |
| 2012. | 18,255.8 | 62 |
| 2013. | 20,664.5 | 65.5 |
| 2014. | 21,012.2 | 63.8 |

*Source: http://www.javnidug.gov.rs,2014*

From this table we can clearly conclude that the public debt increased every year. Our country has the biggest amount of debt per issued securities and Eurobonds. The amounts are shown in table 3.

*Table 3: Overview of the state of public debt of the Republic of Serbia on 31.03.2014.central and local level of authority in Euros*

| Description | Central level of authority | Local level of authority |
|---|---|---|
| Government securities issued at the domestic market | 5,544,788,596 | 110,460,061 |
| Eurobonds | 4,112,088,808 | 0 |
| Total | 9,656,877,404 | 110,460,061 |

*Source: http://www.javnidug.gov.rs,2014*

This table clearly shows that getting into debt through the issued securities at the domestic market and Eurobonds represents almost the half of the entire public debt.

Government securities are sold at auctions that are held twice a week according to the previously determined calendar. Public call for an auction is sent to the authorized participants three days before the auction. Authorized participants are fourteen business banks and twenty-one brokers.

Public call has to have basic elements of the issuance, auction and time frame. Basic elements of the issuance contain information on the issuer, value of securities, nominal value of the bills, issue date and maturity date. The part of the public call that refers to the auction contains the following: date and the scope of an auction, kind and method of an auction, type of price, currency, minimal nominal value of an offer of a single client. Timeframe implies the time schedule which the auction will follow.

After the announced auction, the results and the statistics of the same are published, which show the amount of the securities sold and according to which accept rate and price.

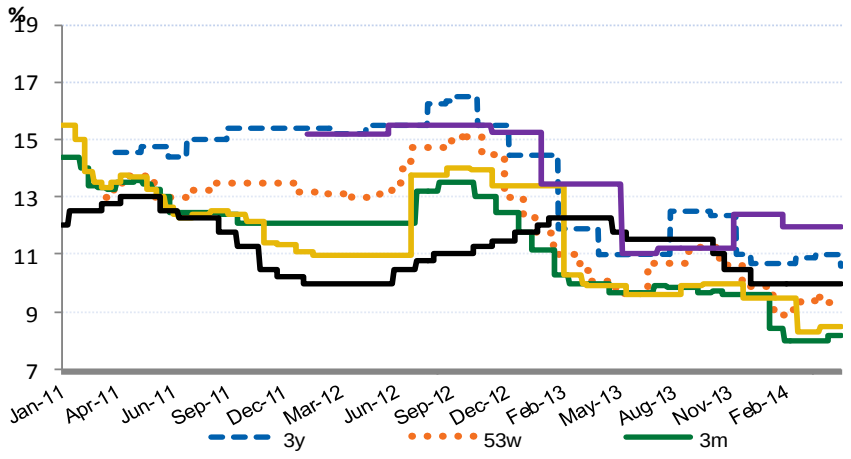
Auction's statistics contain the detailed data. From the mentioned report we can find out average weighted rate offered of the accepted bids, average weighted price offered of the accepted bids, highest rate offered, lowest rate offered, total number of participants, total number of bids, total number of accepted bids, as well as the number of accepted bids per sector. From the published statistics we can conclude that the most active buyers are business banks that through the mentioned activity manage their liquidity adequately and employ the surplus of their means. The rest of the participants are present in a very small number, especially physical entities whose participation at auctions is extremely low.

According to the assessments and forecasts of the International monetary fund, in 2019 Serbia will have a low growth rate of the gross domestic product, low investment activity, high unemployment rate, high deficit of public finance and most importantly for us, the growth of the public debt.

The growth of public debt is followed by a deficit of public finance. Gross public debt will increase from 65.8% in 2013. to 83.5% in 2019. While net debt will be increased from 56.9% in 2013. to 82.5% in 2019. Since in 2019. Gross and net debt will practically be equal; the claim of the state will decrease from 8.9% GDP in 2013. to 0.9% in 2019, and mostly in 2014 to 4.5% GDP (http://www.makroekonomija.org,19.06.2014.).

## *COORELATION OF PUBLIC DEBT AND DEBT SECURITIES IN REPUBLIC OF SERBIA*

The development of debt securities in the Republic of Serbia can be traced from 2011. when the Directorate of public debt of the Ministry of finance, started issuing the securities intensely, at the domestic market. The beginning of this period is actually the phase when the Republic of Serbia started to feel the direct influences of the world economic crisis intensely. Strong growth trend and wider dispersion of maturity have enabled the definition of yield curve in Serbia, which was, by then, impossible to define since the only securities that were on the market were the securities issued by the National Bank of Serbia i.e. central bank with maturity date from two weeks i.e. six months, intended only to the business banks. The period of development of this market of debt securities is the period characterized by the high illiquidity of banking sector, whose manifestations began in the last quarter of 2008.




*Graph 1: Overview of the movement of yield at the primary auction of dinar debt securities issued by the Republic of Serbia*

*Sources: (NBS,2014) and (Ministry of Finance,2014)*

Primary market of debt securities has a strong and expansive growth in the Republic of Serbia. As the primary reasons we can state the stable currency rate, inflation that moved in the previously defined framework, especially in 2013. and high and attractive yield especially in dinar securities, and the possibility of realizing the yield i.e. carry trade effects. The cheap sources came from the politics that FED was leading in the past five years along with the reference rate at the zero level, taking into consideration the depreciation of the domestic currency of 0.8% in 2013. Serbian market, as well as the markets of countries like Hungary, Turkey etc. in circumstances of high budget deficit and high yield of securities in local currency, represented the "yield heaven". Investing of the foreign investors was limited by law regulations and it is allowed to them to invest in securities with the maturity date over 53 weeks.

As an example, according to the data of the National Bank of Serbia, we can take the primary auction organized 15.01.2013. with the maturity date of 373 days and yield of 11.24%, on one hand and on the other, depreciation of the domestic currency that was 0.8% yearly with the cheap money that was supported by the American Central bank.

*Table 4: Overview of dinar yield of debt securities at the domestic market of the republic of Serbia 20.06.2014.*

| **Maturity** | **Yield** |
|---|---|
| 3 months | 7.59% |
| 6 months | 7.65% |
| 12 months | 8.20% |
| 24 months | 9.00% |
| 36 months | 10.09% |
| 60 months | 11.48% |
| 84 months | 11.80% |
| 24 months amortizing | central bank key rate +1.39% |

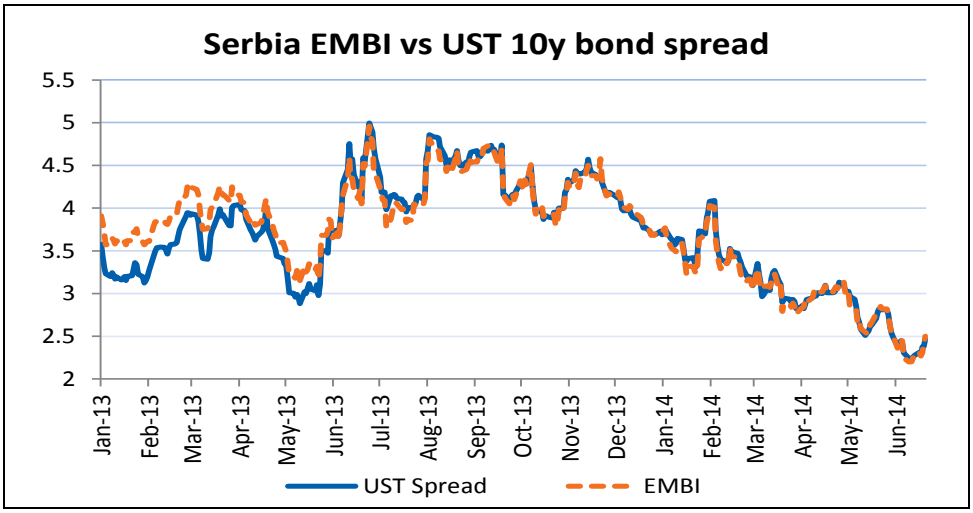
*Source: Ministry of Finance of the Republic of Serbia, 2014*

*Table 5: Overview of eur yield of debt securities at the domestic market of the republic of Serbia 20.06.2014.*

| **Maturity** | **Yield** |
|---|---|
| 12 months | 3.19% |
| 24 months | 4.05% |
| 36 months | 4.72% |
| 60 months | 4.92% |
| 10 years | 5.50% |

*Source: Ministry of Finance of the Republic of Serbia, 2014*

The proof of the attraction of Serbian debt securities is seen in the chart and shows the intention of foreign investors to invest in securities with yield greater than 220 base points greater than the most secure securities at the global level like American 10 year bonds.

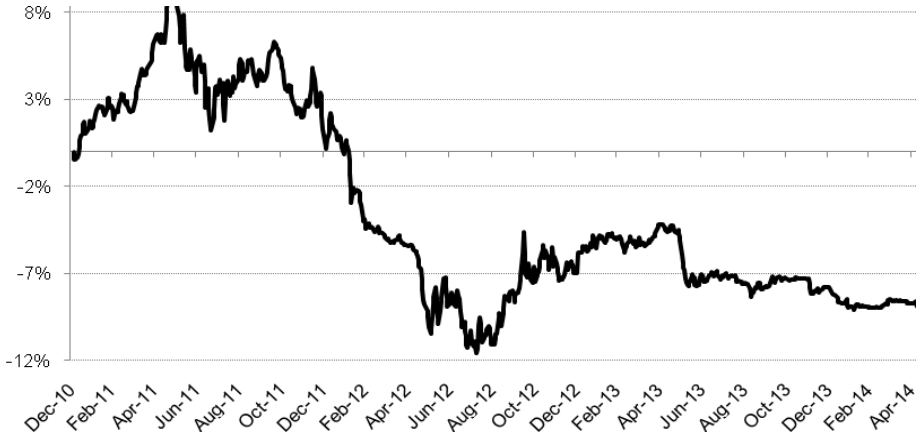



*Graph 2: Overview of the movement of EMBI Serbia in relation to American 10 year bonds in the period from June 2013 to 2014.*

*Sources: Bloomberg,2014*

Essentially the countries of central and eastern Europe (CEE) are the only winner of FED's politics. Decrease in benefits from the FED will be of crucial importance in the next periods and greater defense of domestic currency of central banks of CEE, which can cause high expenses.

Shallow Serbian secondary market of debt securities is the main limitation that decreases the fast and efficient marketability at the acceptable price in the Republic of Serbia. Secondary market of debt securities can be assessed as shallow and insufficiently liquid.




*Graph 3: Overview of the movement of the middle exchange rate of the National Bank of Serbia in relation to 31.12.2010.*

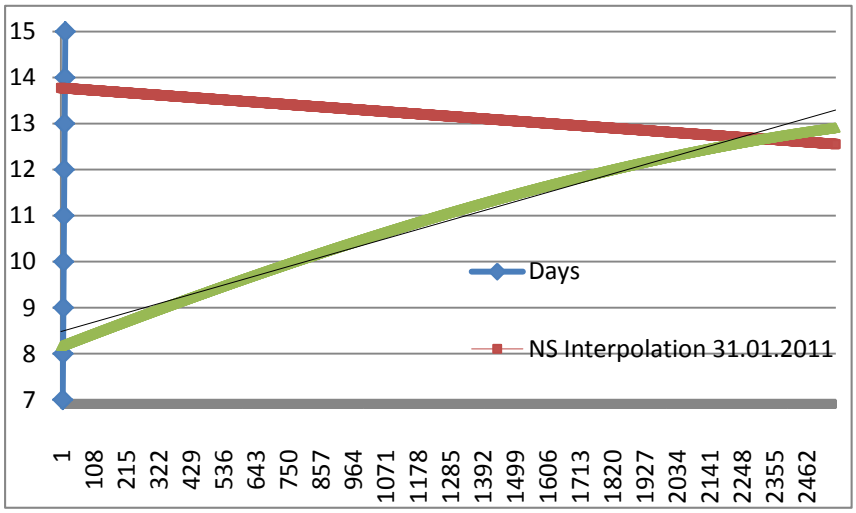
*Source: Bloomberg,2014*

*Table 6: Overview of the debt of the Republic of Serbia for the period from 2008 to 2013.*

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | IMF estimates 2014 |
|---|---|---|---|---|---|---|---|
| Debt | | | | | | | |
| External debt, in EUR mln | 21,088 | 22,487 | 23,786 | 24,125 | 25,721 | 25,842 | / |
| RS public debt, in EUR mln | 8,782 | 9,849 | 12,157 | 14,784 | 17,671 | 20,089 | / |
| External debt, in % of GDP | 65 | 78 | 85 | 77 | 87 | 81 | / |
| RS public debt, external + internal in % of GDP | 29.23 | 34.8 | 44.5 | 48.2 | 60 | 61.2 | 69.703 |

*Source: www.nbs.rs,2014.*

By using the model (Nelson C.R and Siegel A.F, 1987) with the goal of interpolation of the trend we got the dinar yield curve. Through that dinar yield curve we can see a high differential of yield from the overnight maturity along with the six-year maturity. Maximum differential of yield is seen at the level 5.61%, where we can see the movement of the entire yield curve in the bend of 2%.




*Graph 4: The yield curve in dinars got by using the Wielson Siegel model on 31.01.2011. and 31.12.2013.*

*Source: Ministry of finance of the Republic of Serbia, 2014*

From this chart we can see than the biggest gap in yield is the widest at the shortest period of time, by comparing the yield curves on 31.01.2011, when the issuance of debt securities started, and yield curve in the local currency on 31.12.2013. This is determined at the domestic market through the BEONIA rate.

Increase of the public debt of the Republic of Serbia is accompanied by an increase in issued debt securities of the Republic of Serbia in the period from 2008 to 2013. In fact, at the end of 2008, the amount issued in local currency debt securities amounted to RSD 1.4 billion, while the situation on the last day of 2013 stood at RSD 454 billion. The same trend was observed even in the case of debt securities in EUR by the last day of 2013 was 135 billion, which is more dynamic growth trend since 2008 have not been issued.

In this trend was affected by budget deficit of Republic of Serbia, easing of monetary policy of ECB and FED and reducing investors' aversion to risk.

The influence of the global economy on the variables of a small country such as the countries of central and eastern Europe (CEE) we can see the influence of the change of politics of central bank of America i.e. FED and correlation and influence on the foreign currency market, capital market and finally management of budget deficit. The central bank FED has a policy of application of quantitative benefits; whose product is the fund of cheap money started decreasing in stages according to Bloomberg:

- 18. December 2013 – USD 85 – USD 75 bn;
- 29. January 2014 – USD 75 – USD 65 bn;
- 19. March 2014 – USD 65 – 55 bn;

- 30. April 2014 - USD 55 – 45 bn;
- 18. June 2014 - USD 45 – 35 bn.

Cumulative decrease, in one quarter, of cheap FED money of 30bn USD significantly influenced other world markets, and the most sensitive markets were: Turkey, Hungary, Serbia and Romania. At the foreign currency market of the Republic of Serbia this was the period when the central bank of Serbia significantly intervened by selling the foreign currency at the domestic market in the overall amount of 820mil EUR. According to the announcement of the renowned rating agency (Moodys, 2014) one of the most affected countries, among the others, were Turkey and Brazil at the global level.

In the overall portfolio of issued securities at the domestic market of debt securities the foreign investors or the institutional investors own the average of 50%.

As the basic reasons for the sensitivity of the CEE countries we can give the following:

- The relatively high current balance deficit,
- The foreign exchange reserves of the country are at the relatively low or moderate level
- The lower official interest rates of the central bank (usually in combination with the regime of the domestic currency rate, which is typically fluctuating).

From the perspective of global financial conditions we can specify:

- Basic interest rates of the developed countries
- Basic reference i.e. benchmark yield at the bond market i.e. government securities
- Global appetite of the risk investors

*Table 7:Indicators of the selected CEE countries*

| | Public debt exposed to FX risk (% of GDP, end 2013) | Stock of public debt (% of GDP, 2013) | Fiscal financing needs (% of GDP, 2014) | Average CDS spreads, May 22 2013 – March 31, 2014 | Exchange rate misalignment | Reserves buffers |
|---|---|---|---|---|---|---|
| Serbia | 51 | 66 | 19 | 374 | Moderate | 215% |
| Hungary | 33 | 79 | 20 | 332 | None | 152% |
| Turkey | 11 | 36 | 14 | .... | Moderate | 103% |
| Croatia | 36 | 60 | 20 | 332 | Moderate | 97% |
| Romania | 23 | 39 | 9 | 189 | None | 147% |
| Slovenia | 23 | 73 | 16 | 296 | None | |

*Source: IMF,2014.*

Analysis (IMF, 2014) shows the several basic indicators that come from the public sector and external fundaments and points out to the relative vulnerability of the CEE countries, but not the absolute vulnerability in the conditions of high level of debt. The analysis also shows that the countries with the fluctuating regime of foreign currency exchange rate will manage external shocks adequately, like the decrease of the amounts of credit benefits by the FED.

## *CONCLUSION*

The markets of developing countries are most exposed to the decrease or future termination of financial flows of FED, considering that they are the recipients of large amount of capital inflow during the periods of monetary politics under the name of quantitative benefits. Extremely low interest rates and sufficient liquidity in the USA shifted the capital flows into fast growing countries like the Republic of Serbia and especially at the debt bonds market because of attractive profit in the so-called carry trade.

Yields of the debt securities of CEE countries were encouraged by system parameters and most often they would come from the surroundings and besides the stated pressures like it was the case in the Republic of Serbia come from the inside and they are a product of high debt and fiscal deficit.

The worrying fact can be the dominant role of non-residential investors in the form of institutional investors i.e. investment funds, pension funds, insurance companies and other characteristic for the CEE countries and the Republic of Serbia. Generally speaking the institutional investors are significantly resistant and dispersive towards the countries in which they invest, and they also have a tendency to react stronger and more persistently in the extreme shocks than the clients. The sensitivity of the portfolios of the debt securities such as the Republic of Serbia could be especially sensitive towards the decisions of a few portfolio managers, if the concentration of the investors is high.

The greatest winners of the monetary politics of FED and the European Central Bank are surely the countries in transition with the fundamental problems of budget deficit. Creators of monetary and fiscal politics of countries in transition in the following couple of years can expect, at the global level, the leading of monetary politics of low interest rates, which will enable the CEE countries the decrease of yield on the government debt securities, and that decreases the expenses of financing the budget deficit.

## *REFERENCES*

[1] International Monetary Fund (IMF), CESEE REI SPRING 2014, Regional economic issue, pp 34, avilable at: http://www.imf.org/external/pubs/ft/reo/2014/eur/eng/pdf/ereo0414.pdf
[2] Ministry of finance, Republic of Serbia, Public Debt Administration, Statistics, available at:
http://www.mfin.gov.rs/pages/issue.php?id=9810
[3] Moodys, QE Tapering having greater impact on emerging market countries with external imbalances, 2014, available at:https://www.moodys.com/research/Moodys-QE-Tapering-having-greater-impact-on- emerging-market-countries--PR_292278
[4] Nelson, C.R. – Siegel, A.F. (1987): Parsimonious Modeling of Yield Curve Journal of Business 1987, vol60, no.4, pp.473-489, availablehttp://www.math.ku.dk/~rolf/ teaching/NelsonSiegel.pdf
[5] National bank of Serbia (NBS), Executive Board Meetings and changes in the Key Policy Rate (yearly), available at:http://www.nbs.rs/internet/english/30/30_2/mon_pregled_13.html
[6] Ristić,Ž.,Komazec,S.( 2007.),Monetary and public finance,Čačak:Business college Čačak
[7] http://www.makroekonomija.org,19.06.2014.
[8] http://www.javnidug.gov.rs,19.06.2014.
[9] http://www.trezor.gov.rs, Law on public debt.pdf,19.06.2014.

# *MANAGEMENT OF GOVERNMENT BUDGET DEFICIT AND PAYMENTS CURRENT ACCOUNT*

*Jovan Savic,PhD*[7]

*Marina Bugarcic, MA*[8]

## *ABSTRACT*

*The purpose of this report is to spotlight the significant matters of the budget shortfall and balance of payments deficit and its impact on economic development. This report looks at the twin deficit hypothesis, which indicates that there is a causal connection between the two deficits, and proposes that the decline in current account deficit could lead to a decrease in the fiscal deficit, provided that the relation between savings and investment remain constant. Serbia for years has a twin deficit problem, whose chief feature is that it greatly cuts back the potential for sustainable economic growth. To research the effects of budget deficits and balance of payments deficit on macroeconomic relations and aggregates were used official data relevant national and international institutions in the period from 2000 to 2013th, and evaluated for the complex cause-effect relationship has been applied the intertemporal model. Our results suggest that in the long run these deficits are not connected and hence diluting the current account deficit will cause an impingement on the fiscal deficit. This implies that the government will sustain to make every effort towards sustainability of financial deficits, the revitalisation of the investment climate in the nation, controlling subsidies, and other non-insured expenses. Nevertheless, the growth of gross domestic product and the adulthood of the debt obligation, indicate that the debt load increases, the weak development of the economy and the debt, and the ability of the land and threatened to open debt crisis, the issue of foreign insolvency.*

***Keywords:*** *The Gross Domestic Product, The Budget Deficit, Public Debt, Balance of Payments, Economic Growth.*

***JEL Classification:*** *E62, H63*

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[7]Jovan Savic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, cajo.sale.js@gmail.com

[8]Marina Bugarcic, Union University"Nikola Tesla", Beograd, Serbia,bugarcicm.vbps@gmail.com

## *INTRODUCTION*

The demand for fiscal consolidation will be the focus of economic policy in every national economy, not simply because of the pressure on expenditure in line with EU standards, but likewise because of the role of any of an development funding. In this context, a number of factors specific to a particular country, including a fall in the calibre of the fiscal variables in the last a dozen years, essentially opting growth opportunities (World Economic Outlook,2014,pp. 53-57). This implies that fiscal policy is a key risk in relation to opportunities for economic growth. In this sense, the lack of progress in getting down the excessive deficit in the current account balance, may contribute to a reduction in economic activity in countries with large external deficits.

In the command economies of many types of "fiscal" function is not run by the Government, as is the case in market economies, but these are usually performed by the company. Even then, depending on the period of conversion to market economies, the uptake of these companies is falling, while the duties of government growth. This is especially true at the beginning of the modulation in the first half of the nineties, when the transfer of these affairs to the general state budget was an increase of budget expenditures and if the income therefore not brought up, there is an increase in the budget deficit and the essence of raising debt. Taking up the carry-over of the social functions of the company to budget slows down the cognitive operation of transformation and delaying the necessary transformation of the former state-owned enterprises (Tanzi,1993, pp. 697-708).

Interest payable represents the fate of total public spending, and agreeing to the content of the components of public spending they can experience a negative impact on growth and employment, which entails that these resources could be used for productive purposes, and they are the least favourite item of public expenditure. For example, these obligations in the early 1990s amounted to 6% of GDP in the late 1990s 4.3% of GDP. At the top were Belgium with 11.8% and Italy with 10.5% in the early 1990s, 7% and 6.7% (respectively) in the late 1990s (European Economy 4|2013, pp. 154). The application of the convergence criteria of the Maastricht Treaty has contributed to the general decline in interest rates, which in many EU countries contribute to a better allocation of resources and a possible model for transition economies.

## *DESCRIPTIVE STATISTICS*

Since the budget deficit is the sum of the primary deficit (the excess of public expenditure over revenues) and liabilities for public debt service (real interest on existing debt B), to finance the deficit the government must borrow and / or issue new debt ΔB:

$$\Delta B = G - T + rB \quad (1)$$

Dividing both sides of the equation (1) with real GDP (Y) follows:

$$\Delta B/Y = G/Y - T/Y + (B/Y)^r \quad (2)$$

Which implies a couple things:

$$\Delta\left(B/Y\right) = \left(Y\Delta B - B\Delta Y\right)/Y^2 = Y\Delta B/Y^2 - \left(B\Delta Y\right)/Y^2 = \left(\Delta B/Y\right) - \left(\Delta Y/Y\right) \times \left(B/Y\right),$$

And then: $\Delta B/Y = \Delta\left(B/Y\right) + \left(\Delta Y/Y\right) \times \left(B/Y\right)$.

Taking into account that the $\Delta Y/Y = g_i$ and replacing $\Delta B/Y$ in equation (2) we get:

$$\Delta\left(B/Y\right) + g\left(B/Y\right) = \left(G - T\right)/Y + \left(B/Y\right)r \quad (3)$$

A rearrangement is obtained:

$$\Delta\left(B/Y\right) = \left(G - T\right)/Y + r\left(B/Y\right) - g\left(B/Y\right) \quad (4)$$

The change in the ratio of debt to GDP (left), equal to the ratio of the primary budget deficit to GDP - (the first peak on the right) and the ratio of debt to GDP (the second stage), adjusted to the pace of GDP growth (third degree). Isolating the debt service on the left, we look:

$$r\left(B/Y\right) = \Delta\left(B/Y\right) + \left(T - G\right)/Y + g\left(B/Y\right) \quad (5)$$

To get the relationship public debt/GDP stabilized ΔB/Y=0, the balance of payments and the rate of growth of this relationship must be coherent with the possibility of financing the public debt obligations. And last but not least, the debt service in a nominal amount as follows:

$$i\left(B/Y\right) = \left(T - G\right)/Y + g\left(B/Y\right) + p\left(B/Y\right) + \Delta\left(B/Y\right) \quad (6)$$

Blanchard will be here still in 1990 proposed a debt-stabilizing Δ (B/Y) = 0 through stabilization of the tax rate $t^*$. Namely, when the actual tax rate *t*, below the tax rate necessary to stabilize the debt, the debt increases, and vice versa. In this context, the gap between the $t^*$ and $t$ represents a measure of debt sustainability.Furthermore, what seems like the tax gap, basically the primary

deficit or spending or taxes, which can be equally well adjust for bridging the gap. The alleged "good quality" of fiscal adjustment, referred to as the need to reduce spending, not increase revenue (Blanchard, 1990, pp. 13-15).

Factors affecting debt are servicing in nominal terms the balance of payments deficit, growth rate, inflation rate and the change in debt (all rates as a percent of GDP).

Let's look at the evolution of these genes in Table 1 which shows the portion of public debt to GDP in the last 12 years.

## *FACTORS BEARING ON CURRENT ACCOUNT*

In the literature, the prevailing attitude that the cost of servicing the public debt depends on the variables that regulate the debt dynamics: the balance of payments, the amount of outstanding debt, economic growth and mounting costs. Some empirical studies devoted to the developed market economies, point to the conclusion that lower debt service costs contribute to balance of payments. In fact, the cost of interest on the public debt servicing are the key to its sustainability, which implies that the essence of these monetary values to public finances and the economic system. From this point of view, the kinetics of the debt depend on the variation in the cost of its maintenance.

The great and persistent current account deficit may call into question country's economic prospects, especially when there is a problem its sustainability. In the result of small open economies that rely primarily on external financing, adverse changes in the behaviour of foreign investors can prepare off the mathematical process of external imbalances with serious consequences for the economic organization. The global financial and economic crisis has exacerbated these risks in the long run, so that the chastisement of the current account deficit incurred in the period after the crisis, takes predominantly cyclical and short features. With the above point of view, the identification of the causal factors of the current account balance becomes an issue of paramount importance, as demonstrated by the growth of a number of theoretical models of intertemporal analysis of the literature over the last ten. Several empirical applications of these models rely on the national accounting identity, which treats the rest of the current explanation as the divergence between national savings and investment. In this regard, it was advised that a number of the central elements that determine the positions of the current account balance.

The two most commonly used approaches in explaining the current account are: (a) the elasticity approach, which emphasises the international cost competitiveness and relative demand, as a critical factor in exports and imports, and (b) intertemporal approach, which begins from the premise that this story was basically the result of macroeconomic, financial and structural elements that bear upon the symmetry of relations between national saving/investment. Since these components are normally different from the variable standard trade model, the

equations used to generate estimates of the current account position, the implications for economic policy and the readjustment of the exchange rate, can vary significantly depending on the approach to this problem. Intertemporal approach originally proposed Sachs (1981, pp. 218-230) and Buiter (1981, pp. 15-22), subsequently extended by the Obstfeld and Rogoff (1994, pp. 8-26).

Intertemporal model of determining the current account is a confirmation of the hypothesis of rational expectations model of private consumption open economy. The model treats the balance of the current account of a country as a result of long-term consumption and investment decisions, established on the basis of expectations about future movements in macroeconomic variables (Federici,Gandolfo, 2001, pp. 6-9).

The standard intertemporal model is characterized by a small open economy with an infinite number of companies, which optimize consumption over time, in terms of free lending or borrowing abroad, in order to increase their welfare (total utility function). The model assumes that the current account absorb temporary or transitory shocks national net cash flow (IE, investment minus government consumption), which corresponds to national saving, so consumption will completely flatten over time - assuming the free movement of capital. In the future, the economic system will decrease (increase) national saving and thereby lead to the current account deficit (excess), whenever the expected temporary decline (increase) in national net cash flow.

The empirical application of the model was extended out in two ways. (Bussièreet et al., 2005, pp.10-15, Ca 'Zorzi et al. 2008,pp. 12-18). On the one hand, several studies have presented evidence in favour of the attempts of the basic model using various testing strategies (Sheffrin, Woo,1990, pp. 245-252; Bergin,Sheffrin,2000;Nason,Rogers,2006, pp. 6-14). On the other hand, a significant number of works investigated the long-run relationship between current account and the main macroeconomic determinants using standard econometric techniques (Debelle, Faruqee, 1996, pp. 2-12; Blanchard,Milesi-Ferretti,2011, pp. 9 - 11;Chinn,Prasad, 2003, pp. 17-25).

The starting point of the empirical model is an accounting identity of the current account (CA), equal to the difference between domestic savings (S) and investment (I), which is further decomposed into the net private saving $(S_p - I_p)$ and the fiscal balance of the general government $(S_G - I_G)$:

$$S - I = (S_p - I_p) + (S_G - I_G). \quad (1)$$

For purposes of normalization, all the variables are shown in relation to the GDP. The left side of the identity of the current account balance, with its negative value represents a current account deficit:

$$\frac{CA}{Y} = \frac{S_P}{Y} - \frac{I_P}{Y} + \frac{S_G - I_G}{Y}. \quad (2)$$

At first glance, the evidence suggests that private saving plays an important role in explaining movements in the current account deficit. Suppose you are the ratio of private savings to – GDP $S_p/Y$; function of various economic variables,

including domestic real GDP per capita (per capita $Y/_N$) of a certain country or $Y^*/_{N^*}$, The group of countries with which the comparison is made, the real effective exchange rate (REER), the ratio of annual budget to GDP $(S_G - I_G)/Y$, the ratio of private investment to GDP $I_p/Y$. It is obvious that domestic investment plans are private business entities affect the private savings ratio, and to the extent that they are financed in the country. Consequently, the basic model for expressing private savings is as follows:

$$\frac{S_p}{Y} = f\left[\frac{\frac{Y}{N}}{\frac{Y^*}{N^*}}, REER, \frac{S_G - I_G}{Y}, \frac{I_p}{Y}\right]. \quad (3a)$$

In addition to the basic specification, the following financial and demographic factors are considered important in explaining the rate of private savings: (a) credit to the private sector as a percentage of GDP (CRP); (b) the real interest rate (RIR) and (c) dependency ratio (or, alternatively, the birth rate) (DEM). Finally, consideration is given to the effect of inflation uncertainty (VOL). It can be expressed as an expanded model of private savings:

$$\frac{S_p}{Y} = f\left[\frac{\frac{Y}{N}}{\frac{Y^*}{N^*}}, REER, \frac{S_G - I_G}{Y}, \frac{I_p}{Y}, CRP, RIR, DEM, VOL\right]; \quad (3b)$$

Real GDP per capita is a substantial factor in explaining the directions relative motion. On the relationship between the intertemporal approach and stage of development presented their hypothesis Debelle and Farukee (1996, pp. 2-12), Chinn and Prasad (2003, pp. 17-25) and Freund (2000,pp.6-14). In fact, the small open economy that starts with a relatively low domestic revenues, is expected to have a low level of savings, which means that the optimal level of consumption is large relative to current income. From this point of view, this means increased borrowing against future income, which, together with a significant initial investment needs, can lead to the growth deficit of the current account deficit. In other language, at an early point of development, financing consumption based on extraneous sources of growth, and should refuse when they gain a higher degree of evolution. In this context, it is true that the actual development of GDP per capita positively related to secret savings.

Appreciation of the REER increases purchasing power for imported goods from current and future income, as well as the value of accumulated cash and property assets of domestic companies. This effect tends to raise consumption and reduce the propensity to save. So that the increase in REER expected drop in personal savings.

The relationship between private savings and checking account, on the one hand and fiscal policy on the other, can be explained by the reaction of others to the Keynesian or Ricardo's approach. The Keynesian model assumes a moderate fiscal deficit (or lower fiscal surplus) as a result of lower taxes or increased public spending, increasing disposable income and thus reduces consumption and

personal savings. The economic response of private entities in this model supports the dual deficit hypothesis, according to which the fiscal deficit is usually accompanied by the expansion of the current account deficit. However, the double-deficit hypothesis does not necessarily apply in circumstances where consumers behave according to Ricardo's equivalence. If the fiscal situation becomes untenable, it is expected to increase taxes or reduce government spending (fiscal consolidation) in the future, affecting future net worth entities. In this case, the increase in the fiscal deficit (or lower fiscal surplus) present in reducing consumption and increasing savings as a precaution, so that the operators achieve the long-term rate of consumption in terms of reduced future disposable income. This may require a lower current account deficit (or higher current account surplus). In extreme cases, when changes in public štednjiu fully customized changes in private savings (Ricardian equivalence), fiscal policy has no effect on the current account, which is built into the standard intertemporal model.

However, the empirical literature suggests that fiscal policy has a significant long-term implications for the current account deficit. Taking into account the finite time horizon entities, heterogeneity of the population and the existence of borrowing constraints, the absorption of the government deficit by private savings may be inadequate. Thus, it appears that the ratio of government debt to GDP can only partially explain Ricardo's or Keynesian behaviour of private entities (Nickell et al.,2008, pp. 8-12).

An important determinant of savings, which is especially apparent in the literature is financial liberalization, usually shown as: credit to private sector/GDP. In this context, the process of deregulation of the financial markets should be associated with lower levels of private savings. Financial liberalization and integration of capital markets, allowing banks to borrow more funds available and at a lower cost to individuals, for example to buy a house or other durable goods, which may cause a significant decline in savings.

Empirical evidence confirms this effect in countries with a higher degree of liberalization of consumer credit (Reinhart et al.,1995,pp. 7-9). For example, the growth in house prices in a number of industrial countries in the period 2000-2008 has caused the increase in mortgage debt of households, while at the same time, its positive effect on wealth resulted in a decrease in household savings. Therefore, it can be said that private loans negatively affect private savings (Faulkner, 2004, pp. 36-39).

As for the real interest rate, its growth affects the rates of return on savings and thus the ratio of savings. In the same vein, the reduction in interest rates and increased currency risk due to financial liberalization and meeting the requirements of convergence in the EU, for example, the expected impact on reducing private savings (as well as an increase in private investment) for countries that are net borrowers. Thus, the real interest rate is expected to be positively correlated with the ratio of private savings and current account balance plans (Holinski et al., 2012, pp. 3-12).

Demographic variables are considered as fertility rate, because the normal assumption that the age profile of the population will have a significant impact on domestic savings. The aspect ratio of dependent population relative to the working age, is negatively correlated with the aggregate domestic savings. Increasing the degree of dependence, or fertility rates will reduce the ratio of savings, because according to the life cycle hypothesis, young and old are net beneficiaries, while the rest of the population net savers. However, other factors such as uncertainty about life expectancy after retirement and financial support that will be needed, and the amount of public - part of pension income can affect greater savings than consumption. Accordingly, the effect of demographic variables personal savings can be positive or negative.

Regarding the volatility of movements in the inflation rate, it follows that its impact on private savings rather unconvincing and can only be determined empirically (Nocetti, 2010, pp.16-18).

Substituting equation (3b) in equation (2) we get:

$$\frac{C_A}{Y} = f\left[\frac{\frac{Y}{N}}{\frac{Y^*}{N^*}}, REER, \frac{S_G - I_G}{Y}, \frac{I_p}{Y}, CRP, RIR, DEM, VOL\right] + \frac{S_G - I_G}{Y} - \frac{I_p}{Y} \qquad (4)$$

The ratio of private investment to GDP is considered to be the deciding factor in private savings, so as an autonomous variable has a direct impact on the current account of the balance of payments. Similarly, the fiscal balance in the equation is taken as the determining factor and autonomous because it is difficult to distinguish between the factors that influence public consumption (savings) and public investment, since the decision of the government do not always purely economic criteria.

## *THE TWIN DEFICITS HYPOTHESIS*

The term deficit “twin” is related to the simultaneous existence of the external current account deficit and the budget deficit. Serbia unfortunately for years has twin deficit problems whose primary characteristic is that it greatly cuts back the potential for sustainable economic development. The primary effects of the characteristics of these deficits are to increase of the budget deficit implies the usage of different methods for its funding. In this respect, it is important to look at the views of so-called Key "Theorem budget constraints" ', especially intertemporal budget constraint, which brings up to the principles of the game and provides a good analytical instrument towards understanding the underlying features of the economic system.

The theoretical explanation of the relationship between state budget deficits and current account deficits in the remainder of the payments of the open economy, the beginning point is the well-known national accounting identity (Bernheim, 1988, pp. 1-32):

$$C + I + G + (X-M) – R = C + SD + T \quad (1)$$

Where: C - private consumption expenditure; I - domestic private investment; G - government spending; X - exports; M - import; R - net transfers abroad; SD - private domestic savings; T - state tax revenues.

Equation (1) can be rearranged in terms of clearness of the relationship between budget deficits and current account shortfalls:

$$(G-T) = (SD-I) + (M+R-X) \quad (2)$$

From the present relationship (2) implies that the state budget deficit (G-T) must be equal to or to finance the excess of domestic savings over domestic investment (SD-I), plus the current account deficit (M+R-X). On the other hand, the current account deficit is equal to the national spending on foreign goods and services and imports (M), plus net transfers (R), and reduced foreign spending for national goods and services and exports (X). It pursues that the current account deficit must be financed by an equal net inflow of foreign capital and net foreign savings (SF), so that the relation (2) becomes:

$$(G-T) = (SD-I) + SF \quad (3)$$

The relation (3) leads to the determination that an exogenous increase in the budget deficit (G-T) can be financed solely by increasing net national savings (SD-I), and/or net foreign savings (SF). In conditions of financial flows this relationship can be written every bit:

$$(G-T) + I = SD + SF \quad (4)$$

From this relation it follows that the sum of of the budget deficit and domestic investment, which is the total domestic demand and use the savings (D), must be equal to the amount of the gross domestic savings and net foreign savings, which present the total resources or offer savings (S) economy, in parliamentary procedure to balance is achieved. On the other hand, the causal chain from economists of the budget deficit to current account deficit, open economy with a flexible exchange rate scheme, it can be viewed by replacing net foreign savings (SF) in equation (3) its current account deficit and net import-balance sheet positions (NM):

$$(G-T) = SD (r) – I (r) + NM (e) \quad (5)$$

Where must meet the next requirements: $SDr > 0$, $Ir < 0$, and $NM (e) > 0$.

From the relations (5) clearly emerges that the real domestic savings (SD) directly related to the real interest rate (r); real domestic investment (I) are inversely related to the real interest rate (r), and net imports (NM) is inversely related to the real exchange rate (e), defined as foreign currency price of domestic currency-adjusted differential rate of inflation in domestic and foreign countries (in the sense that an increase in the real exchange rate represents a real increase in the value of the local currency). Consequently, an exogenous increase in the budget deficit can be financed by domestic savings, reduction in domestic investment (both are functions of the real interest rate); and / or increasing the national net trade deficit or a net inflow of foreign savings (which is a function of the real exchange rate).

The information in Table 1 indicate that Serbia from 2011 until the close of 2013 entered the extreme imbalance, both budget and current account shortfalls. The increment of the budget deficit, the growth of the current account deficit, increased borrowing by domestic banks and increased borrowing on the basis of issuing bonds have reached alarming proportions. The effective exchange rate is deeply overvalued, indicating a link budget and balance of payments deficit.

## *THE SUSTAINABILITY OF THE CURRENT ACCOUNT DEFICIT*

Seen from a financial point of view, the current account deficit cumulated over a number of years requires constant funding sources, such as net inflow of foreign direct investment, portfolio investment, credit transactions or reducing foreign exchange reserves. In addition to the influx of foreign capital helps cover the current account deficit, its role is to create a favourable climate for productive investment and the growth of domestic savings and investment. On the other hand, foreign borrowing has its limits, because the increase in net foreign debt creates new obligations in terms of its repayment. In this context, it inserts the question of the sustainability of the current account deficit and its financing ways, especially in terms of reducing the inflow of investments.

It should be emphasized that there is currently no generally accepted opinion as to the level of the current account deficit can be considered unsustainable, as well as the impact of higher deficits on the other macroeconomic indicators. In fact, long dominated by the views of the IMF and of other international financial institutions in the current account deficit is not sustainable if it exceeds the level of 5% of GDP (Web site, Gross government debt...). However, many examples of countries that have managed to maintain and finance a larger deficit of these for many years and after that go into surplus, as well as examples of countries that have low current account deficits, and failed to avoid balance of payments crises (Mexico,Chile), influenced are to be abandoned by a strict set of criteria (Blanchard,2007, pp. 195-200).

Since any deficit must be financed from the appropriate sources of funding, it follows that the current account deficit is sustainable in the extent and limits of the creditors believed that is sustainable. Ultimately, the concept of sustainability includes expectations of future developments which have implications for-her checking account. In this context, the current account deficit is sustainable if and only if the continuation of the current economic policies of the government and / or private sector behaviour in the present, as well as possible external shocks, demand the implementation of significant changes in the economic policy of the country, or if do not lead to balance of payments crisis. So, in terms of confidence of financial markets to the debtor country in terms of regularity of servicing its obligations, it is reasonable to assume that the debt crisis will not occur (Ote,2009, pp. 155-157).

Accordingly, it can be concluded that there is no single criterion for assessing the sustainability of the current account deficit, which could be applied to all countries.

From this point of view, the estimates should: take into account the specific characteristics of specific countries; take into account the dynamics of other macroeconomic indicators; monitor the tendency of the current account balance; viewed the structure of imported goods (imports of consumer goods and investment goods), as well as developments in the capital and financial account (foreign direct and portfolio investment, loans-their maturity structure and purpose).

In the last ten years, these theoretical assumptions have experienced very significant changes. First, the cumulative trade deficit has worsened the external financial position of some countries, primarily Greece, Spain, Portugal, Italy and France. This situation is a consequence of the lack of competitiveness of their economies, which all contribute to the financing of the deficit worse. In this context, one can ask whether a competitive economy can ease the burden of public debt. The answer is not easy, but it has come to define the level of capital inflows into the country, which is registered in the capital sub-balances and the resources from the budget deficient countries stand to service interest on borrowed resources. As is well known, foreign investments are determined possibility of Earnings based on the interest on invested funds or returns from portfolio investments on the stock market. However, in situations constantly growing consumption of available options, the generated current account deficit over the long term, we need measures of balance of payments adjustment. For the purpose of servicing the public debt, and in terms of achieving its sustainability deficient countries would have to make an adjustment of the balance of payments and economic structure, which generates a deficit.

Another possible generator of financial instability and the share of exports in GDP and compared with countries of similar levels of development and size of the market. For example, it is possible to make a comparison of Germany, whose exports to GDP accounts for 50%, and Italy, which has a share of exports in GDP by 27%, or France, which has a share of about 26%. On the other hand, a small open economy with a very high share of exports in GDP: Belgium 81%, Netherlands 82%, Switzerland 91%, Ireland 68%, Norway 60% and Denmark 54%. In contrast, other small open economies whose public finances threatens to undermine the overall macroeconomic stability, have a very low share of exports in GDP: 16% of Croatia, Serbia 13%, Portugal 23%, Greece about 9% (World Economic Outlook,2014, pp. 56-57).

The following is the conclusion that Serbia has the worst macroeconomic indicators of the countries analysed (Tables 1 and 2). From this point of view, the delay of payments and structural adjustment can lead the country into total financial insolvency and failure to meet not only the public expenditure, but also servicing debts to foreign creditors.

*Table 1: Serbia's macroeconomic indicators, 2002-2013*

| **Indicators** | **2002** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP growth rate | 4.3 | 2.5 | 9.3 | 5.4 | 3.6 | 5.4 | 3.8 | -3.5 | 1.0 | 1.6 | -1.5 | 3.7 |
| Consumer price inflation, in % | 14.8 | 7.8 | 13.7 | 17.7 | 6.6 | 11.0 | 8.6 | 6.6 | 10.3 | 7.0 | 12.2 | 4.9 |
| Unemployment rate | 13.3 | 14.6 | 18.5 | 20.8 | 20.9 | 18.1 | 13.6 | 16.1 | 19.2 | 23 | 23.9 | 20.1 |
| Balance of payments overall, in mil EUR | 996 | 827 | 343 | 1,647 | 4,269 | 742 | -1,687 | 2,363 | -929 | 1,801 | -1,137 | -190 |
| Current account balance | -671 | -1,347 | -2,620 | -1,778 | -2,356 | -5,052 | -7,054 | -1,910 | -1,887 | -2,870 | -3,155 | -1,114 |
| Capital and financial account | 1,516 | 2,305 | 2,791 | 3,828 | 7,566 | 4,739 | 7,146 | 2,034 | 1,819 | 2,691 | 2,872 | 948 |
| Current account balance, in % of GDP | -4.2 | -7.8 | -13.8 | -8.8 | -10.1 | -17.7 | -21.6 | -6.6 | -6.7 | -9.1 | -10.5 | -2.0 |
| Budget deficit, in % of GDP | -4.3 | -2.4 | -0.2 | 0.7 | -1.7 | -1.1 | -1.9 | -3.3 | -3.5 | -4.1 | -5.7 | -5.6 |
| Public debt, in % of GDP | 72.9 | 66.9 | 55.3 | 52.2 | 37.7 | 31.5 | 29.2 | 34.7 | 44.5 | 48.2 | 60.0 | 61.7 |
| External debt, in % | 58.7 | 55.9 | 49.8 | 60.1 | 60.9 | 60.2 | 64.6 | 77.7 | 85.0 | 76.7 | 86.9 | 81.9 |
| FX reserves, in mil EUR | 2,186 | 2,835 | 3,104 | 4,921 | 9,020 | 9,634 | 8,162 | 10,602 | 10,002 | 12,058 | 10,914 | 10,444 |
| FDI, net in mil EUR | 500 | 1,194 | 774 | 1,250 | 3,323 | 1,821 | 1,824 | 1,372 | 860 | 1,827 | 146,9 | 642,8 |
| RSD/EUR FX rate (period average) | 60.69 | 65.12 | 72.69 | 82.99 | 84.11 | 79.96 | 81.44 | 93.95 | 103.04 | 101.95 | 113.13 | 114.18 |
| **Public debt (EuroArea)** | 69.2 | | | 70.3 | | 66.4 | | | 85.4 | 87.3 | 90.6 | |

*Source:http://www.tradingeconomics.com/serbia/government-debt-to-gdp*

*Table 2:Serbia Current Account tendencies*

| **Trade** | **Last** | **Previous** | **Highest** | **Lowest** |
|---|---|---|---|---|
| External Debt[1)] | 25604.10 | 25863.30 | 26722.40 | 8961.90 |
| Balance of Trade[2)] | -435.20 | -455.70 | -161.00 | -1364.00 |
| Current Account[3)] | -148.60 | -48.20 | 178.00 | -1073.40 |
| Current Account to GDP[4)] | -11.50 | -9.90 | 2.20 | -21.60 |
| Exports[5)] | 1415.50 | 1194.00 | 1439.00 | 116.00 |
| Imports[6)] | 1850.70 | 1649.00 | 2507.00 | 292.00 |

**Units:**

[1)] EUR Mill.

[2 - 6)] USD Mill.

*Source: Serbia Current Account to GDP, http://www.tradingeconomics. com/serbia/current-account-to-gdp*

## *CONCLUSION*

Serbia is now in recession with high chances that the economic problem dramatically worse, so that the results cannot be identical measures, anti-recession policy of relying on funding are deficit spending, because the crisis in Serbia is characterized by insufficient consumption. Furthermore, Serbia is not even close to the level of full employment, so we cannot speak about the overheated economy. In contrast, it was excessive and unproductive government spending and personal consumption, this process significantly contributed to economic policy.

Theoretically, it is impossible that in the present situation overstretched consumption and improper decline in exports, a stable exchange rate policy implemented, and that all other prices kept flexible. Fundamentally, the track is a decisive cost in the economic organization. On the other hand, there are arguments for keeping the exchange rate stable in the circumstances, such a policy seems inevitable, especially in order to avoid undesirable social and political consequences. In this context, it looks like the economic policies blocked, while the rescheduling of overdue foreign debt makes it real. Otherwise, the economy will remain only two directions of movement: stagflation or deflation; where the unemployment rate is inevitable, as the price of these movements in both variants. In making the relevant decisions directional selection depends on the relationship of classes in Serbian society (the financial oligarchy, entrepreneurs, workers-citizens), but at the same time impossible to ignore the relationship with the EU and the requirements of its supranational institutions.

Developments in the financial markets and real economic growth in Serbia, are far below the sustainable level of economic equilibrium, employment and the existence of his own net working capital, which is expressed as follows:

- The increase of budget deficits crowd out the economic system from the fiscal securities industries;
- Adaptation of the exchange rate persistently delayed, thereby causing damage to the current balance of payments;
- Balance of payments imbalance leads to new borrowing to finance the deficit of the country;
- A greater volume of debt causes growth of the budget deficit, increase interest and growth for its servicing obligations in the future.

The following is the conclusion that no balance sheet and budget adjustments cannot achieve sustainable economic growth. This becomes clearer when we consider the fact that only Serbia to finance its current account deficit must be paid and interest, as opposed to the economic developed countries, the current account deficit is serviced through interest free inflow of foreign capital.

## *REFERENCES*

[1] Bergin, P.R., Sheffrin, S.M. (2000),' Interest rates, exchange rates and present value models of the Current Account', *Economic Journal*, vol. 37, no. 110, pp. 535-558. Available at: http://www.frbsf.org/economic-research/publications/ economic-letter/2000/december/should-we-worry-about-the-large-us-current-account-deficit/, date approaches: 07.05.2014

[2] Bernheim,D. (1988),'Budget Deficits and the Balance of Trade', Volume Title: Tax Policy and the Economy: Volume 2, Volume Author/Editor: Lawrence H. Summers, editor, Volume Publisher: *MIT Press*, Chapter Title:' Budget Deficits and the Balance of Trade', Chapter pages in book: 1 - 32.Available at: http://www.nber.org/chapters/c10935 date approaches: 09.05.2014

[3] Blanchard, O. (1990),' Suggestions for a New Set of Fiscal Indicators'. Paris, OECD, *Dep. of Economics and Statistics*, Working Paperno. 79, pp. 13-15. Available at: http://www.oecd.org/tax /public-finance/2002735.pdf, date approaches: 09.05.2014

[4] Blanchard, O. (2007),'Current Account Deficits in Rich Countries' , *IMF Staff Papers*, vol. 54, no. 2. Available at: https://www.imf.org/external/pubs/ft/staffp/2007/02/pdf/blanchar.pdf, date approaches: 10.05.2014

[5] Blanchard, O.,Milesi-Ferretti, G.M. (2011),' (Why) Should Current Account Balances Be Reduced?', *IMF Staff Discussion Note*, March 1, 2011. SDN/11/03. Available at: http://www.imf.org/external/ pubs/ft/Sdn/ 2011/ sdn1103.pdf, date approaches: 15.05.2014

[6] Buiter, W. (1981),' Time Preference and International Lending and Borrowing in an Overlapping - Generations Model' .*The Journal of Political Economy*, vol. 89, no. 4. Available at: http://papers.ssrn.com/ sol3/papers.cfm?abstract_id=260527, date approaches: 23.05.2014

[7] Bussière, M., Fratzscher, M., Müller, G.J. (2005).' Productivity shocks, budget deficits and the current account'.*ECB Working Paper,* no. 509. Available at: http://www.ecb.europa. EU/pub/pdf/ scpwps/ ecbwp509.pdf, date approaches: 24.05.2014

[8] Ca' Zorzi, M., Rubaszek, M. (2008),'On the empirical evidence of the intertemporal current account model for the euro area countries' .*ECB Working Paper,* no. 895. Available at:http://www.ecb.europa. eu/pub/pdf/scpwps/ecbwp895.pdf, date approaches: 25.05.2014

[9] Chinn, M.D., Prasad, E. S. (2003),' Medium-term Determinants of Current Accounts in Industrial and Developing Countries: an empirical exploration'. *Journal of International Economics 59*, pp. 47-76. Available at: http://www. nber.org/papers/w7581.pdf, date approaches: 01.06.2014

[10] Debelle, G., Faruqee, H. (1996),'What determines the Current Account? A Cross-Sectional and Panel Approach'.*IMF Working Paper,* no. 96/58, pp. 1-42. Available at:http://papers.ssrn.com/ sol3/papers.cfm? abstract_id=882958, date approaches: 04.06.2014

[11] Faulkner-Mac Donagh, C., Mühleisen, M. (2004),' Are U.S. households living beyond their means?'.*Finance and Development,* no. 41, pp. 36-39. Available at: http://www.gci.org/series/money/living, date approaches: 05.06.2014
[12] Freund, C.L. (2000),' Current account adjustment in industrialized countries' .*International Finance Discussion papers 692,* pp. 1-32. Board of Governors of the Federal Reserve System. Available at:http://www.federalreserve.gov/pubs/ifdp/2000/692/ifdp692.pdf, date approaches: 05.06.2014
[13] Federici, D., Gandolfo, G. (2001),' Endogenous Growth in an Open Economy and the Real Exchange Rate' .*CESifo Working Paper,* no. 526, pp. 1-30. Presented at: CESifo Area Conference on Macro, Money & International Finance, May 2001. Available at: http://hdl.handle.net/10419/75871, date approaches: 27.06.2014, date approaches: 07.06.2014
[14] Holinski N., Kool, C.,Muysken, J. (2012),' Persistent Macroeconomic Imbalances in the Euro Area: Causes and Consequences' , *Federal Reserve Bank of St. Louis Review*, January/February 2012, vol. 94, no. 1, pp. 1-20.Available at: http://research.stlouisfed.org/publications/review/12/01/1-20Holinski.pdf, date approaches: 10.06.2014
[15] Nason, J.M., Rogers, J.H. (2006),'The present-value model of the current account has been rejected: round up the usual suspects'. *Journal of International Economics,* vol. 68, pp. 159-187.Available at: http://www.federalreserve. gov/ pubs/ ifdp/2003/ 760/ifdp760.pdf, date approaches: 13.06.2014
[16] Nickell, C., Vansteenkiste, I. (2008),' Fiscal policies, the current account and Ricardian equivalence'.*ECB Working Paper*, no. 935. Available at: http://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp935.pdf, date approaches: 14.06.2014
[17] Nocetti, D., Smith, W.T. (2010), *Pricevariability and savings* . Mimeo, POBox 5790, Clarkson University, Potsdam, NY. Available at: file:///C:/Users/m/Downloads/SSRN-id1538407.pdf, date approaches: 27.08.2014
[18] Obstfeld, M.,Rogoff, K. (1994),' The Intertemporal Approach to the Current Account'. *NBER Working Papers Series,* no. 4893. Available at:http://www.nber.org/papers/w4893.pdf, date approaches: 17.06.2014
[19] Ote, M., (2009),'Slom dolazi', Banja Luka: Romanov.
[20] Reinhart, C.,Ogaki, M.,Ostry, J., (1995),' Saving behaviour in low- and middle-income developing countries', *Munich Personal RePEc Archive.* Available at: http://mpra.ub.uni-muenchen.de/6978/, date approaches: 18.06.2014
[21] Report on Public finances in EMU,'Economic and Financial Affairs 2013', European Economy 4|2013. Available at: http://ec.europa.eu/economy_ finance/publications/european_ economy/2013/pdf/ee-2013-4.pdf, pp. 154, date approaches: 20.06.2014

[22] Sachs, J., (1981),'The Current Account and Macroeconomic Adjustment in the 1970s'. *Brookings Papers on Economic Activity*, vol. 1981, no. 1, 1981, pp. 201-282. Available at: http://www.brookings.edu/~/media/Projects/ BPEA/1981%201/1981a_bpea_sachs_cooper_fischer.PDF, date approaches: 24.06.2014

[23] Serbia Current Account to GDP, (2014), available at: http://www. tradingeconomics.com/serbia/current-account-to-gdp, date approaches: 25.06.2014

[24] Sheffrin, S.M., Woo, W.T., (1990),' Present value tests of an intertemporal model of the Current Account'. *Journal of International Economics*, no. 29, pp. 237-253. Available at: http://homepage.ntu.edu.tw/~kslin/macro2009/ Sheffrin%20 and%20Woo%201990. Pdf, date approaches: 01.07.2014

[25] Tanzi, V. (1993),'The Budget Deficit in Transition'. Washington, IMF. Available at: http://www.jiscjournalarchives.ac.uk/openurl. html?ref=proquest/ 5171/5171-1993-040-03-000010.pdf, pp. 697-708., date approaches: 02.07.2014

[26] World Economic Outlook, (2014). Available at: http://www.imf.org/ external/Pubs/ft/Weo/ 2014/01/ pdf/ text.pdf, date approaches: 06.07.2014

# *INTEREST RATE AS AN INSTRUMENT OF RATIONAL DIRECTING AND DISTRIBUTION*

*Danijela Vukosavljevic,PhD*[9]

*Dejan Vukosavljevic,PhD*[10]

## *ABSTRACT*

*Question of interest rate is the question of economic power and political reign. In line with that, interest rate is economic and political issue. Interest rate is one of the most significant and one of most observed variables in economic system. Interest rates are interesting to issuers of market instruments, as well as to investors. The main importance of interest rate comes from the fact that its height directly affects the cost of capital. So the interest rate is the cost of capital in financial markets. Interest rate is a very complex category because it is affected by numerous specific factors that determine the interest rate. Nowadays determination of interest rate related to loans and deposits is influenced by many factors, such as the state through central bank, country risk and risk that the borrower carries himself, the world economic crisis etc.*

***Key words**: Interest Rate, Interest Rate Factors, Genuine Market Economy*

***JEL Classification**: G11, G12, G24, G29*

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[9]Danijela Vukosavljevic, Raiffeisen Bank International AG,Vienna, Austria, danijela.vukosavljevic@rbinternational.com

[10]Dejan Vukosavljevic, Faculty of Business Economics and Entrepreneurship,Belgrade,Serbia, vukosavljevic.dejan@gmail.com

## *INTRODUCTION*

The perception of banking sector as the sector engaged in a business activity for the purpose of profit generation changes. Any legal entity, whether private, public or entrepreneur, which performs any business activity, aspires to generate profit. Indeed, there are many factors which influence profit generation. Some of the very important ones are interest rate and interest rate policy of the state and banking sector. An attempt to present potentials for faster development of companies and natural persons is practically impossible unless interest rate policy of a country is analyzed. The subject of this paper is the influence of interest rate on flows, which determined the structure of the paper, too. The paper consists of several parts in which the subject matter is presented in accordance with the requirements of usual scientific methods, with the purpose to obtain valid results. The theoretical part interprets concepts of banks' business policies, primarily interest rate and loan policy, and it criticizes positive and negative aspect of the problem.

## *THE EXISTING OPINIONS AND ATTITUDES*

In some segments of this paper deal with the issue of necessity of changing banking sector in respect to making decisions regarding interest rates bearing in mind all the circumstances, such as the influence of economic crisis, business risk, liquidity issue, general liquidity crisis in economy, low population standard etc. This change of the model requires radical change in perception of the most adequate business policies regarding interest rates, and of interest rates always reflecting negative occurrences in activities of companies or stimulating business activities. Interest rate and its calculation is always a considerable burden for activities of any company of entrepreneur, particularly in the sectors (such as agriculture) which cannot bare high interest rates regardless of the investment risk.

## *METHODS OF THE RESEARCH*

Methods used in this paper are analysis and research, domestic and foreign knowledge and references, methods of logical research, interdisciplinary approach, indicative method, general methods of research compatible with economic and social sciences, empirical and theoretical approaches, deduction method, subjective methods, comparative methods, discriminant methods and statistical data, practice and achievements of various countries in European market in comparison to Serbian market. In European banking circles, for example in Germany and Austria,

interest rates are in the range from 0.5 % , 1.0 % to 3,14%. In order to understand variations of interest rates and their influence thoroughly, some data from earlier periods have to be processed, which will be done in a part of this paper. The "philosophy" of so called "agreed economy" underlies the interest rate policy. This model is defined in "Encyclopedia of Economics".

## *THEORETICAL GROUNDS AND LITERATURE REVIEW*

In order to make higher profit, banking sector develops new forms and new products. This perception of innovations leads to the conclusion that changes in financial surrounding will stimulate financial institutions to search for profitable innovations (Mishkin,2006). In the financial surrounding, many financial institutions faced extensive changes since 1960. Significant inflation and inflation of interest rates complicated all business activities and businesses, which contributed to the increased demand in the financial market. Financial institutions were forced to search for new profitable activities, which was referred to as financial engineering. This necessity of the development was the ground for innovations (Mishkin,2006). Credit and other risks are defined as the probability that the debtor will not be capable to pay the interest or principal according to the terms of loan agreement (Greuning,Brajovic,2006).

## *INTEREST RATE AS ECONOMIC AND POLITICAL ISSUE*

The question of interest rate is the question of economic power and political reign. If the function of interest rate is to determine distribution and directing of funds for production, turnover and consumption, the power governing interest rate policy thus gained domination over economic reproduction and distribution of social product. Hence interest rate is not just an economic question, but a very important and powerful political issue of an economy.

In so called sacral capitalism, for Sumerians (West Asia, around 3000 years BC) the starting point is dogma that God owns everything, things and people. Priests run production, exchange of goods, capital spending, and through sacral merchants, commission sale and foreign trade, also in the name of God.

Here we should see roots of very similar and historically closer to us dogmas from the Talmud, the Bible and the Koran- according to Talmud, God's blessing of the chosen provides a house full of blessings and wealth, the Bible says in imperative "You shall not land on interest to your brother, interest of food or anything on which interest can be charged. You may charge interest to a foreigner, but not to your brother…"

However, these religious laws did not eliminate hypocrisy that is almost always seen in this field. For example, the development of contemporary European

banking owns the most to so called pope's usurers, bankers from northern Italy. In the service and for the benefit of strong Vatican's funds, from the middle of XIII century on, they were redesigning Europe as lenders and exchange officers. Exactly from those times history provides more data on fluctuations of interest rates in European countries.

## *MONETARY AND LOANS POLICY*

Monetary and loans policy in the time of the second Yugoslavia was in the environment of negative real interest rate. Discount rate of the National Bank used to remain the same over long periods of time, regardless of fluctuations of general economic activities, problems of balance of payments or price inflation movements.

The "philosophy" of so called "contract economy" is the basis of interest rate policy from earlier periods. That model is defined in "Encyclopedia of Economics", Volume I ("Savremena administracija", edition 1984, entry "loan interest rate", author's initials V.R.), which defines loan relationships as "but a form of pooling social reproduction funds… Interest rate is actually a form of participation in mutual business activities with proceeds from joined assets".

Even after monetary reform in January 1994, the great ambitions of which were thorough economic and political changes of the entire economic system, there was a relapse around 1995 of the same, several decades old interest rate policy. Regardless of pronounced trends of high rise of prices, money market deformations, disappearance of savings and deposit activities of banks etc., discount rate of the National bank remains negative real (see "Mark Impex" study, Belgrade, November 1995).

However, no matter what the motives for negative real interest rate policy were (depreciation of expenditure inflation, encouraging export activities, improving the standard of living, etc.), on the other side there is still undisputed truth that it is at the same time an instrument of unjustified usurpation for one group of people, while at the same time for the other it is an instrument of the same losses in the distribution of social product, or, in other words, guaranteed contribution to the polarization of the society.

In order to fully understand moving of interest rates and their influence, this subject must be dealt with in respect to data and occurrences from earlier periods.

We shall take an example of interest rate movements after paradoxical year of 1955. Since that time we have witnessed a fundamental change- negative real interest rate has not occurred since. Discount rate of the National Bank had a huge nominal leap, and so did active rates of commercial banks. This most definitely qualitatively correct change fully highlighted several problems which had been known in Yugoslavian economy and banking for quite a long. We will present here

a simplified interest rate overview for the second half of 1997 (July-December) for the purpose of illustration:

- inflation (retail prices, at the annual level) 9.6%
- discount rate of the National Bank around 35% at the annual level
- active weighted interest rate of commercial banks was in the range from 103%-72% at the annual level
- passive weighted interest rate of commercial banks was around 20% at the annual level(Data according to the Bulletin of the NBY, January 1998).

At that time this was not about critical evaluation of interest rate policy, but about a phenomenon highlighted by this picture. The core issue on one side is a huge distrust in borrowers from all economic sectors and a good deal of agricultural sector, and on the other side the same distrust in saving in banks.

This can easily be understood after all delusions, mistakes and abuses in the field of savings and interest rate we have witnessed in past, distant and close.

Interest rate is generally determined by three components. We will neglect the price of commercial credit agreements (various administrative, legal, overhead, tax etc. expenses), which are unavoidable and relatively low, although we can assume that they are comparatively large in bureaucratized procedure. The second component is so called net interest rate or pure rate of interest resulting from supply/demand ratio in the money market. "Liquidity preference", defined by John Maynard Keynes as willingness to hold cash over other types of assets (property), is definitely relevant. This willingness in our circumstances is very pronounced, and it leads to the increased demand for cash and relatively higher interest rate. If in our case we follow the motives J.M. Keynes quotes for "liquidity preference", we shall see that so called transaction needs are great since greater part of our active economy, from small companies, flea markets, smugglers and "black economy" to significant private sector firms, for current and assumed business activities' purpose, various procurements, foreign currency purchases at black-market exchange rate and giro currency exchange rate etc. tends to have a safe and significant quantities of money. Let's not forget that private and cooperative sector make, according to statistically officially registered social product, a significant part of Serbian economy. Speaking about that, we should also not forget that "population" in M1 cash mass participated with 60% (December 1997.data National bank), and today it participates with 59.43% (June 2012). The second Keynes' motive is called precautionary motive, and the third speculative motive, which in our current economic setting relatively increases "liquidity preference".

The third component determining interest rate level in our case is, unfortunately, very pronounced, and it is the price for losing money (and capital). The same fear occupies the mind of lenders and deponents, otherwise it would not have been possible to explain neither such high active bank rates, nor movements of population savings in banks at symbolic level in spite of the big difference between passive bank rates and current inflation. This deep rooted fear could not be

eliminated by a long period of relatively low inflation we have had over the past two years (2011.-2012.data National Bank Y)

Speaking about "liquidity preference", we observe that J.M. Keynes did not observe that there can also be some liquidity reserve, grey liquidity, such as the liquidity we observe in our case as mass going into negative balances, issuing uncovered cheques, unreturned loans, unpaid interests etc. Having that in mind, we can wonder whether this parameter is present at all in running monetary politics. The answer can hardly be affirmative since we know that the ratio of uncollectible bank investments is rather high.

Status of our banking today is such that it is not clear enough where from and how in a reasonable manner and with promising solution one should start solving the problems. Of course, it is the business of every bank, so it is the business of the central bank, too.

One thing is for sure- we should forget that in the conditions of the world economic crisis, above all financial crisis, interest rate would be low. But we should also forget negative real interest rate which was observed under the conditions of high inflation forever. K. Marx sees interest rate as the part of gross profit which industrial or merchant capitalist should hand over to financial capitalist. From axiom ex nihilo nihil we can conclude that if there is no gross profit, there is no interest rate. In case of Serbia, with huge global loss of economy as whole (for the past several years), negative real interest rate would cause complete breakdown of banking.

Regardless of all positive circumstances in banking system, there still remain problems of further returning trust in banks as institutions for saving and socially rational directing of money and capital. But that subject does not belong to this short paper on interest rate. Still, here are some elementary thoughts on a path that seems to be worth following.

A bank, almost a non-profit organization, should be established, the one which is not a fictional shareholder company, more like a lever of arbitrary political, than a company for rational and secure directing of funds. Bank is a free financial company business, the goals and results of which a state can and should selectively encourage without changing them by some laws subsequently passed.

This will be achieved once we reach authentic market economy instead of various hybrid "models" which are succeeding each other since earlier economic reforms. Their basis has been and remains social property, res nullius, which by itself imposes strong administrative centralism, which makes it uncertain that business results of companies and banks in all cases originate from their confirmation in the market.

If the entire strategy of economic and social transformation we have been witnessing for a long time is based on "philosophy" of authentic market economy, this would mean that all practical measures (privatization, financial recovery of banks and companies, fiscal reform, changes in non-economic activities, rooting out crime, social programs etc.) have the same coherent goals. Their success requires time, but there will be no big wandering.

In those circumstances interest rate can get its positive role, without it principles of liquidity, solvency and profitability which are usually repeated in business policies documents of banks are but empty declarations.

Full efficiency of legal institutions, primarily of courts, has undoubted priority. So called domination of debtors is an anachronism of the worst kind. One intervention court, let us call it drumhead court, has to intervene in a matter of days by final judgment, as soon as claimant submits credible evidences (promissory note, cession, mortgage, letter of credit, guarantee etc.) that debtor has not made due payment. When such court in an utterly simplified procedure decides, debtor can for no purpose dispose of his assets until the court decision is executed. Appeal has no postponing effect. If debtors do not fulfill their obligations, interest rate becomes meaningless since it cannot be collected and as such is but an accounting category which makes the debt larger than principal and financial guarantee given. So it is good to say that banks "must protect their debtors".

It cannot be normal to take away bank's licenses while its debtors continue their activities unpunished.

One more priority should be highlighted here, too, and that is aligning of functions and actions of central bank with its normal role in market economies. For commercial banks it is the "lender of last resort", for a government its banker, for a state enforcer of its monetary and credit policies. In no case can any lex specialis turn an institution for issuing currency into an investment fund for long term purposes and similar activities, which has in past been the case. Economic activity status nowadays (2012 data NBY) can cause various demands, which should by all means be avoided.

## *INTEREST RATE POLICY*

Interest rate policy is an instrument for connecting stabilization policy and concept of reviving economic activity. If the only goal of macroeconomic policy were providing currency stability, policy of very high interest rates should be considered which would defend currency and currency stability, but for the price of creating price barrier for functioning of a great part of the program in economy. It should particularly be stressed that the greatest part of economy functions with low capacity use, partly because of foreign trade limitations, which undoubtedly increases expenses of business activities. In such circumstances very high interest rates would exceed average rates of return of the greatest part of economy. On the other hand, if a concept of low interest rates would be adopted, that would maintain economic structure with low performances. Thus middle concept of interest rate policy which would provide real positive price of the capital should be adopted, but capital price should not be a too high price barrier for process of dinamization of economic activity based on new or existing capacities. It should also be pointed out that in the concept of fixed currency rate of exchange somewhat lower interest rates than those that would have had to be applied in the context of flexible currency rates can be applied in the current phase.

As far as competition in banking market is concerned and the notion that it would lead to lowering of interest rates, that is yet another illusion of central bank, government and public in general when it comes to future economic movements. It is hard to say on what such conclusion and prognosis are based. A number of large and leading banks practically determine conditions of conducting business activities and central bank has no adequate instruments to prevent such behavior in setting interest rates on loans and credits.

The situation that decrease of market price of some service or product where they are provided is not followed by increased demand can also be influenced by some external effects (Samuelson,1969) of free natural goods (air, sun, air temperature, altitude, social and cultural surrounding, precipitation etc.) if these goods are endangered, and even have critical impact of further use of those services – products (Vujovic et al.,2011). However, interest rates and risk of financing can have a significant and even critical role in decrease or increase of prices of services and products, and that way cause decrease in demand for them.

## *INTEREST RATE AND AGRICULTURAL SECTOR*

Status of agriculture is always unfavourable. Root causes of such status are miscellaneous. However, the most noticeable ones are: (1) inadequate place of agricultural sector in total economic development; (2) inadequate loan and interest rate policy; (3) organizational and managerial conditions and disappearance of large systems; (4) inadequate privatization of large facilities, which in such circumstances do not realize their full potential etc.

Agricultural sector takes inadequate place in total economic development in Serbia for decades even though basic potential for agricultural production is more favourable in Serbia than in many European countries.

Organizational management restructuring was carried out without good analysis and in danger of breaking natural ties within agricultural complexes. This reorganization was carried out just before ownership transformation in agriculture, which contributed to more profound process of breaking production connections.

Due to inadequate loans and interest rate policy of the banking sector and monetary authority agricultural sector was the first to experience stopping or limiting of bank loans on one hand, and inadequate interest rates on loans for agriculture on the other. But agricultural sector was able to help country overcome difficulties during the hardest times with its production whatever it was like.

When we speak about the role of modern state in production of food we can conclude that it is similar in more and less developed countries, but the measures to fulfil it are not the same. Forms of state interventions can and have to be various, starting from low food prices, subventions for food prices, supply control, import barriers, export promotion, adequate loans and interest rate policy, marketing, etc. However, ongoing global economic crisis led to complete turnover in financial and production sphere, different approach to solving accumulated problems and recognition of them.

"Economic crisis can be recognized according to classical indicators: decrease of economic activity, lower cost-effectiveness, level of indebtedness, lower liquidity, loss of market participation, mistakes in management, information on surrounding et"(Vojinovic et al., 2011). Of course, the business risk is higher during crisis period, credit ratings of countries and banks are lowered, so interest rate, i.e. the price of capital is adequate in that situation.

We never or hardly ever take time to think how much an unusual phenomenon actually money is. However, each bill is just a paper with no intrinsic value, but money offer has a large influence on production, investments, employment, prices, interest rate and so on. Agricultural sector as a significant investment field, i.e. the largest investment field, should and must "win" a more significant stake from financial sector and state for using the money with favourable conditions, appropriate to the needs of agricultural sector. Interest rate policy should enable agricultural sector to use great chances in production, processing and export of food and food products. It is a big opportunity for Serbia in the times of crisis.

Development of agricultural sector is unimaginable without investments into expanding of processing capacities of agricultural industry, into production itself, or into creating better conditions for agricultural production (irrigation etc.). Each investment has to be socially justifiable and contributing to sustainable development.

"Sustainability of investment, i.e. sustainability of development is first evaluated according to the United Nations model when determining whether an investment project is socially justifiable. One generally acknowledged definition of sustainable development is in 1987 Brundtland report of UN Commission on Environment and Development, which says: "Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs" (Popovic,Čoprka,2011). So, investments are significantly influenced by price of capital, i.e. interest rate.

## *THE ESSENCE OF INTEREST RATE*

If we start from the fact that interest rate in economic, legal and political sense is the essence of each particular financial business, we can conclude without a bit of pretentiousness that interest rate (contractual and penalty interest rate) has, it seems, almost critical influence on the entire functioning and development of financial activities, including development of agricultural business. Famous J.M. Keynes discovered a new role of interest rate in economy based on free movement of goods and capital, discovering the influence of interest rates on reviving of agriculture and economy in general and employment. State through its institutions, by means of interest rate (e.g. setting discount or reference rate) regulates operations of banking sector and a great deal of the conditions for operations. Hence, whenever central bank changes discount or reference rate that event attracts attention of banks, companies, citizens and media.

Interest rate is, in shortest, in its essence compensation paid for using somebody else's money. It is a price determined by contract or by law, especially if using of money is unauthorized. Interest rate is a demonstration of owner's rights, an attribute of ownership in wider sense. Interest rate is in exclusive function of ownership and capital.

'There is another notion of interest rate, i.e. the rate which measures profit from investments by means of real goods and services. That is real interest rate. It measures the quantity of goods which will be obtained tomorrow for goods we invested today. Real interest rate is obtained when nominal interest rate is increased by inflation rat'(Vukosavljevic,2008).

## *CONTRACTUAL AND AGREED INTEREST RATES*

There is a big difference between "contractual interest rate" and "agreed interest rate". The term "contractual interest rate" shows belonging of the interest rates to a contract which determines interest rate, i.e. interest rates are agreed upon between legal entities, while "agreed interest rates" refers to the manner they are determined. Interest rate is set as a relative value (percentage) of principal, and there is a rule to calculate and quote interest rates in the same asset as principal. If the principal is money, interest rate will be money too.Interest rate in cash can be agreed upon on non-monetary obligations.

Banks' data show that interest rates in Serbia nowadays are very high on average. As such, they are not stimulating any kind of investment into business activity, whether production or service program of citizens or companies, for example:

- regular overdraft rate is 30.15% on annual level,
- average unauthorized overdraft rate is 48.72%, in some banks from 23.20% to 70%.

## *ANATOCISM*

Anatocism is a term from Ancient Greek Law and times which denotes compound interest. It is similar to usury, which is why in many countries interest rate is limited by law. Anatocism is nowadays rarely used since it very often causes insolvency. Prohibition of anatocism in practice is very often abused in contracts when debtors are charged various fees, costs etc.

## *REFERENCES*

[1] Claytzon G. E.,SpiveyChristopher B. (1978): "The Time Value of Money" WB. Saunders.
[2] ČolanovićB.(1998): PeterS. Rose (2003): "Banking in Yugoslavian Transition", Economic Annals, Belgrade.
[3] Encyclopedia of Property Rights,(1978)Newspaper Publishing Company, Official Gazette SFRY, Belgrade
[4] Greuning, H., Brajović, S. (2006), „Amaliza upravljanja bankovnim rizicima" ,MATE, Zagreb, str.135-136
[5] Keynes J. M. (1936): "General Theory of Employment, Interest and Money": The General Theory of Money.
[6] Keynes J. M. (1936): "Discussion on money", (A Treatise on Money).
[7] Mishin F.S. (2006): "Monetary Economy, banking and financial markets" (seventh edition), Belgrade.
[8] Miler Roger L.R., Hoose D.D. (1997): "Modern Money and Banking" (third edition), Zagreb.
[9] Popović G., Čoprka M. (2012): "Practice of evaluation of social sustainability of investment projects in EU", Economics of Agriculture,No. 4/2011.p.706.,Institute of Agriculture Economics,Belgrade.
[10]RoseP.S. (2003): "Management of Commercial Banks",Zagreb.
[11]Vukosavljević D.(2008): Monograph"Monetary policy in Serbia 1981-2006", page 69, Andrejević Endowment, Belgrade.
[12]Vujović S., Spajić J., Vukosavljević D., (2012): "Defining anatomy of tourism demand in the light of rules, phenomenon and paradox in consumption", Economics of Agriculture, No. 4/2011. p.570.,Institute of Agriculture Economics, Belgrade.
[13]Vojinović B., Cvijanović D., Veselinović P.(2012): "Research on the influence of crisis on business activities of domestic companies" Economics of Agriculture, No. 4/2011.,p. 750.Institute of Agriculture Economics, Belgrade.

# *APPLICATION OF CURRENCY FORWARDS AS FINANCIAL INSTRUMENTS FOR HEDGING IN THE IMPORT-EXPORT BUSINESS IN SERBIA*

*Natasa Vujadin,PhD*[11]

*Radomir Vujadin,PhD* [12]

## *ABSTRACT*

*Forwards are extremely useful financial instruments for currency hedging. Serbia is a small, open economy which is increasingly turning to other markets, which in turn requires the use of specific financial instruments in business in order to reduce the risk of market unpredictability. The subject of this paper is to analyze and monitor the volume of forward transactions concluded in domestic financial markets and their compliance with the exchange rate. The results have showed that domestic importers and exporters use the mentioned financial derivatives in managing currency risk inefficiently. Also, no dependency between the volume of closed forward transactions and the exchange rate can be found. The aim of this paper is to highlight the importance and potential of forwards in the protection of exchange risks in Serbian export/import companies.*

***Key words:****Forward,Financial Derivative,Foreign Exchange Rate, Commercial Banks*

***JEL Classification****:G19,G23*

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[11]Natasa Vujadin, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, natasavujadin@gmail.com

[12]Radomir Vujadin, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, r.vujadin@gmail.com

## *INTRODUCTION*

Financial institutions during the 70s found themselves in very risky situations which became even riskier during the 80s and 90s of the 20th century. Exchange rates were changing occasionally during this period, and the foreign exchange market became instable. This was the reason why the managers of financial institutions had to make an attempt to minimize the risk. The big interest for risk minimizing caused the advent of new financial instruments which would help financial institutions and their managers to manage risk better. These instruments are called financial derivatives and can to be very useful as tools for minimizing and controlling some risks or even several risks simultaneously. Furthermore, financial derivatives are useful not only as tools for the simplest risk management, but they are also an important profit source, especially for business banks. However, not all existing kinds of financial derivatives are equally present in all countries. There are some countries, as for example the USA, where the trade of futures and options dominate, and there are also countries with a less developed stock market. For that reason, the use of forwards as a type of financial derivative dominates in the countries like the USA. It is no doubt that Serbia is among the countries in which only forwards and swap contracts are used.

For the mentioned reasons, the aim of this paper is to show the link between the most commonly used instrument of protection – currency forwards and the movement of the exchange rate. We wish to point out how big the influence of exchange rate volatility is on the volume and the intensity of concluding forward contracts. We especially tried to examine the mentioned phenomena on the Serbian financial market, considering the fact that in Serbia there is a strong need for protection from the risk of exchange rate changes.

## *CURRENCY FORWARDS – THE THEORETICAL FRAME*

Forward contracts, as the oldest financial derivatives, take into account the exchange of two currencies to be carried out in the future, except that all the conditions (the exchange rate, delivery date and transaction amount) are set at the moment of the contract conclusion (Miletić et al.,2011, p. 187). Different from the other financial derivatives which are traded on the organized exchanges, the forward contracts are usually agreements between two business parties .One side of the forward transaction takes the so-called long position and allows the purchase of a certain financial assets at a fixed time in the future for a price specified in advance. The other side in the forward transaction takes up a short position and allows the sale of a certain financial assets at a fixed time in the future also for a price set in advance.

Forward contracts are not subject to standards which are valid for other kinds of exchange traded derivatives, as they are very flexible (delivery date, amount etc). The delivery date of the financial assets could be any date which both sides agree to. With this type of contract delivery, the date must be precisely determined, which is different from the other financial derivatives (such as futures) where this is not the case.

Forwards serve for hedging (protection) of foreign exchange risk. The following example in Table no. 1 best illustrates the mentioned.

*Table 1: Forward exchange rates EUR/USD*

| Rate | Bid | Ask |
|---|---|---|
| 3 months | 1.392593 | 1.392618 |
| 6 months | 1.392464 | 1.392699 |
| 9 months | 1.392321 | 1.392811 |

*Source: www.reuters.com, 2014.*

According to the table, to buy a million euro in nine months, some 1,392,321.00 USD is needed, according to the nine-month forward rate of 1,392,321.00. If the spot exchange rate for nine months grows for example to 1.40, the forward contracts would be positive (1,400,000.00 – 1,392,321.00 = 7,679.00). In this case, the client who has arranged the forward contract would be at an advantage and would be protected from the consequences of the risk of exchange rate change. But if the spot exchange rate for nine months falls to the level of 1.29, the value of the forward contract would be negative (1,290,000.00 – 1,392,321.00 = -102,321.00). The hedger might lose or gain money on the forward contract, but because of this existing spot position the end price will be equal to the initial forward prices adjusted for the differential in the basis.

An analysis of forwards takes into consideration an analysis of the forward price, i.e. the exchange rate and the value of the forward contract.

The arranged price i.e. exchange rate in forward contracts is known as the forward rate or the exchange rate on which will be based the exchange of the arranged currencies. The shipping price is determined by supply and demand.

Along with the forward rate, also analyzed was the so-called forward price. The contracted forward price is the forward rate which would be valuable if the forward contract were concluded today. In simpler terms, the forward price in certain contracts is defined as the forward rate which equates the contract value with zero. By definition, at the moment of contract, the concluding forward price and forward rate are equal. But as time passes, the forward price changes and the forward rate remains the same. So these two rates cannot remain identical during the contract duration, as they can be evened out only by coincidence. Generally speaking, the forward price varies, depending on the maturity of the forward contract, interest rates and expectations. For example, the forward price in the

contract which predicts buying or selling within a three-month maturity period will differ from the forward price in the contract which predicts buying or selling with a six-month maturity period, which is clearly visible from Table 1.

At the time when the forward contract is concluded, the value of this contract equals zero. In other words, taking a long or short position imposes no costs for the contracting parties. Thus, the value of the forward contract while taking the long position could be expressed in the following way (Hull,1991, p. 40):

$E - E^F$ where (1)

$E^F$ represents the forward rate and

Erepresents the spot rate.

The value of the forward contract while taking the short position could be expressed in the following way:

$E^F - E$ (2)

The value of the forward contract can be positive or negative (Hull,1991). The conclusion of the forward contract does not imply any costs and provisions, so the value of forward contract represents, conditionally speaking, a pure gain or loss by the client.

During analyses of forwards, certain authors stress the difference between the forward price and the forward rate. The forward price represents the price (rate) which would be concluded today for the delivery of financial assets (foreign currency) in the future. The forward price would become the forward rate if the forward contract is concluded. Let us use the following example: if a three-month forward rate EUR/RSD today is for example 106.0200, this forward rate would become the official exchange rate of the forward rate if the contract was concluded. Thereby, the forward rate would stay unchanged because the contract was concluded, but the forward price would vary (Hull, 1991, p.4).

To analyze the forward contracts which could also be used for arbitration, we will define the following parameters which will be marked the same as in the former presentation: E represents the spot rate and $E^F$ is the forward rate. Owners of a certain foreign currency could make a profit if they place that currency on the market at the appropriate interest rate. We will define $r^*$ as the foreign interest rate when the funds are invested in a certain time frame $T$, and $r$ is the domestic interest rate. The relation between $E^F$ and E is expressed thus (Hull, 1991, p.60):

$$E^F = E^{(r-r^*)T} \quad (3)$$

This parity is well known in international finances and we will show its accuracy in a numerical example. Let us take as an example the annual interest rates in the EU countries (e.g. Germany) and in the Republic of Serbia - 0.612% and 9.5% on May 7th 2014, respectively. The EUR/RSD relation on the same date is 115.5361. From the former equation, the forward rate can be calculated for a one-year period.

$$E^F = 115.5361e^{(0,095-0,00612)*1} = 126,2752 \quad (4)$$

Suppose that the forward rate is smaller than the calculated one - approximately 125.9599. In that case, there are possibilities for arbitration in which the arbiter could do the following: borrow 1,000 EUR with an annual interest rate of 0.612% for a year, in order to convert Euros to RSD and get 115,536.20 RSD and place them at the rate of 9.50% or conclude a forward contract, whereupon he would buy 1,006.14 EUR (which is the amount borrowed in the first case 1000eur $e^{0.00612*1}$ = 1,006.14 EUR) for 126,733.14 RSD (1,006.14 EUR * 125.9599).

The borrowed amount from 1,000 EUR is converted to 115,536.20 RSD and placed at an annual rate at 9.5% for a one-year period, and after the expiration of that period it amounts to 115,536.20 $e^{0,095*1}$ = 127,050.40. From this amount, 126,733.14 RSD is paid, which is adequate to purchase 1,006.14 EUR according to the conditions of the forward contract. This amount is sufficient to return the equity and the interest for the borrowed amount of 1,000 EUR. From such a strategy, the investor can realize a profit of 127,050.40-126,733.14 = 317.26 RSD.

If we assumed that the forward rate is larger than the calculated one by approximately 126.4223, we have the following situation. Borrowed was 100,000 RDS at an annual rate of 9.5% during a one-year period, converted in 865.53 EUR and placed at an annual rate of 0.612% in a one-year period, while a forward contract was concluded regarding the sale of 870.84 EUR for 870.84*126.4223=110,094.01 RSD.

The amount of 865.53 EUR is placed in the mentioned conditions and during one year it amounts to 865.53$e^{0.00612*1}$ = 870.84 EUR. The borrowed amount which should be returned after a one-year period is 109,965.88 RSD. The investor would make a profit from 110,094.01 – 109,965.88 = 128.13 RSD.

From the above example, it is obvious that forward contracts can serve the investor not only as an instrument for the protection of exchange rate change risk, but also for arbitration through which profit can be made.

Now we will discuss how the spot and forward rate vary depending on the variations of the domestic and foreign interest rate. According to the mentioned equation: $E^F = E^{(r-r^*)T}$, if the foreign interest rate is bigger $r^* > r$ then the forward rate is smaller than the stop rate. Why is this so? A bigger foreign interest rate causes a bigger demand for foreign currency so it can be invested on the foreign market. An increased demand for foreign currency leads to a devaluation of the national currency and an increase of exchange rate E and decrease of the forward rate. Value $E^F$ will increase in accordance with the maturity of forward contract T.

If $r > r^*$ then $E^F > E$ and the forward rate will grow with the increasing of parameter T. When the domestic interest rate is higher, the interest for the domestic currency is bigger which influences its appreciation and during a direct quotation, there is a decrease of the spot exchange rate.

Forward contracts still have a significant appliance in practice as they allow the clients to conclude these contracts without limitation, according to their needs and their evaluation.

## *APPLYING CURRENCY FORWARDS IN THE EXPORT-IMPORT BUSINESS IN SERBIA*

On the foreign currency market in Serbia, some 18 banks deal with financial derivatives, i.e. more than a half of the total number of banks which operate in the country.

Unlike the world organized markets, Belgrade organized (stock) market do not trade with financial derivatives, meaning futures and options, even though this is stipulated by valid legislation. Banks deal only with forwards and swaps in direct contact with primarily their clients and other business banks. Actually, due to this, our research is related only with forwards as the dominant financial instruments.

The research will start with the table representation in Table 2 which shows the complete image of financial derivatives used in domestic business banks.

*Table 2: Overview of domestic banks dealing with financial derivatives.*

| Bank Name | Financial derivative types | Contracting of financial derivatives | Minimum or maximum amount per transaction | Ongoing costs for realization of transaction | Contracting parties in financial derivative businesses |
|---|---|---|---|---|---|
| Alpha Bank Serbia A.D. Belgrade | Covered quasi forward and partially covered forward, currency and interest rate swap | From three days to six months for forward transactions | No limited amount | No contracting costs | Economic entities and banks |
| Banca Intesa A.D. Belgrade | Covered quasi forward and non-covered forward | From six to twelve months | No limited amount per forward transaction | No contracting costs | Economic entities and banks |
| Credit Agricole Bank Serbia A.D. Novi Sad | Covered quasi forward | From one week to six months | No limited amount per forward transaction | No contracting costs | Economic entities and banks |
| Eurobank A.D. Belgrade | Covered quasi forward, partially covered and non- covered forward and currency and interest swap | From one week to one year | No limited amount per forward and swap transaction | No contracting costs | Economic entities and banks |

| | | | | | |
|---|---|---|---|---|---|
| Hypo Alpe Adria Bank A.D. Belgrade | Covered quasi forward and non-covered forward, currency and interest swap | No precise deadline | No limited amount per forward transaction | No contracting costs | Economic entities and banks |
| Jubmes Banka A.D. Belgrade | Covered quasi forward and partially covered forward | Up to three months | No limited amount per forward transaction | No contracting costs | Economic entities and banks |
| Komercijalna banka A.D. Belgrade | Quasi forward | From six to twelve months | Minimum transaction amount of 50,000 EUR | No contracting costs | Economic entities and banks |
| KBC Banka A.D. Belgrade | Covered quasi forward and non-covered forward | Up to three months | Minimum amount of transaction is 50.000 EUR, and maximum amount of transaction depends on approval limit of the Credit Committee | No contracting costs | Economic entities and banks |
| Marfin Bank A.D. Belgrade | Covered quasi forward, and partially covered forward, currency and interest swap | No precise deadline | No limited amount per forward transaction | No costs in contracting | Economic entities and banks |
| NLB Banka A.D. Belgrade | Covered quasi forward and non-covered forward, currency and interested swap | No precise deadline | No limited amount per forward transaction | No contracting costs | Economic entities and banks |
| OTP banka A.D. Novi Sad | Covered and non- covered forward and currency swap | Up to one year | No limited amount per forward transaction | No costs in contracting | Economic entities and banks |

| | | | | | |
|---|---|---|---|---|---|
| Piraeus Bank A.D. Belgrade | Covered quasi forward and non-covered forward | No precise deadline | No limited amount per forward transaction | No costs in contracting | Economic entities and banks |
| Raiffesen Banka A.D. Belgrade | Covered quasi forward and partially covered forward, currency and interested swap | From three days to six months, and in case of two foreign currencies, the forward deadline could be over six months, currency swap-three days to one year, interest transaction one to ten years | Minimum amount for forward transaction 50,000 EUR, minimum amount per interest swap 500,000 EUR | No contracting costs | Economic entities and banks |
| Societe General Bank Serbia A.D. Belgrade | Covered quasi forward and partially covered forward, currency and interested swap | To one year | No limited amount | No contracting costs | Economic entities and banks |
| Srpska Banka A.D. Belgrade | Covered quasi forward | To one month | No limited amount per forward transaction | No contract costs except the commission for the client for the execution of orders on the day of maturity | Economic entities and banks |
| Unicredit Bank A.D. Belgrade | Covered quasi forward and partially covered forward, currency and interested swap | Maximum deadline of forward transaction is eighteen months | No limited amount per forward and swap transaction | No costs in contracting | Economic entities and banks |

| | | | | | |
|---|---|---|---|---|---|
| Vojvođanska Banka A.D. Novi Sad | Covered quasi forward and partially covered forward, currency and interested swap | No precise deadline | No limited amount per forward and swap transaction | No contracting costs | Economic entities and banks |
| Sberbank Serbia A.D. Belgrade | Covered quasi forward and non-covered forward | Minimum deadline for forward transaction is three days, maximum is one year | No limited amount per forward transaction | No contracting costs | Economic entities and banks |

*Source:www.nbs.rs,2014*

This analysis leads to the conclusion that business banks in Serbia are engaged only in covered or quasi foreign currency forwards, partially covered foreign currency forwards, uncovered foreign currency forwards, currency and interest rate swaps. More precisely, Serbian banks are engaged in financial derivatives which are not traded on the organized (stock) market and whose basis is foreign currency. The meager offer of financial derivatives shows that a poor representation of forwards, futures, options and swaps shows a small development not only of the exchange currency market but of the overall financial market in Serbia.

According to the research, all eighteen banks have businesses engaged in covered or quasi forwards. The explanation for this is very simple. This type of forward covers delivery risk. Engaged with uncovered or real forwards are nine banks: Banka Intesa A.D., Belgrade, OTP Bank A.D., Novi Sad, Eurobank A.D., Belgrade, Hypo Alpe Adria Banka A.D., Belgrade, KBC Banka A.D, Belgrade, Piraeus Banka A.D, Belgrade, Vojvođanska Banka A.D, Novi Sad, NLB Banka A.D Belgrade and Sberbank Serbia A.D Belgrade.

Eight banks are engaged in partially covered forwards which implies paying the so-called margin or one part of the amount of funds (mostly in RSD) on the day of the forward transaction. The margin in most cases is 25% of the total amount Banks engaged in partially covered forwards are: Alpha Bank Serbia JSC, Belgrade, Eurobank JSC, Belgrade, Jubmes Banka JSC, Belgrade, Marfin Banka JSC Belgrade, Raiffesen Banka JSC Belgrade, Societe General Banka Serbia JSC Belgrade, Unicredit Banka JSC Belgrade and Vojvođanska Banka JSC Novi Sad.

Nine banks deal with currency and interest rate swaps: Alpha Bank Serbia JSC Belgrade, NLB Banka JSC Belgrade, Eurobank JSC Belgrade, Marfin Banka JSC Belgrade, Raiffesen Banka A.D. Beograd, Societe General Banka Serbia A.D. Beograd, Unicredit Banka A.D. Beograd, Hypo Alpe Adria Banka A.D. Beograd and Vojvođanska Banka A.D. Novi Sad.

The research has shown that most of the banks contract forward transactions with their clients and other business banks, while the banks which also deal with swaps usually cooperate with other business banks and the National Bank of Serbia, though rarely with individual clients.

Business banks dealing with forward and swap transactions with various maturity periods are dependent on client needs. According to available data, forward transactions with a maturity period of only one month are contracted by only one bank (Srpska Banka A.D. Beograd), two banks with the maturity period of two to three months (Jubmes Banka A.D. Beograd, KBC Banka A.D. Beograd,), six months - three banks (Alpha Bank Serbia A.D, Raiffeisen Bank A.D. Beograd, and Credit Agricole Banka Serbia A.D. Novi Sad), to one year – six banks (Banka Intesa A.D. Beograd, Eurobank A.D. Beograd, Komercijalna banka A.D. Beograd, OTP Bank A.D. Novi Sad, Societe General Bank Serbia A.D. Beograd and Sberbank Serbia A.D. Beograd), to eighteen months - only one bank (Unicredit Bank A.D. Beograd ) and the remaining five banks do not precise the maturity period. The only bank which has a specified maturity and swap transactions period is Raiffesen Bank A.D. Beograd. The maturity period for a currency swap at the mentioned bank is three days to one year, and for an interest rate swap it is one to ten years.

Regarding the minimum or maximum amounts of forward and swap transactions, banks occasionally have no precisely set limits which are consistent with the nature of those financial instruments of an unstandardized type. The exceptions are three business banks - KBC Banka A.D. Beograd, Komercijalna Bank A.D. Beograd and Raiffesen Bank A.D. Beograd. At KBC Bank A.D. Beograd and Komercijalna Bank A.D. Beograd, the minimum amount of a forward transaction is 50,000 Euros, the same applying to Raiffesen Bank A.D. Beograd. Raiffesen Bank A.D. Beograd also determinates the minimal amount for interest rate swaps from 500,000 Euros.

Common for all business banks in Serbia is that they charge no extra costs on concluding financial derivative businesses. According to the applicable Law on Foreign Exchange Operations, clients who conclude forward transactions related to foreign currency purchasing have to use them for appropriate payment to foreign countries. In that case, clients pay only regular costs which imply the issuing of payment orders, which differ from bank to bank depending on the freely set rates.

According to the new Decision on operations with financial derivatives, the clients are allowed to use financial derivatives for balancing their currency position, i.e. liquidity. Also, the National Bank of Serbia has introduced an obligation for business banks to obtain from the client an adequate statement regarding the purpose or reason for concluding the business deal.

The second common feature of all the banks engaged primarily with forwards is the simplicity of the procedure for concluding these types of transactions. The client addresses a bank’s authorized dealer with a request for the buying or selling of a certain amount of foreign currency during a certain period of time. The bank dealer offers to the client an exchange rate to carry out the potential transaction. Based on the offered rate, if the client accepts it, a contract about the execution of forward transactions is

carried out, with details regarding the rights and obligations of the contracting parties, i.e. the bank and the client. The bank is obliged to inform, through adequate documentation, the client regarding any potential risks of the transaction.

Carrying out research of the eighteen business banks, we came to the conclusion that most of the forward transactions were concluded with clients which represent large systems. Thus, the question is posed: which clients are concluding forward contracts? Our research have shown that these are mostly the clients obliged to pay foreign partners. Also these are clients who are paying large amounts to foreign countries, and thereby the losses, in the case of exchange rate change, would be large, so they reasonably wish to protect themselves. In Serbia, practice shows, this profile of client is mostly related to those companies doing business with oil, petroleum oil products and energy sources. Still, a small number of small and medium enterprises opt for exchange risk protection instruments, and even the National Bank of Serbia recommends to the economic entities to apply these instruments in their businesses. Large systems which have a large volume of payments toward foreign countries, due to the losses based on exchange rate differences, often address banks with requests for concluding forward purchase transactions. Consequently, the same clients contact the banks which offer such products with the same requests for forward businesses.

Which are the business banks in Serbia which offer hedging instruments for exchange rate changes to clients? Table 3 shows the ownership structure of the mentioned banks to indicate which are more engaged in the mentioned businesses on the Serbian market, domestic or foreign banks.

*Table 3: Ownership structure of the banks engaged in financial derivatives in Serbia*

| Business Banks | Major owner | Country | % share |
|---|---|---|---|
| Alpha Bank Serbia A.D. Belgrade | Alpha Bank A.E. Athens | Greece | 100 |
| Banca Intesa A.D. Belgrade | Intesa Sanpaolo Holding International S.A. | Italy | 77.79 |
| Credit Agricole Banka Serbia A.D. Novi Sad | Credit Agricole S.A | France | 100 |
| Eurobank EFG A.D. Belgrade | EFG Eurobank Ergasis Athens | Greece | 55.21 |
| Hypo Alpe Adria Bank A.D. Belgrade | Hypo Alpe Adria Bank International AG Klagenfurt | Austria | 99.92 |
| Jubmes Banka A.D. Belgrade | Republic of Serbia | Serbia | 19.77 |
| Komercijalna banka A.D. Belgrade | Republic of Serbia and European Bank for Reconstruction and Development | Serbia | 42.60% and 25% |
| KBC Banka A.D. Belgrade | KBC Insurance NV | Belgium | 100 |

| | | | |
|---|---|---|---|
| Marfin Bank A.D. Belgrade | Marfin Popular Bank public Co Ltd. | Cyprus | 97.22 |
| NLB banka A.D. Belgrade | Nova Ljubljanska Banka | Slovenia | 99.99% |
| OTP banka A.D. Novi Sad | OTP Bank | Hungary | 96.94% |
| Piraeus Bank A.D. Belgrade | Piraeus Bank Sapireus | Greece | 100 |
| Raiffesen Banka A.D. Belgrade | Raiffesen Bank International AG | Austria | 100 |
| Societe General Banka Serbia A.D. Belgrade | Societe General S.A. | France | 99.99 |
| Srpska Banka A.D. Belgrade | Republic of Serbia | Serbia | 96.52 |
| Unicredit Bank A.D. Belgrade | Unicredit Bank Austria AG | Austria | 100 |
| Vojvođanska Banka A.D. Novi Sad | National Bank of Greece | Greece | 100 |
| Sberbank Serbia A.D. Belgrade | Sberbank Europe AG | Russia | 100 |

*Source:www.nbs.rs, 2014.*

According to the given table, it is evident that most of the banks dealing with forwards and swaps are foreign banks or banks with major foreign capital. From eighteen banks, three are Austrian, four Greek, two French, one Italian, and one from Cyprus, Russia, Hungary, Slovenia and Belgium.

During 2013, residents concluded only forward transactions for purchasing foreign currency for RSD with banks, while forward purchasing of exchange currency did not occur. In total, 28 domestic enterprises were using the possibility of hedging exchange rate changes through concluding forward purchases of foreign currency from banks (in the fourth quarter of 2013). The share of forward purchasing of foreign currency from residents was 5% while the highest was in the fourth quarter – 6.3%. The average weighted maturity of forward purchasing of foreign currency was 39 days, while the largest weighted maturity was recorded in the second quarter - 47 days (http://www.nbs.rs/static/nbs_site/gen/latinica/90/dinarizacija/din_12_13.pdf08.05.2014).

The average value of resident forward foreign currency purchase contracts was 0.7 million Euros. Domestic enterprises in 2013 were not concluding transactions of forward foreign currency purchasing to domestic banks, as opposed to 2012. In 2012, five enterprises recorded this kind of forward transaction in the total amount of 1.3 million Euros. The average weighted maturity of transaction was 18 days, and the average value of the contract was 0.2 million Euros (http://www.nbs.rs/ static/nbs_site/gen/latinica/90/dinarizacija/din_12_13.pdf 08.05.2014).

In the currency structure of forward purchasing, it is the U.S. dollar which dominates by 85.3%, the Euro by 13.3% and the Swiss franc by 1.5%. A high share of USD in forward purchases of foreign currency could be connected to the fact that forwards are used by enterprises dealing with the import of energy products.

Tables number 4 and 5 will present foreign currency forward transactions of residents with banks related to the purchase and sale of foreign currency. The data is quarterly and the analysis includes the years 2012 and 2013, with an adequate comparison and establishing of the development and trend of this financial instrument.

*Table 4:Foreign currency forward transactions of residents with banks-resident forward purchasing*

| Year | | Amount in million Euros | | The weighted average maturity in days | | Share of the total purchase % | |
|---|---|---|---|---|---|---|---|
| 2012 | 2013 | | | | | | |
| First Quarter | First Quarter | 211,9 | 139,6 | 36 | 40 | 8.0 | 5,5 |
| Second Quarter | Second Quarter | 188,3 | 139,5 | 42 | 19 | 6.6 | 5.2 |
| Third Quarter | Third Quarter | 179,9 | 75,0 | 35 | 20 | 6.7 | 2.9 |
| Fourth Quarter | Fourth Quarter | 174,6 | 179,7 | 40 | 17 | 5.8 | 6.3 |
| Total | Total | 754,7 | 533,8 | 38 | 24 | 6.7 | 5.0 |

*Source: www.nbs.rs,Report on the dinarisation of the financial system of Serbia, 2014.*

From the presented data it can be concluded that the value of the concluded forward contracts during 2013 varies from quarter to quarter. It certainly may indicate the movement of economic activity in Serbia.

*Table 5:Foreign currency forward transactions of residents and banks - resident forward sale*

| Year | | Amount in million Euros | | The weighted average maturity in days | | Share of total sale % | |
|---|---|---|---|---|---|---|---|
| 2012 | 2013 | | | | | | |
| First Quarter | First Quarter | 0,2 | 0 | 20 | 0 | 0 | 0 |
| Second Quarter | Second Quarter | 0,4 | 0,9 | 16 | 47 | 0 | 0 |
| Third Quarter | Third Quarter | 0,6 | 0,5 | 6 | 23 | 0 | 0 |
| Fourth Quarter | Fourth Quarter | 0,1 | 0 | 92 | 0 | 0 | 0 |
| Total | Total | 1,3 | 1,4 | 18 | 38 | 0 | 0 |

*Source: www.nbs.rs,Report on dinarisation of the financial system of Serbia, 2014.*

If we compare the given data, we can clearly conclude that in Serbia there is still a higher import than export activity. In 2012, we observe a higher forward buying of foreign currencies by residents compared to 2013. In 2013 we have slightly greater the forward sale of foreign currency by residents in relation to the year 2012. The reason is due to a reduced export activity of Serbian businesses and insufficient knowledge about hedge instruments. Increasing the knowledge level about this area of business of the bankers will improve the foreign exchange market in the country.

A comparison of the two previous years leads us to the following appraisal:

- A forward purchase of resident foreign currency from business banks is still dominant in comparison with the forward foreign currency sale. It leads to the conclusion that Serbia is still import-oriented, with an insufficiently high level of economic development and activity. However, the volume of the concluded forward transactions in 2012 was bigger than in 2013. The summarized values for 2013 were drastically smaller (533.8) compared to 2012 (754.7). The quarterly results in 2012 indicated that the volume of concluded mentioned transactions has a negative trend. Though such a trend also continued in 2013. Observing negative growth rates of the gross domestic product, we can confirm that a more intensive economic activity and development influenced a larger volume of forward foreign currency purchases.
- In 2013, the number of enterprises using hedging instruments of exchange rate changes was reduced compared to the previous year.
- The participation of the forward foreign currency purchase reduced the total purchase of client foreign currency. In 2012 it was 6.7% and in 2013 it amounted to 5%.
- The average weighted maturity of forward foreign currency purchases was also reduced.
- The currency structure of forward foreign currency purchases stayed unchanged during the observed years. The US dollar remained dominant related to the other currencies.

As an analysis of forward contracts in Serbia in the last two years was given, it is necessary to explore their influence on the exchange rate trends on the Serbian market, but also to determine how the foreign currency rate affects the increasing or reducing of the volume of the concluded forward business.

Table 6 presents quarterly trends of the average value of the exchange rate Euro/RSD and USD/RSD in 2012 and 2013, calculated on the basis of an average monthly value.

*Table 6:Average quarterly RSD currency rates*

| Year | 2012 | | 2013 | |
|---|---|---|---|---|
| | Euro/RSD | USD/RSD | Euro/RSD | USD/RSD |
| First Quarter | 108.2806 | 82.3144 | 111.6912 | 84.5667 |
| Second Quarter | 113.6617 | 88.6421 | 112.1546 | 85.9035 |
| Third Quarter | 116.9180 | 93.4363 | 114.1938 | 86.1830 |
| Fourth Quarter | 113.3140 | 87.4425 | 114.3218 | 83.9822 |

*Source:www.nbs.rs,2014*

In 2013 there was a depreciation of the national currency, in comparison with 2012. Also, the dinar lost its value compared to the two leading currencies, the Euro and the USD. The highest value of the domestic currency was in the first quarter of 2012 and the lowest in the third quarter of 2012.

From the presented data about concluded forwards and the data about foreign currency trends, it can be concluded that in 2013 clients were purchasing less forward foreign currency on the Serbian market, due to a rise of the exchange rate. In the observed period, the fluctuations of the exchange rate were significant, which should result in an increasing of the volume of the concluded forward contract in the aim of protecting against foreign currency exchange risk, but in Serbia this was not the case. In fact, forward foreign currency purchases from the residents decreased as the exchange rate rose. Forward contracts do not follow volatility of the exchange rate.In the local conditions, the clients, in the case of dinar depreciation, prefer prompt and spot trading due to a fear of eventual losses. The data shows us that our economic entities rarely used hedging instruments for exchange rate changes, which does not have a positive impact on the development of the financial market.

## *CONCLUSION*

The conclusion after the observed research is clear: the financial derivatives market is poorly developed in Serbia. The main reason for such a situation may be the underdevelopment of the entire Serbian economy. When economic activity is raised to an appropriate level and businessmen realize the benefits of financial derivatives, the market will record a progress in development. When the volume of the economic exchange increases and we have a larger production volume, a larger export of hedging of the exchange rate changes will gain an even greater importance. The benefits of financial derivatives are quite large. The enterprises in this way protect themselves from negative exchange rate consequences and enlarge their profitability.

The second reason of the underdevelopment of the mentioned instruments is insufficient awareness by businessmen. It is necessary to first train bank employees which should support and present this type of product to their clients. It can be said that this type of business until a couple years ago was completely unknown to Serbian bankers and the portfolio of their products did not include any financial derivatives. With the arrival of foreign banks on the Serbian market, the situation has changed in a positive direction. The mentioned business activities can be very easily introduced although nowadays there are only three banks which deal with financial derivatives.

The Serbian foreign exchange market is not yet ready to trade with other financial derivatives such as futures and options. In Serbia there are no clearing houses as a precondition for working with the mentioned derivatives, and what is more important, participants on the market lack the amount of capital which is necessary for trading with futures and options, so eventually there would be some devastating losses.

A more intense development of financial derivatives market in Serbia is still in the distant future. The instability of the domestic economy slows down the development of the mentioned segment of the financial market which in turn does not lead to an optimistic prognosis.

There is no effective appliance of financial derivatives on the domestic market as, instead of their more intensive usage in the case of a bigger fluctuation and depreciation of national currency, we have an opposite trend, as research has shown in the observed period. We can conclude that the domestic financial market is still underdeveloped and unable to compete with the developed countries of the world. However, the growth and development of economic activity as well as the stabilization of the national currency will cause a greater need for the mentioned financial instruments.

## *REFERENCES*

[1]Ćirović, M. (2000), Devizni kursevi, Beograd, Bridge University
[2]Erić, D.(1997), Finansijska tržišta i instrumenti, Naučna knjiga
[3]Hull, J. (1991), Introduction to futures and options markets, Toronto, Prentice Hall international.
[4]Hull, J. (1991), Options, futures and other derivatives, Toronto, Prentice Hall international
[5]Miletić, S., Kvrgić, G.,Vujadin, R., (2012), Monetary economy, Faculty of Business Economy and Entrepreneurship, ISBN 978-86-6069-047-2.
[6]http://www.nbs.rs 08.05.2014.

# *SECURITIZATION AS A FUNDING SOURCE OF COMPANIES*

*Dejan Vukosavljevic,PhD*[13]

*Danijela Vukosavljevic,PhD*[14]

## *ABSTRACT*

*Securitization is in wide use and a component of many risk transfer mechanisms between various parties. It is based on selling risky assets in absolute form, as well as synthetic transfer of specific risk aspects. The aim of this paper is to define securitization, various contexts of its use, transaction participants and their motivation. Securitization in practice is a process in which loans, receivables and other assets are gathered into pools (packages). Money flows in connection with them are employed as well as economic value as a support to securities settlements.*

*Securitization is turning illiquid securities and illiquid assets into liquid securities and liquid assets. Final result of securitization is providing funding for activities of companies by selling their assets gathered into pools (packages), instead of using loans. Methods used in this paper are desk researches, as well as the method of analysis, practical application worldwide etc.*

*This paper proves that securitization can practically be based on any asset the relative value of which can be determined, or which generates relatively predictable future income flow, which does contribute to providing funding of current business activities of a company.*

***Key words:*** *Securitization, Pool, Assets, Risks*

***JEL Classification:*** *M21*

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[13]Dejan Vukosavljevic, Faculty of Business Economics and Entrepreneurship,Belgrade,Serbia, vukosavljevic.dejan@gmail.com

[14]Danijela Vukosavljevic, Raiffeisen Bank International AG,Vienna, Austria, danijela.vukosavljevic@rbinternational.com

## *INTRODUCTION*

Financial system is complex and it involves different types of financial institutions, such as banks, insurance companies, investment funds, finance companies, investment banks and others. Each of these institutions can be and is the subject of this research since the field is too large and it can be observed from several viewpoints. A successful management of economy, in addition to a well-established economic policy that any country including ours defines every year, requires an important starting point- laws and by-laws, determined development policy, investment policy, and at the same establishing a budget which should be conducive to economic development. Considering that financial system is complex and that in all the specified institutions there is still a lot of risk, in this paper attention must be focused on the area which examines the possibility of additional funding for projects, sources of funding and means to reduce the risk in funding. The subject of this paper is financing projects and whether it can be achieved on the basis of long-term securities and securitization as new form of financing which is not sufficiently theoretically and practically developed and used in our banking conditions yet.

## *PREVAILING VIEWS AND POSITIONS IN THE AREA OF RESEARCH*

During the last three decades in financial markets, capital markets and long-term securities positions and practices have fundamentally changed. Nowadays we observe that field almost like a regular phase in a development cycle of companies. In cases of temptation, insolvency, application for adjustment and payment of claims securitization is not completely free from all the risks for its owners and creditors, but this activity rarely makes the existing situation worse and most frequently, in fact, it helps. Therefore, training of project leaders through market mechanisms and especially for the long-term securities and securitization of receivables as a new form of financing is the area for which certain positions were adopted which are intensively thought through. Another important view that prevails in the literature is related to investment into securities of profitable and financially troubled companies and securitization of their claims. The prevailing view is that such investment is one of the strategies for structuring the investment portfolio, which is becoming more popular in the countries with developed financial markets. Opportunities and investments into such securities offer investors the opportunity to achieve high yields, but are also burdened with high levels of risk. Securities of the troubled companies represent a wide range of debt and possessors' financial instruments of companies that have experienced liquidity problems.

## *RATIONALE AND REFERENCES*

Since our country is one of the countries which embarked on the path of development of modern financial markets, the importance and timeliness of work threads simply imposes itself because it deals with one section of the market (long-term securities, securitization, etc.), and with important phase in the life cycle of every company - financing of projects with the necessary funding sources. Also, the importance of this study is in showing and explaining the ability to predict corporate progress, as well as the methods and techniques by which this can be done.

- The first task of this paper is to show that raising of capital through long-term securities and receivables through securitization claims of corporations for funding projects is entirely normal and regular stage in the life cycle of each company and it brings benefits.
- The second aim is to point out the necessity of such work in securities market and economic entities.
- The third and final hypothesis is that the securities of troubled, low-ranking and non-ranging companies taken through securitization are a legitimate investment alternative for structuring of the investment portfolio.

Securitization is beneficial for all the participants in that process. It is beneficial for borrowers, as those who take loans, because it increases the possibility of obtaining a loan. How so? Largely, the attention will be paid to securitization as a new way of financing projects and its positive and negative aspects. However, there is much more evidence which suggest that securitization is a useful form of additional financing and establishing conditions for immediately payable to be transformed into good and uncollectible. Securitization differs from traditional forms of financing.

## *METHODS OF RESEARCH*

This paper is based on many analyses, domestic and international achievements, and expert literature, and the following methods are employed: a) logical research, b) interdisciplinary approach, c) inductive method, d) general methods of research which are compatible with social and economic sciences using empirical and theoretical approaches, e) methods of deduction, f) subjective methods, g) comparative methods and discrimination methods, h) statistical data etc.

## *SECURITIZATION AND PROJECT FINANCE*

## *PROJECT FINANCE OF INVESTMENTS*

Providing means for financing investments is a difficult task for all investors. Many questions come to light when it comes to providing means for financing an investment project. These questions are usually posed in cases where a project needs to be financed from the credit potential of banking sector.

We have learned from experience, and that is still true today, that any placement of bank's credit potential to loans carries some risk arising from the question whether the loan will be returned within the agreed deadline. For these reasons, banks are forced to obtain quality additional means of security in order to compensate for the risk of non-repayment of the borrowings. Each provision is a serious problem for the investors, therefore bank often does not approve the requested loans because of the low-quality provision for timely repayment of the loan.

In 2004, Serbian banking system has launched a new form of long-term lending to corporations, primarily in the construction of housing for the market called "Project Finance".

## *WHAT IS PROJECT FINANCE*

Project finance of investments (e.g. construction of housing for the market) is the expenditure of funds for a particular project strictly dedicated and completely controlled by the bank. If it is about a housing project for the market, and it is available for any other purpose, it is necessary for the project finance to meet certain conditions set by the bank, which means that in accordance with the law the investors provide:

- Proof of ownership or right to use the land on which the facility will be built,
- Complete technical documentation (preliminary design, final design and other documentation and licenses),
- The proof that that the borrower is a newly registered company the sole job of which will be to build a facility, with no right to get involved into other activities while the investment is credited,
- That the borrowers, i.e. the investors, ensure their own participation in construction of the facility in the amount of at least 20% of the investment value (depending on the bank), and many other conditions(Vukosavljevic et al.,2013,pp. 171-172).

This method of financing (e.g. in the housing market) is very beneficial for all the following participants in this business: the investor, the bank lenders, and for real estate buyers. This type of financing may be approved in any area of investment.

## *WHAT IS SECURITIZATION AND ITS CONCEPT*

The term securitization has entered into wide use, and it describes many mechanisms through which risks are transferred between different parties, and it includes sale of risky assets in absolute form, as well as synthetic transfer of specific aspects of risk. This paper aims to define the word securitization, different contexts in which the word is used, the transaction participants and their motivation. It is obvious that the world of securitization on the theoretical level and in the market is already defined - creating new asset classes and new mechanisms, with new participants who regularly enter the market.

Securitization in practice is a process through which the loans, receivables and other assets are collected in pools (packages). Cash flows associated with them are engaged, and so is the economical value as a support to the payments on the securities. These securities are issued by issuers or on their behalf on public and private markets in order to finance their business activities based on securitization. These securities are commonly referred to as backed securities (asset-backed securities, ABS).

Investors' risk is therefore correlated with the assets securing the securities into which he invests. The primary source for payment of the interest and repayment of the principal ABS does not represent all the revenues of the issuer, but certain cash flows generated by the assets. Credit analysis of the investors therefore focuses on the defined pool of assets.

Pool of assets in securitization from the perspective of the credit often increases the internal structural measures, sometimes with the assistance of external participants. Funding liquidity may somewhat expand credit capacity, but it usually provides a mechanism for directing the flow of cash transactions by providing a regular flow of payments to investors, especially in a situation where flows of payments by securitized assets are at risk and vulnerable.

The basic concept of securitization can be applied to virtually all assets the relative value of which can be determined, or which generate a relatively predictable future stream of income. Securitization has for this reason spreaded beyond the typical classes of assets to the less-known asset classes, including claims based on insurance, liability of freight forwarders to railways, natural gas buying and future rights to royalties, among others. Basics of securitization are relatively homogeneous and common to the most types of transactions. Therefore structure, roles and functions of key participants in transactions are similar wherever the concept of securitization is applied, regardless of jurisdiction and despite of the different regulatory environment. Securitization is different from other forms of financing such as borrowing or joint stock capital, where yields for investors in general depend on the possibility of payment of overdue receivables or potential for profit making of the company's current operations.

## *SIMILARITIES BETWEEN SECURITIZATION AND SECURED LENDING*

There are some similarities between securitization and secured loan (secured lending). In case of a secured loan, which is also called credit-based assets, the lender requires that the firms which take a loan deposit the assets of the company as a security or collateral for the loan arrangement. Assets used as the collateral may be short-term assets, such as accounts receivable, and long-term assets, such as equipment. For example, in financing based on accounts receivable, the lender verifies that the borrower's accounts receivable can meet the financial obligations of the loan arrangement. The amount that the lender will approve to the firm client depends on: a) acceptability and the quality and nature of the trade receivables, b) types of clients to which the client company sells goods or services and the terms of sale c) historical performance of accounts receivable of the company client.

Apart form that, some types of claims might not be appropriate for funding on the basis of a secured loan. In case of long-term assets such as equipment, secured loans can be in form of loans or bonds. The cost of the loan depends on the credit quality of the borrower since the lenders consider the ability of the borrower to fulfill the terms of the credit arrangement.

Securitization differs from traditional forms of financing in several important aspects. The key of securitization is that one or more securities may be issued based on the cash flows generated by a pool of assets, which may be of higher credit quality than the secured debt of the company. The key to securitization is that it is possible to issue one or more securities that may be of higher credit quality than the secured debt of the company based on the cash flows generated by a pool of assets. Higher credit quality of these securities is achieved on the basis of the cash flow generated by a pool of assets, as opposed to taking over payment obligations of the borrower company. In case of financing based on accounts receivable, the lender first considers the cash flow generated claims, and the borrower company is responsible for any shortfall. In case of the insured lending where collateral is property, the lender primarily examines the ability of the borrower company to repay the debt, and only then the value of that collateral can be liquidated in case of bankruptcy. In addition, when relying on the liquidation value of the collateral, the lender assumes that in the process of liquidation distribution of the assets is based on the principle of absolute priorities (i.e. the secured creditors are paid before the unsecured creditors and equity investors are to receive the funds generated by the liquidation). Although this is common in liquidation of a corporation, the principle of absolute priorities does not exist in reorganization of the corporation.

As securitization involves sale of assets, it is usually compared to factoring (Another reason for the comparison is that factor becomes the department of loans and debt collection of the client company; In the case of securitization, the performance of billing and servicing is usually retained by the initiator, or they can

be transferred to an independent repairer).Unlike the secured loan arrangements, such as financing based on accounts receivable, the client company sells receivables to the factor. Credit risk of the factor depends on the arrangements, which can be factoring with recourse, modified factoring with recourse and non-recourse factoring.

Factor does not absorb the risk of the loss for unpaid claims of a client-customer when it comes to factoring with recourse, but is paid by the client company. With the modified factoring with recourse, the factor receives insurance and offers it to the client company. In that case, the client company is not responsible for the risk of loss based on uncollected receivables from customers (Client company is responsible for claims from the customer if the failure to pay occurs due to disputes arising from the product specification or quality of the product). With factoring without recourse, all the credit risk is transferred to the factor.

## *SECURITIES THAT ARE ISSUED IN A SECURITIZATION*

Terms used for securities issued by a special purpose company in securitization are: entries secured by assets (asset-backed notes), debentures secured by assets (asset-backed bonds), or obligations secured by assets (asset-backed obligations).When security is a short-term commercial paper, it is called commercial paper, ABCP. As it will be explained in the section that discusses different types of securitization structures, asset-backed securities may have different credit risk exposure and on the basis of credit priorities, securities are described as senior notes and junior notes, or subordinated notes.

## *CLASSIFICATION OF THE INITIATORS OF THE SECURITIZATION*

The most common initiators in the world of securitization are banks, mortgage originators, the initiators- specialists for consumer loans, asset managers, and in a growing number of cases corporations. Table 1 summarizes most of the classes of potential initiators, a possible range of asset classes for securitization and their motivations. The greater European initiators are generally banks. Their primary motivation until now has been to achieve a more efficienct regulatory capital. However, with the proposed amendments in accordance with the Basel guidelines on capital adequacy (Basel Capital Adequacy Guidelines), primary motivation in future is likely to be diverting liquidity, business growth, transfer of risk of premature withdrawals and transfer of credit risk.

There are different categories of issuers in structured transactions, ranging from direct emissions by the very structure of the initiator to multiple vendors. An overview

of these categories is presented below. The U.S. and the growing European market have significant flows of securitization through the intermediary market, where several initiators gather under the same sponsored program of emission. This way initiators achieve economies of scale, which is particularly effective in case of short-term claims to initiate Corporation. In the context of securitization, companies are established exclusively for the purpose of purchasing risk or cash flows from the initiators, which is directed to investors. They are usually established on an offshore destination, and are legally separate from the assets of the initiator. This way the securitized assets are effectively separated from other business assets of the initiator. In some cases, initiator issues bills the performance of which is correlated with the performance of some assets retained in its balance sheet. The key to the success of such structures is the ability of the initiator to eliminate other assets from the risk equation. In other cases, the initiator appears in the role of the issuer and his total business is being securitized.

## *MOTIVATION OF THE INITIATOR*

Understanding motivations of the initiators and decision-making criteria is crucial for assessing whether to invest in structured financial transactions. Successful transaction creates a partnership between the initiator, service provider and the investor. This partnership must survive throughout the life of the transaction, provided, however, that each of these parties understands the motivation of others. The key reason for securitization can be represented as follows: with regard to banks and corporations, the traditional management of the balance sheet requires optimal management of liabilities. Securitization allows optimal use of venture capital, taking into account the residual economic risks and division into operational and risk management of daily operations. With efficient transfer of credit risk, the capacity for incremental credit risk is created,whereas the limits of the other side are being released.

*Table 1:Classification of the initiators, target asset classes and motivation*

| Type of initiator | Class of assets | Motivation |
|---|---|---|
| **Banks** | Mortgage loans (residential and commercial);<br>Loans (consumer and corporate);<br>Portfolio of bonds and credit derivatives;<br>Leasing | Transfer of risk;<br>Efficiency of capital;<br>liquidity;<br>Risk transfer of early payment,<br>New business |
| **Initiators**<br>Specialists in mortgages | Mortgages<br>(residential-often non-conforming and without guarantees) | Liquidity;<br>New business;<br>Efficiency of capital;<br>Transfer of risk<br>Early payments |
| **Financiers**<br>The level of consumer | Loans by credit cards<br>Loans for the purchase of vehicles<br>Loans to individuals<br>Leasing | Business<br>Liquidity<br>Efficiency of capital<br>Transfer of risk<br>Early payments |

| | | |
|---|---|---|
| *Companies* | Export;<br>Claims;<br>Inventory;<br>Leasing | Efficiency of capital<br>Liquidity |
| Entertainment and retail | Claims of the pubs;<br>Cash flows of the theatres;<br>Cash flows of the retail; Revenues from franchise | New business and liquidity<br>Efficiency of capital<br>Profit |
| Construction companies | Financing for borrowing:<br>The construction of office space,<br>Hotels,<br>Shopping malls<br>Nursing homes | Efficiency of capital<br>Liquidity<br>Deadlines and Costs |
| *State* | Borrowing for privatisation<br>Export credits | Efficiency of capital<br>Balance sheet<br>Liquidity<br>Deadlines and Costs |
| Utility companies | Claims<br>Real estate | Efficiency of capital<br>Liquidity<br>Deadlines and Costs |
| Projects | Cash flows after completion | Efficiency of capital<br>Liquidity<br>Deadlines and Costs |
| Asset managers | Bonds; portfolio of credit derivatives and credits | Transfer of risk<br>Efficiency of capital<br>New business<br>Liquidity |
| Hedge funds and investment entities | The portfolio of bonds; credit derivatives and loans; financing of structural products | Liquidity<br>Efficiency of capital<br>Profit |
| Housing cooperatives | The portfolio of real estate and its cash flows | Efficiency of capital<br>Liquidity<br>Deadlines and Costs |
| Health care | The portfolio of real estate and its cash flows | Efficiency of capital<br>Liquidity<br>Deadlines and Costs |

*Source: Commerzbank Securities / 2004th*

One of the possible motivations is reducing the cost of financing. Reducing the cost of funding is cited as the reason for securitization because the issuer has the ability to structure the cash flows generated by a pull of assets to create securities that are the most attractive to a wide range of institutional investors. Creating securities based on a pull of assets is called structuring transactions.

## *REASONS TO USE SECURITIZATION FOR FUNDING*

Non-financial and financial corporations, as well as state and local governments are also interested in securitization. Six basic reasons why corporations use securitization are: a) reducing the cost of financing, b) diversification of funding spources, c) risk management, d) regarding financial entities which must comply with the capital requirements based on risk, the possibility to release the required capital, e) the possibility of off-balance sheet financing, f) generating revenues based on fees for service.

## *THE POSSIBILITY OF REDUCING THE COST OF FINANCING*

In order to understand the possibility of reducing the cost of financing by issuing securities secured by assets rather than issuing corporate bonds, assume that company A has a single B credit rating. This rating is called a speculative rating (speculative-grade rating), and if company A had issued corporate bonds, these bonds would be high yield bonds or high-risk bonds (junk bonds), because all the securities which make a great income carry a high risk. "Credit risk or counterparty risk - is defined as the probability that the borrower will not be able to pay interest or repay principal under the conditions stipulated by loan agreement" (Greuning, Brajović,2006). If, for example, financial manager of company A wants to raise 100 million dinars by issuing corporate bonds, financing costs would be almost the same as the yield of T-bills plus range of issuers of single B rating in the industry sector in which company A operates (the same would be the case on fund raising based on commercial paper). Suppose instead that financial manager of company A uses sales contracts with payments in installments in the amount of 100 million as collateral for the bond issue. Although this is a type of secured loan, credit rating would probably be the same as in case of issuance of corporate bonds because they would be in default of any maturing debt obligations of the company A, and bankruptcy regulations could affect rights of the secured lenders to require payment of the interest on securities as to liquidate bonds.

However, suppose that company A may establish other legal entity and sell loans to that entity. This entity is a special purpose company. If the sale of loans is properly performed, that is, loans receivable are transferred, AT (new company) becomes the legal owner of the receivables instead of the company A. This means that if it comes to bankruptcy of the company A, its creditors cannot recover loans sold to the special purpose company since their legal owner is AT. AT sells the bonds, which are secured by loans (i.e. asset-backed securities), rating agencies assess the credit risk associated with the collection of receivables from loans regardless of the credit rating of company A. That is, the credit rating of the initiator / seller (of the company A) is of no consequence. Credit rating that will be assigned to classes of bonds issued by AT will not get any credit rating which issuer wants. It may look strange that the issuer AT can get any credit rating he wants, but it is so. Rating agencies will assess the class of the bond and indicate to the issuer that the transaction must be structured in order to obtain a certain rating for each class of bonds in the structure. Specifically, the issuer will be told how much raising of the credit rating of the structure is necessary in order to obtain a certain credit rating for each class of bonds. "When it comes to trends in lending, we need to mention that recently Efma / Finalta has engaged in research of loans with or without coverage in all major regions of Europe. In Western Europe, for a loan without collateral, and if there are differences due to the loan value or level of exposure, decision making took three and a half days, while in other parts of Europe it took eight or nine days. For loans with coverage and generally for loans of higher value with greater exposure to risk, the time is significantly prolonged

because of the need to collect information about the coverage. On average, it is more than nine days in Western Europe and more than 15 days in Eastern Europe, (Vukosavljević,2013). This procedure, in terms of obtaining funds for the work through securitization, is much simpler and faster.

Raising of the credit rating implies that there is a source of capital that can be used to absorb losses which pool of assets suffers (Look at FitchRatings: Note Acceleration in Whole Business securitization, 2nd of April 2004).There are different forms of raising the credit rating. The bottom line is that the rating agencies will assess impairment of the collateral and determine how big raising of the credit rating is necessary for classes of bonds in the proposed structure in order to achieve the target rating of the issuer. Therefore, company A, which we assume to have a single-B rating, can obtain funds on the loans granted to customers as collateral in order to achieve a better credit rating of one or more classes of bonds issued by the own credit rating. In fact, with sufficient raising of credit rating, a class of bonds secured by collateral can get the highest credit rating of triple-A. For the corporate bond issuance through securitization with a higher credit rating than rating of the corporation is the key role of the special dedicated company. Its role is crucial because special purpose company legally separates the assets used as the collateral for securitization from the corporation that needs the funds (initiator's / seller's), thus isolating the transaction from the initiator's credit risk.

Only specially dedicated company is structured as an entity in which the bankruptcy has no effect. Therefore, we are left with the risk of losing the assets, or credit risk, which can be alleviated by raising the appropriate credit rating until the target rating is achieved. Despite factoring in the cost of raising the credit rating and other legal and accounting expenses related to securitization, companies that need capital consider securitization to be cheaper than broadcasting of corporate bonds.

Although the difference between legal benefits that an investor in securitization has compared to the investor in secured debt obligations of the issuer is explained, the question is why corporations cannot provide such a legal advantage without selling assets to a special purpose company. The reason is that the prevailing legal structure does not allow isolation of certain assets if there are no claims of other creditors of the corporation in case of financial difficulties. Therefore, securitization is essentially a form of "legal" arbitration.

## *DIVERSIFICATION OF FUNDING SOURCES*

Corporations which need to raise funds through securitization must be positioned as the issuer of the securities in the market of secured assets. For this reason, among other things, it is often required from the issuer to transmits securities to the market in order to make his name recognizable in the market of securities secured by assets and to create a reasonably liquid secondary market (aftermarket) for trade with these securities. When the issuer is positioned, he can

keep track of the market and the corporate bond market and securities secured by the assets in order to decide on the best source of financing by comparing the total cost of funds in the two markets, as well as the immeasurable benefits in connection with the securitization.

## *CORPORATE RISK MANAGEMENT*

Credit risk and interest rate risk of the securitized assets are not risks of the initiator/seller. Thus, securitization may be used for corporate risk management. Not only banks, but corporations, too, can manage risk by means of securitization.

## *REGULATORY CAPITAL MANAGEMENT*

For financial institutions, securitization is means of managing regulatory capital (i.e. achieving capital adequacy requirements). The basic guideline for risky capital is the regulatory requirement for direct correlation of capital reservs and credit risk of the asset portfolio of the financial institution operating in accordance with the regulations.

## *OFF-BALANCE SHEET FINANCING*

In most securitizations, assets and liabilities are not included in balance sheets, which lowers initiator's balance sheet leverage. Off-balance sheet financing may increase return on equity of the entity entering into securitization and of ther key financial indicators. However, many analysts of corporate assets and liabilities take into account both leverage from financial reports, and the managed one (i.e. leverage from financial reports and off-balance sheet laverage) in their credit analyses of the companies in securitization.

## *GENERATING PROFIT BASED ON SERVICING FEES ARISING FROM SECURITIZATION*

Loan initiatior usually services it. Loan initiator may convert capital-intensive assets into a source of servicing fee which is less capital-intensive by securitization. This increases servicing fees and loan approval fee without increasing capital base. This can be achieved by securitization and sale of loan, while at the same time retaining the right to service the loan. Loan servicing fee is retained as it is similar to the share of the interest of servicer.

## *CONCLUSION*

Organized capital markets and financing imply complex processes, which involve long-term investments, and investing is booking of money or other assets at the present time in anticipation of achievements of a project tasks and benefits in the future. Of course, for the beginning of each job as well as investing it is necessary to provide funds for financing.

1. Securitization is a form of structured finance. A common characteristics to all types of structured finance transactions is that transactions are structured to modify or redistribute the risk of collateral on different classes of investors based on the structure. Securitization involves formation of pulls (packages) of assets/receivables and emission of securities by a special dedicated company. The end result of the securitization transaction is that the corporation can obtain funds by selling assets, and not though a credit.

The process of asset securitization transforms a pull of assets in one or more securities, which are referred to as asset-backed securities. Securitization differs from traditional methods of funding in that the cash flow generated by assets may be used for one or more securities which may be of higher credit quality from the secured debt of the company.

There are three advantages of securitization in relation to factoring without recourse and modified recourse factoring.

The essence of securitization is primarily monetizing financial assets in a way, due to which the collateral risk (credit risk, interest rate risk, the risk of early repayment and liquidity risks) is associated primarily with the repayment, instead of the performance of a particular project or entity.

The assets used in securitization may be either current assets/current accounts receivable, in which case the transaction is called securitization of existing assets and assets/accounts receivable, and securitization of the assets that will arise in the future, in which case the transaction is called the transaction of the future cash flows. The participants in securitization are initiator, servicer, and investors in asset-backed securities.

The initiator (also known as the originator/seller) approves the loans based on their lending standards and sells a pool of loans approved to the special purpose company, in which it is necessary that the transaction is a transfer of claims for legal reasons. Special purpose company buys a pool of loan funds generated from the sale of securities secured by assets.

2. The most important reasons why corporations use securitization are: a) the possibility of reducing the cost of financing, b) the possibility to diversify funding sources, c) the ability to manage corporate risk, d) with financial entities that must meet the requirements of venture capital- the ability to reduce capital requirements, e) the possibility of off-balance sheet financing, f) the ability to generate revenues from servicing fees.

The key role in issuing bonds with higher credit ratings from the credit rating of the corporation itself through a securitization has a special purpose company since that entity legally separates the assets used as collateral for the securitization from the corporation that needs the resources (initiator/ seller).

The risk of loss of the pool of assets used in securitization transactions can be alleviated by raising the appropriate credit rating until the target rating is achieved. As for the financial entities which have regulatory capital, securitization is a means of managing requirements.

3. The only economic goal of the person who deals with structuring of securitization is to maximize the total revenue from sale of all classes of bonds that are secured by the pool assets. Maximizing revenue in securitization of assets can be achieved by structuring cash flows. The securitization influences financial markets of one country and the economy. Securitization of assets has the ability to reduce funding costs by dividing a company into various groups of financial assets or cash flows, with some of the sub-groups of financial assets separate from general creditors of the initiators, while investors into the asset-backed securities issued benefit from them. The benefit of securitization for economy is in achieving marketability of financial assets, which results in: a) reducing agency costs, which makes financial markets more efficient, and b) improving the liquidity base of financial claims, which reduces the risk of liquidity in the financial system.

## *REFERENCES*

[1] Greuning, H., Brajović, S. (2006), Analysis of bank risk management, page 136, MATE, Zagreb
[2] Fitch Ratings: Note Acceleration in Whole Business securitization, 2nd of April 2004.
[3] Kothori, V., (2006),,Sekjuritisation“ The Financial Instrument of the Millennium
[4] Kothori, V., (2006),,Sekjuritisation“ The Financial Instrument of the Future, Wiley, Finance,
[5] Mishin S. (2006) ,,Monetary Economy, banking and financial markets“ (seventh edition), Belgrade.
[6] Srdic M.,UnčaninR.(2009),,Poslovni leksikon“ Belgrade, COBISS.SR-ID 154731532
[7] Vukosavljevic D. (2013) „New possibilities for financing small interprises,, The Second International Conference of Employment, Education and Entrepreneurship, PEP, Belgrade
[8] VukosavljevićD.,Kvrgić G.,VukosavljevićDe.(2013),,Investment management“,PEP, Belgrade page 171-172.

# *THE INVESTMENT FUNDS AS AN INCENTIVE FOR ECONOMIC ACTIVITY IN REPUBLIC OF SERBIA*

*Danijela Maksimovic,PhD*[15]

*Marija Marcetic,PhD*[16]

## *ABSTRACT*

*Investment funds may become an important instrument for the collection and marketing of surplus capital that exist in Serbia. Accumulated capital can be cheaper and more accessible through the allocation of securities. The economy would thus deal with the continuing problem of securing the necessary funds and banks would finally lost the primary role in financing the economy. Perspectives of investment funds in countries in transition and in our country are great. Mobilizing domestic savings and accumulation and their efficient allocation to those who have the resources required and who perform well will solve the problem of financing. At the same time, investors are going to compensate for the risk to achieve high returns with high liquidity. Survival, growth and development of small and medium-sized enterprises are primarily determined by funding opportunities from favorable source. The establishment of a number of investment funds in Serbia would lead to the development and deepening of capital markets, increased competition among financiers, increased economic activity and strengthen the overall economic development*

***Keywords:*** *Investment Funds, Economic Development, Small and Medium Enterprises*

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[15]Danijela Maksimovic, Bussines school of aplied studies, Blace, Serbia, nelmax2005@yahoo.com
[16]Marija Marcetic,Bussines school of aplied studies, Blace, Serbia, marija.marcetic@vpskp.edu.rs

## *INTRODUCTION*

Small and medium-sized businesses represents the most efficient segment of the economy in almost all countries of the world. Individually, these enterprises make the largest contribution to the increase in employment, gross value added and turnover and therefore they are being considered to be the backbone of the growth and development of the national economy. Their role is particularly important in countries in transition faced with problems of high unemployment, low level of economic activity, lack of competition and lack of investment and which have still present large inefficient state-owned enterprises. As a reliable source of job creation, small and medium enterprises make an important social function by absorbing surplus labour incurred in the process of transition and transformation of state and socially-owned enterprises. Small and medium enterprises are encouraged to strengthen competition, which results in improving the quality of products and services and price reduction, innovation and development of new technologies and economic growth of the national economy in general. In Serbia, the small and medium sized enterprises and entrepreneurs has contributed significantly to economic growth in a period of political change in 2000.to the occurrence of spill over effects of the global financial crisis 2008. During this period, there has been dynamic growth in employment, gross value added and exports. Consequently, development of this sector is defined as one of the priorities of the economic policy of Serbia.

Survival, growth and development of small and medium-sized enterprises is primarily determined by funding opportunities from favourable sources. Limited access to funding sources and the money market and the capital market, especially in terms of price and conditions of use, is perhaps the most important feature of the biggest problem of these companies. In an effort to provide the necessary funding from the most appropriate sources, enterprises is in its life cycle are faced with the following dilemma: whether the investment and business development should be financed from its own resources or borrowed, how much capital to obtain from loans, whether the capital should be provided by banks and other financial institutions, securities market or by attracting formal or informal investor and what is the desired capital structure. Depending on the goals of growth and development, companies are opting to obtain capital from one or a combination of funding sources, with the aim for the optimal capital structure. Number of funding sources of small and medium enterprises are small, and they, compared with large business systems much harder meet their capital needs (Eric et al., 2012). In order to efficiently generate savings and execute its proper allocation the role of investment funds should be strengthen up and thus significantly contribute to the development of the capital market in Serbia. Investment funds may become an important instrument for the collection and marketing of capital surpluses that already exist in Serbia. Thus, this way the economy could deal with the continuing problem of securing the necessary funds and banks would finally lose the primary financing role of the economy.

## *THE INVESTMENT FUNDS IN THE REPUBLIC OF SERBIA*

The establishment of a number of investment funds in Serbia would lead to the development and deepening of capital markets, increased competition among financiers and strengthen the overall economic development. Whether the investment funds will be attractive to our market depends on the type of the funds that are offered. Investors who are more risk-averse will allocate themselves for money funds, those who are more prone to risk will allocate funds for the bonds, and the bravest of fund shares.

In the underdeveloped countries, such as Serbia, establishment of state investment funds are preferable. "State investment fund is particularly suitable for countries with young and underdeveloped capital markets, because this fund is considered to be, in the terms of the investments, the most reliable and safest. It is usually open in the open-type form and it represents one of the most important financial institutions whose participation enables the work of capital markets on the one hand and his stable prosperity on the other (Ristić, 1990, pp. 107).

The law on privatization in Serbia has not predicted the vouchers, therefore privatization investment funds can't keep the same role they once had in some post-communist countries. One of the ways to introduce small shareholders in the joint ownership of investment funds in Serbia could be over shares in their possession. Replacement, or selling off the shares they received in the home companies where and the purchase of shares of investment funds they become shareholders of investment funds. This way, the management of their own funds would be left to professional teams and therefore they could achieve other advantages that mutual funds offer. It is estimated that the number of shareholders in Serbia by the end of 2012.was 250 000. If they are allowed to invest their shares in investment funds in the easiest way possible, the importance and functioning of investment funds would be significantly increased (Tepavac, 2008, pp.133).

There are numerous reasons that caused inadequate demand for the securities in Serbia. A lack of knowledge of local investors on operations with securities, lack of information on prices and transactions in securities discourage investment in securities and channel funds free of known traditional placements. Low standard of living and lack of middle classes does not provide greater savings and investment. The reason why the business of securities is insufficiently used alternative of investing in our country is also found in the fact that the expected returns on domestic securities are linked to a number of risks. Any investment in securities carries certain risks, whether it is linked to a particular issuer or to general market movements. Political instability, inflation, lack of tax incentives are the other reasons that contribute to the existing situation. While the establishment of domestic investment funds was delayed, foreign investment funds have already come to the Serbian market and become the owners of the best companies. In this way, foreign citizens become co-owners of most companies in Serbia. In the course of privatization in Serbia actively foreign investment funds took part: Salford, Midland, FPP Balkan Limited. Its ownership structure is opaque and questionable. The headquarters of the investment fund Salford which is present in

Serbian dairies, is at the Canary Islands, while the Midlands funds and FPP Balkan Limited are in the Cayman Islands. The presence of foreign investment funds can be dangerous in a volatile national conditions because they can threaten the financial system due to sudden outflows.

## *THE SHARE OF INVESTMENT FUNDS TO THE FINANCIAL MARKETS OF THE REPUBLIC OF SERBIA*

After ten years of delay compared to neighboring countries, Serbia has received the Law on Investment Funds (Official Gazette of RS, no. 46/2006), so that the mutual funds in this country began with the work of 2007. Their development is one of the essential conditions of market liquidity and factors for establishing macroeconomic stability, therefore the passing of this legislation was necessary. Adoption of the law on investment funds is a prerequisite, but not the only one for the development and operation of a liquid market. It is still unclear whether Serbia, as a country in with a market logic, will based her own development upon of the capital market or the economic development will continue to be based on bank loans. So far, thanks to strong banking lobby the banks operated monopoly, sapping the economy with expensive loans. Mutual funds represent an alternative to bank deposits and, as such, become an important instrument for the collection and marketing of surplus capital that exist in our country. Through investment funds, our economy would get cheaper funds and it would have been more accessible. That would have a positive impact on the banking market through equitable competition in the financial market. At the same time conditions for citizens to go public with professional assistance when investing are being created.

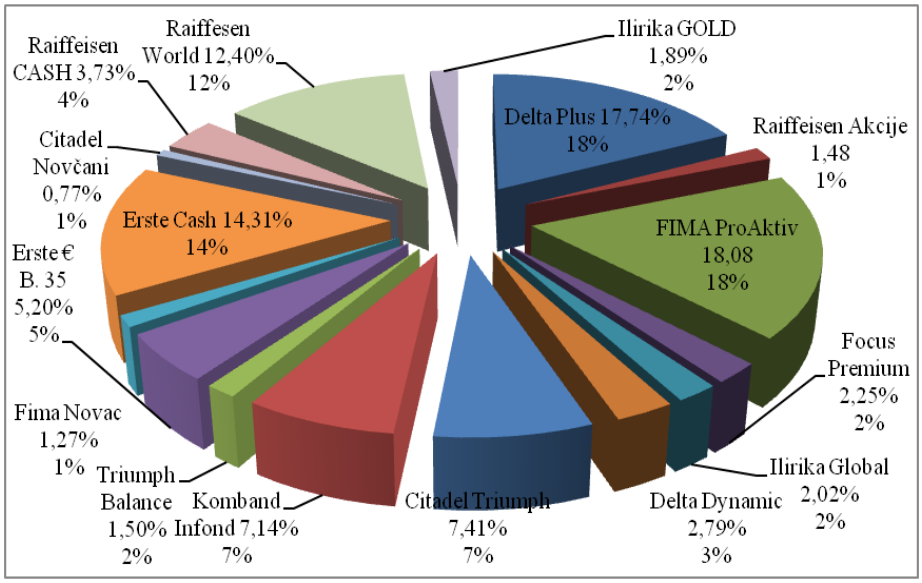
Mutual funds are not very popular in Serbia because they appeared in a pretty bad time. In fact, they all emerged before the impact of the global financial crisis and the economic crisis in our country. Besides, strict legislation which prohibit investment funds investing abroad has further contributed to the decline in investment units. The current situation is such that most of the investment funds in the world recorded losses. In Serbia, by the end of 2011. 19 investment funds operated. Out of the 15 opened funds, 7 of them are investment of equity funds, 5 of them are fund aimed to maintain the value of assets and three balanced funds; 3 private and 1 closed-end investment fund. Some of the funds have already been closed (recorded nine funds that are deleted from the registry) and some just started to work (Securities commission Republic of Serbia, 2012). In addition to these funds, operation of six companies for managing investment funds was recordered.

On the Serbian financial market in this period operated the following funds: Balanced Funds: Balanced Erste Euro 35, Triumph Balance, Illyricum Plus; open-end funds maintain the value of the property: Erste CASH, Erste Euro Cash, Cash Citadel, Raiffeisen Cash, Cash Illyricum; open equity fund: Fima Proactive, Dynamic Illyricum, Illyricum GLOBAL, Illyricum GOLD, Kombank InFond, Raiffeisen World, Triumph; private investment funds: ADM Fund, Erste private

equity fund, Parisbel; and closed-end investment fund Fima Southerastern Europe Activist (Securities commission Republic of Serbia, 2012).

All of the above listed funds have clearly defined objectives and investment policies, and operating in accordance with the Law on Investment Funds. They are mostly oriented towards goal achievement objectives of capital gains, dividends, interest and other income, to maintain quality of the assets of the fund, to grow the value of the fund's assets and investment unit, maintaining liquidity and safety while minimizing investment risk and providing portfolio diversification. Depending on the investment policy of the fund, various funds invest in different securities, debt or equity, short-term or long-term, more or less risky.

The total asset value of investment funds in Serbia in January 2011. were amounted to 1,130,214,093 RSD, ie € 10,801,130. The largest investment funds per share in the total value of assets are: FIMA ProActive with 18.08%, Delta Plus with 17.74%, Erste Cash with 14.31% and Raiffeisen WORLD SA12, 40% (hppt :/ investment-funds. com).




*Graph 1: The percentage share of investment funds in the total assets of all investment funds in the Republic of Serbia in January 2011.*

*Source: hppt :/ / investment-fondovi.com*

The value of the investment units of investment funds in the region and around the world has decreased. The global economic and financial crisis has affected our investment funds market, whose value also declined. Capital funding was cut in half in 2009. due to the withdrawal of the members of the fund. However, after three consecutive years of falling value of investment units, in the 2011.an apparent recovery was noticed. Experts from investment funds announced positive long-term trend.

*Table 1: Overview of the values of open-ended investment funds (RSD) in the Republic of Serbia on 21. 03.2012.*

| **Fund** | **The IU value** | **Change** | **2009** | **Since the establishment** |
|---|---|---|---|---|
| Open Investment Fund - Balanced Fund | | | | |
| Erste Euro Balanced 35 | 1.330,18 | + 0,18% | + 5,54% | + 33,02% |
| Triumph Balance | 1.288,56 | - 0,60% | + 8,07% | + 28,86% |
| Ilirika Plus | 646,41 | - 0,60% | - 1,94% | - 35,36% |
| Open Investment Fund – Fund to maintain the value of assets | | | | |
| Erste CASH | 1.264,14 | + 0,03% | + 2,13% | + 26,41% |
| Erste Euro Cash | 1.130,08 | + 0,13% | + 5,46% | + 13,01% |
| Citadel Cash | 1,375,98 | + 0,02% | + 1,81% | + 37,60% |
| Raiffeisen Cash | 1.266,03 | + 0,03% | + 2,20% | + 25,96% |
| Ilirika Cash | 1.266,44 | + 0,02% | + 1,25% | + 26,64% |
| Open Investment Fund – Fund to maintain the value of assets | | | | |
| Fima ProActiv | 385,14 | - 0,14% | + 4,83% | - 61,47% |
| Ilirika Dynamic | 306,96 | - 0,09% | - 2,00% | - 69,30% |
| Ilirika GLOBAL | 376,96 | - 0,45% | + 5,55% | - 62,38% |
| Ilirika GOLD | 1.024,22 | - 0,16% | + 1,40% | + 2,21% |
| Kombank InFond | 617,14 | - 0,23% | + 5,24% | - 38,29% |
| Raiffeisen WORLD | 1.158,82 | - 0,03% | + 10,96% | + 15,88% |
| Triumph | 782,63 | - 0,02% | - 1,11% | - 21,74% |

*Source: http://www.investicionifondovi.com*

Terms and conditions of reduced investment activities were reflected in closed and private investment funds businesses, thus these funds must operate with negative net financial result, with further significantly reduction of net assets. Net assets of the closed and private investment funds, on December 31, 2011., were 179 million, therefore it was reduced in 77.1% compared to 2010. Consequently, the core capital got to the point of drastic reduction (59.9%), while capital, revaluation reserves and the profit weren't reported, as opposed to last year when they amounted up to 344 million, and the loss was eight times smaller (NBS, 2012).

As already mentioned, the global economic crisis can be felt even today in all sectors of the Serbian economy. Long before, its consequences were obvious in global, regional and local - Belgrade stock market. Investment funds as financial products which are linked to the price movement of securities on stock exchanges have experienced a challenging time. In the period 2008 - 2010 some investment funds and management companies were shut down, while the vast majority of cases were related to the withdrewfunding by the fund members. The most drastic drop in the value of investment units in this period was -70%, while most of the funds fell by around 50%, these changes are clearly visible in the above table.

For comparison, the number of investment funds in the neighboring countries is much higher than in Serbia. This number in 2012.in Croatia was about 120, in Slovenia around 150, while in Hungary operated more than 300 funds. However, if

instead of a number of investment funds, our indicator is fund's assets in the country and in the region, the results are much worse for Serbia. For example, in mid- 2008.fund's assets in Serbia were around 50 million euros, while in Croatia they were over 4 billion euros. The global financial crisis has led to the loss of funds in Croatia with a 4 billion euro to 1.3 billion, while the assets of the funds in Serbia fell from 50 to just 10.6 million. The lowest decline in the value of investment units in the region was recorded by investment funds in Croatia (26%) and Slovenia (30%) and the largest decrease in the value were realized by the investment funds in Serbia (50%) and Macedonia (56%). For comparisons the average decline in the value of investment units of U.S. investment funds ranged between 28% and 32%. After the crisis, more precisely in 2009., investing in the mutual funds was considered as a risky investment. The number of investment funds has decreased, already invested assets were impaired due to the decline in the value of investment units, which mainly dependent upon the movement of BSE indices. In the end it can be concluded that the investment funds sector in Serbia is less developed compared to the surroundings.

## *PERSPECTIVES OF THE INVESTMENT FUNDS DEVELOPMENT IN THE REPUBLIC OF SERBIA*

Perspective of the investment funds in countries in transition as in Serbia as well are great. Domestic savings mobilization and accumulation and their efficient allocation to those who require the resources and who perform well will solve the problem of financing. At the same time, investors are going to achieve, as a compensation for the risk, high returns with high liquidity. As our banks have not yet fully regained trust of depositors extent mutual funds are more likely to gain. Investing in mutual funds is pretty much simple. Professional management of capital, low transaction costs, the risk diversification, the possibility of investing in foreign markets makes the investment funds highly attractive. However, the lack of knowledge about the securities and lack of information on investment funds in Serbia are still channeling domestic savings mainly to banks. The development of investment funds in Serbia will depend on the collection of small savings bonds and taking over the bank clients who are mainly investing out of the habit, and due to the lack of knowledge of the financial markets, as well.

Investment funds may become an important instrument for the collection and marketing of surplus capital that already exist in Serbia. That raised capital may be cheaper and more accessible over the allocation of securities. This way, the economy would deal with the continuing problem of securing the necessary funds and banks would finally lose the primary role in the financing of the economy. So, the long-term depletion of our economy by the banks could be stopped. Pressed by the competition, banks would have to make their placements cheaper and reduce their enormous profits.

The existence of a wide range of market materials is a prerequisite for the development of investment funds. The variety of materials offers the possibility of market diversification and the ability to quickly switch from one investment to another, thereby avoiding loss or making a profit. It is essential that there is sufficient liquidity of the securities, whom Serbia doesn't have enough. Therefore, it is more realistic that indoor and outdoor private investment funds to operate in our area, because outdoor investment funds require a willingness for a continued purchase, which further requires a sufficient number of liquid securities. This can be solved by increasing the state's role as issuer of treasury bills, bonds and notes. On the other hand, the state should create an environment for issuing securities of other issuers through favorable legislation. Limitations of market materials in Serbia is a limiting factor to the development of investment funds. A lots of attractive companies in Serbia gained the majority owners using the method of acquisition or recapitalization, so their actions almost do not occur in the stock market. Out of the 1,000 registered companies in the stock market only around 250 companies appears. Only with the sale of public companies (Telecom, EPS, railways) a high-quality stocks will be disposable and revival of the activities of investment funds will be apparent. The listing of their shares on the stock market, mutual funds will get quality securities in which investors can accumulate domestic savings. In case that the company does not appear in the stock market, domestic investors will not have enough quality securities in which they can invest and will look for them in other countries. So we come to the paradoxical situation that we become exporters of capital and thus finance someone else's development, and provide for our own development funds by taking expensive loans.

After the implementation of new regulations Serbian citizens, ie.investors remain very cautious when it comes to investing surplus funds. Analyzing the level of investors in Serbia, the results showed that among Serbian investors is a need for a greater level of information about the positive signals from the global environment, for greater involvement in the process of globalization of financial and investment flows, as well as alternatives for profit. Of course, globalization has another side. Risks arising from the global economic crisis have made all countries more or less vulnerable to external shocks. This sensitivity must be taken into account when making investment decisions.

The current situation is much more favorable for current and future investors in mutual funds. World stock markets recorded a strong recovery, BSE after the decline and stagnation recorded a slight recovery. The fact that many of the stock prices of companies are at historic lows and that the vast majority of these companies operate with a reduced income but not losses, flows the optimism to the participants in the capital market. History of stock exchanges and capital markets suggests that in such circumstances it is likely that there will be a permanent long-term rise in prices of securities.

## *CONCLUSION*

Survival, growth and development of small and medium-sized enterprises are primarily determined by funding opportunities from favorable sources. So far, the predominant source of funding for small and medium enterprises in Serbia were the banks which, due to strong lobby, operated monopoly, sapping the economy of expensive loans. Mutual funds are an alternative to bank deposits and, as such, have become an important instrument for the collection and placement of surplus capital that exist in our country. Capital accumulated this way can be cheaper and more available over the allocation of securities. This way, the economy would deal with the continuing problem of securing the necessary funds, and banks would finally lose their primary role in the financing of the economy. Perspectives of investment funds in countries in transition and in our country are great. The establishment of a number of investment funds in Serbia would lead to the development and deepening of capital markets, increased competition among financiers, increased economic activity and strengthen the overall economic development.

However, it's still unclear whether Serbia, as a country with present market logic, will base its own development on the capital markets or the economic development will continue to be based upon bank loans. Mutual funds are quite unpopular in Serbia because they came at a bad time, after the economic collapse of the world economy. Another reason why the business of securities is still under-used investing alternative in our country is also in the fact that the expected returns on domestic securities are linked to a number of risks. Lack of knowledge of local investors about business with securities, lack of information on prices and transactions in securities discourage investment in securities and channel funds free in known traditional investments. Also, the low standard of living and lack of middle classes does not provide greater savings and investment.

One of the basic preconditions for the development of investment funds is the existence of a wide range of market material. The variety of materials offers the possibility of market diversification and the ability to quickly switch from one investment to another, thereby avoiding loss or making a profit. It is essential that there is a sufficient number of securities liquidity in whom Serbia lacks. This can be solved by increasing the state's role as issuer of treasury bills, bonds and notes. Selling off a public enterprise will rise high-quality stocks and revive the activities of investment funds. On the other hand, the state should create an environment for issuing securities of other issuers through favorable legislation.

## *REFERENCES*

[1] Erić D. et al. (2012), *Finansiranje malih i srednjih preduzeća*. Beograd: Institut ekonomskih nauka, Privredna komora Srbije, viewed 15. February 2014http://www.pks.rs/SADRZAJ/Files/Biro%20za%20saradnju%20sa%20EU/Finnsiranje%20MSP%20u%20Srbiji.pdf
[2] hppt://investicioni-fondovi.com, viewed 3. February 2012
[3] National bank of Serbia, viewed 30. February 2012, http://www.nbs.rs
[4] Ristić Ž. (1990), Tržište kapitala. Beograd: Private edition, 1990, pp. 107
[5] Securities commission Republic of Serbia, viewed 15. February 2011, http://www.sec.gov.rs
[6] Službeni glasnik RS, no. 46/2006, 51/2009 и 31/2011.
[7] Tapavac P. (2008) ,,Institucionalni investitori na finansijskom tržištu,, Beograd, Filip Višnjić,pp.133.

# *ECONOMIC COOPERATION FUNDS IN CROATIA: PURPOSE AND EFFECTS ON CROATIAN ECONOMY*

*Lucija Udovicic, mag. oec.*[17]

*Damjan Poljak, mag. oec.*[18]

## *ABSTRACT*

*The main purpose of this paper is to closely examine an economic policy instituted by the Croatian government in order to increase the GDP growth rates. The focus of the policy was manifested in the creation of Economic cooperation funds. The paper will use analysis of the legal framework for the cooperation funds, purpose, economic goals and effects up to this point in order to demonstrate what are the effects of the Funds on Croatian economy. Using statistical analysis of the data relevant to the changes in GDP and the Fund's investments during the time period of 2004 – 20012 the paper will show existence or lack of existence of causality between the two data sets. The paper will try to approximate the expected effects of the funds on the growth rates of GDP. Further, the paper will present what is needed for the maximum effects of the Fund's investments on GDP. In order to achieve maximum possible effect from the Economic cooperation funds it is needed to optimize two important parameters which are not necessarily relevant to the Fund's investments or Fund's prospectus. Those two parameters are: increase the overall dynamic of investments in the economy and increase the velocity of money in the economy. This perspective of analysis will present a need for improvement of bureaucratic processes in Croatian economy as well as the need for increase of investment in fixed capital from companies which are connected with the Economic cooperation funds.*

***Keywords:*** *Growth Rate, Economic Cooperation Funds, Employment, Investments in Fixed Capital*

***JEL Classification:*** *E22, G24, O16, O43*

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[17]Lucija Udovicic, The University College Effectus–College for Law and Finance, Zagreb, Croatia, lucija.udovicic@hotmail.com

[18]Damjan Poljak, The University College Effectus–College for Law and Finance, Zagreb, Croatia, damjanpoljak@gmail.com

## *INTRODUCTION*

Croatia, much like the other countries of Eastern Europe, has entered recession in 2009, but unlike most of the other countries in the region, Croatia has been in a prolonged and continuing recession for the last six years. It is enough to look at the basic economic data to be clear about the severity of the economic problems that gripped Croatia. Since 2009, by the end of the first quarter of 2014, Croatia had a negative growth of GDP 19 out of the 21 quarters, of which the last 10 quarters were negative. A similar picture can also be seen regarding employment. Since April 2009 until April 2014 Croatia has lost 200.000 workplaces.

Problems of the Croatian economy are primarily of structural nature, because the economy has relied on consumer-credit consumption. Credit financing sources were not the characteristic for raising the living standard only for households, but also of fiscal policy through which the state was increasing its revenues from VAT over the credit-induced spending. Issues of loans as a source of income and the breakdown of credit-induced funding over VAT are extensively described in Santini (2007).

In the first years of the recession, the Croatian Government had tried to increase tax revenue, because the decline in tax revenue was considered as the basic problem of the economy. An example of such attempts is the increasing of VAT rate, first in 2009 from the than present 22% to 23%, and then in 2012 from 23% on today's 25%. Over time it became clear that the increase in tax revenues is not the solution, because a long-term crisis, in which Croatia had found herself in, cannot be solved with an increase in the tax burden. In order to deal with the lack of tax revenue it is necessary to increase revenues through increased investment activities.

Banks have shown themselves as a fundamental problem for increasing economic activity. With the beginning of the crisis, banks have significantly reduced their credit activities, especially to companies. Because of the recession, the banking sector has turned to protection of its own liquidity. Right at the beginning of the crisis in 2009, the monetary aggregate M0 has become larger than the M1 which is a clear indicator of increasing banking liquidity. Despite the increasing liquidity of the banks, from December 2008 until December 2013, corporate loans have increased by only 6%.

Although the banking sector had decreased its activity,(Bokan et al.,2010) indicate how the banking system was stable during the recession. Unfortunately, the problem of the stability of the banking system is not the main economic problem in the Croatian economy. The problem is in the lack of investments. Given the strategy of the banking sector which has reduced its credit financing, a need of finding another catalyst that will trigger investment activity has become clear. Due to the fact that the catalyst could not come from the banking sector, it became clear that the investment catalyst should be searched on the fiscal side.

To raise investment activity, Jadranka Kosor's Government tried to implement a few clearly targeted economic policy measures which are intended to effect on a clearly defined microeconomic level, in order to increase the overall macroeconomic capacity. One of the measures was the establishment of Economic Cooperation Funds with private entrepreneurs in order to regain economic activity with targeted investments.

Economic Cooperation Funds (hereinafter referred to as ECFs) are classified as private equity venture capital funds. Such funds are characterized by long term investments into company's which reflect possibilities of achieving rapid growth rates and high profits. One of the most significant components of such investments is the fact that the investor has a great impact on achieving growth ambition, especially in the sense of control management. ECFs are established on a limited life span of ten years with a possibility of maximum increasing for an additional two years.

„In the aim of establishing ECFs to promote the development of the economy, to preserve the current and create new jobs, to strengthen the existing and start-up new business entities by means of ownership restructuring through the investment of additional capital, the Croatian Government, in cooperation with private investors, will participate in the creation of ECFs“ (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 1). As is said in the quotation, the main goals of the creation of ECFs is to promote the development of the economy, to preserve the current and create new jobs, to strengthen the existing and start-up new business entities, but also to achieve profit as one of the basic goals of private equity joint capital funds as is determined by the Alternative Investment Funds Act. In addition, „the ECF initiative creates positive investment climate, shares risk with the "private" sector that has proved successful in creating new values, develops venture capital industry as a driver of new industries (internet, web, media, renewable energy, etc.) and encourages entrepreneurship and risk-taking with a professional corporate leadership and supervision“ (http://www.fondovi.hr/edukacija/leksikon/fondovi-za-gospodarsku-suradnju/).

The purpose of this paper is to research the activities of ECFs and their impact on the economy. This paper is split into the following sections. First, we will explain the regulation that enables the existence of the ECFs. After that, we will examine what were the initial expectations of the ECFs as well as their potential economic effects. Furthermore, we will analyze what the ECFs have genuinely accomplished. Finally, the last section will be the conclusion.

## *REGULATORY FRAMEWORK AND LIMITATIONS OF THE ECONOMIC COOPERATION FUNDS*

The minimum size of an ECF is 20.000.000 euro, and to establish an ECF, private investors mutually have to provide a minimum of 10.000.000 euro. The maximum amount that the Croatian Government can invest in a single ECF is 40.000.000 euro. ECFs do not have yearly investment limitations but can invest all of its available capital. The Croatian Government participates in the financing of ECFs in the range of 25% plus one share and up to 50% of shares, without limitations on the extent of other qualified investors. The maximum amount of capital that the Croatian Government will be participating with will be 133.000.000 euro (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 3).

The management of the ECFs will be entrusted to Investment Fund Management Companies which will analyze the potential investment opportunities and recommend them to the Trustee Committee in order to get the final decision. The ECF Trustee Committee can be summoned by the President of the ECF Trustee Committee or by any other ECF Trustee Committee member given the authorization from the President of the ECF Trustee Committee, and when such a summoning is the preposition of the Investment Fund Management Company according to the statue or the prospectus. Furthermore, the Trustee Committee can be summoned by an investor that holds or a group of investors that together hold a minimum of 25% of the ECFs shares. The Trustee Committee consists of all the representatives of all the investors and takes the decisions with a majority of ¾ of the total amount of votes given (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 7).

ECFs exclusively have to invest into companies whose headquarters reside in Croatia and who carry out their business in Croatia. Investments are solely to be made into stocks and shares of companies by which a maximum of 33% of the total capital of the ECF can be invested into one company and a maximum of 40% can be invested into one industry. It is forbidden for ECFs to invest into securities that are included in the stock market with intentions of short-term trading.

The computation of the yearly management fee depends on how many years has the ECF been active. Namely, the Investment Fund Management Company in the first year of the existence of the ECF calculates the management fee as 2% of the total size of the ECF and in the second year as 1,375% of the total size of the ECF. Furthermore, in the third, fourth and fifth year the Investment Fund Management Company will calculate the management fee as 1,60% of the total amount of capital invested and the management fee will be paid out on a half-year basis (0,80% of the total amount of capital invested). Finally, the computation and pay out of the management fee for the remaining years will equal to 1,60% of the total amount of capital invested on a yearly basis (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 4).

The management fee regarding the ECFs yield (yield management fee) will be calculated as a share in the ECFs total profit and related to the ECFs total yield. The Investment Fund Management Company will have the right to calculate and pay out the yield management fee after the investors are paid out their shares enlarged for the profit of the ECF that matches an internal rate of return on their total invested capital of 8% on a yearly basis. In other words, the aforementioned return of 8% annually is the so-called priority return, which means that all the investors are guaranteed an internal rate of return of 8% on their total invested capital. Everything above the priority return, the Investment Fund Management Company can pay out as the yield management fee that will be divided between the Investment Fund Management Company and the investors accordingly (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 5).

## *EXPECTATIONS OF THE ECONOMIC COOPERATION FUNDS*

Taken into consideration that the ECFs were created as a measure to induce the recovery of the faltered Croatian economy which had a total decrease of GDP from 2009 to 2012 of 11,2% (http://www.hnb.hr/publikac/bilten/arhiv/bilten-203/hbilt203. pdf), it is important to explain what are the starting points and short-term goals of the ECFs in order to reach the main long-term goal – GDP growth. In the Regulation of participation of the Croatian Government in the establishment of the Economic Cooperation Funds the appointed goals are described as „...establishing ECFs to promote the development of the economy, to preserve the current and create new jobs, to strengthen the existing and start-up new business entities by means of ownership restructuring through the investment of additional capital...". From the aforementioned quotation, it can be concluded that there are three (connected) main goals of the ECFs – growth of gross capital and consequently, growth of employment. The aftermath of both of these goals will be the fulfillment of the third goal – GDP growth.

In order to have a clear picture of what the expectations of the ECFs are, we will have to examine a similar case that has proven successful. One such example, although in lesser and more specialized proportions, can be found in Great Britain. Namely, in the year 2009 the UK Innovation Investment Fund was established. The fund is also classified as a venture capital fund „that aims to drive economic growth and create highly skilled jobs by investing in innovative businesses where there are significant growth opportunities"(http://www.capitalforenterprise.gov.uk/uiif). However, the UK Innovation Investment Fund is relatively specific when it comes to investing into industries. The included industries of interest are advanced manufacturing as well as digital, clean technology and life science companies. The reason behind the selected industries is that UK studies have shown a collapse in private venture investment in technology companies since the start of the financial crisis (especially in small and medium size entities – the SMEs). The UK Innovation

Investment Fund has raised 175.000.000 pounds from private investors alongside with 150.000.000 pounds of public capital. The capital would be split equally amongst four smaller investment funds and then allocated to the industries that will be evaluated as both promising and profitable.

Clearly, Croatia is not the first country that has discovered the need to assist the private sector and the economy as a whole through SME financing. Nevertheless, there are some differences between the ECFs and the UK Innovation Investment Fund, one of the most important being the fact that the UK Innovation Investment Fund is highly specialized in investing into new technologies, research and development – an industry in which Croatia cannot be competitive. The Croatian Government has decided to let the ECFs to determine what they consider to be a solid and profitable investment. After the ECFs confirm their interest in a specific investment, it has to request the assembly of the Trustee Committee in order to vote for the final decision on the investment. Furthermore, the ECFs will not be limited to a single or few industries so the ECFs will be able to suggest an investment in any company that they consider to have the potential of profitable business, with a special emphasis on the companies that have had trouble because of the financial crisis.

The active ECFs, alongside with their expected sizes, can be seen in the following table:

*Table 1: Economic Cooperation Funds expected sizes*

| Economic Cooperation Funds - ECF | Investment fund expected size | Qualified investor (Government) |
|---|---|---|
| Alternative Private Equity ECF | 79.221.040 € | 39.610.520 € |
| Honestas ECF | 20.465.435 € | 10.232.718 € |
| Nexus ECF | 50.173.325 € | 25.086.663 € |
| Prosperus ECF | 44.891.923 € | 22.445.961 € |
| Quaestus Private Equity Kapital II | 71.298.936 € | 34.659.205 € |
| **TOTAL** | **266.050.659 €** | **132.035.067 €** |

*Source: Authors illustration according to the Croatian Financial Services Supervisory Agency (CFSSA), 2013*

As the table shows, the total expected size of the ECFs is 266.000.000 euros (http://www.cvca.hr/news/more/?id=238), of which the Croatian Government finances just short of 50%. The interests of the Croatian Government in the investment are represented by the Croatian Bank for Reconstruction and Development.

So far, the starting strategies and intentions of the ECFs as the driver of the economy are showing themselves true. Namely, from the web pages of the ECFs it can be seen how, for example, Nexus ECF invested a portion of its capital into Požgaj LLC which manufactures parquetry and Dalekovod PLC which offers services of engineering, production and construction. On the other hand, Quaestus PE has invested a portion of its capital into Fragaria LLC which breeds and produces fruits while

Prosperus ECF invested a portion of its capital into Vodoskok LLC which manufactures and sells materials for construction of infrastructural objects.

It is investments into companies like these, which have their own production and the possibility of creating added value for the economy that can make quality portfolios which will serve as a stable ground and a big step in the right direction for the growth of the economy as a whole.

Some of the limitations of the ECF investments, like the one that ECFs can solely invest into Croatian companies and invest in them only long-term (see chapter two), additionally secures that the capital will be used for helping domestic companies that found themselves in financial trouble or to help develop new projects of domestic entrepreneurs who will, with their high return rates, justify the investors trust in them. Furthermore, as already explained in the second chapter (Regulations on the participation of the Croatian Government in Economic Cooperation Funds, 2013, pp. 4).the management fee after the second year is calculated on the total amount of capital invested by the ECFs, which should serve as an additional incentive to the ECFs in order to invest their capital quickly and efficiently.

Table number 2 shows the economic branches in which the ECFs have invested so far. From this table, it can be clearly seen how the idea to jumpstart the economy through ECF investing is well conceptualized. Private investments have a broader range than public investments and as a result, ECFs have invested in numerous economic branches. The investments are not limited by industry type and are realized on the ECFs own assessment.

*Table 2: Economic Cooperation Funds investments by industry*

| Invested companies | Investor - ECF | Industry |
|---|---|---|
| Centar banka PLC. | Alternative PE ECF | Banking |
| VABA banka PLC. | Alternative PE ECF | Banking |
| Conty plus LLC. | Honestas ECF | Wood products |
| Dalekovod PLC. | Nexus ECF | Construction |
| Energija Gradec LLC. | Nexus ECF | Energy |
| Mare conecto LLC. | Nexus ECF | Nautic tourism and infomation technology |
| Podatkovni centar Križ LLC. | Nexus ECF | Information technology |
| Požgaj LLC. | Nexus ECF | Wood products |
| Adriatic kampovi LLC. | Prosperus ECF | Tourism |
| Energija Gradec LLC. | Prosperus ECF | Energy |
| HTP Korčula PLC. | Prosperus ECF | Tourism |
| HTP Orebić PLC. | Prosperus ECF | Tourism |
| Vodoskok LLC. | Prosperus ECF | Construction |
| Akromion LLC. | Quaestus PE Kapital II | Medicine |
| Drvna industrija Spačva PLC. | Quaestus PE Kapital II | Wood products |
| Fragaria LLC. | Quaestus PE Kapital II | Agriculture |
| Tvornica tekstila Trgovišće LLC. | Quaestus PE Kapital II | Textile industry |

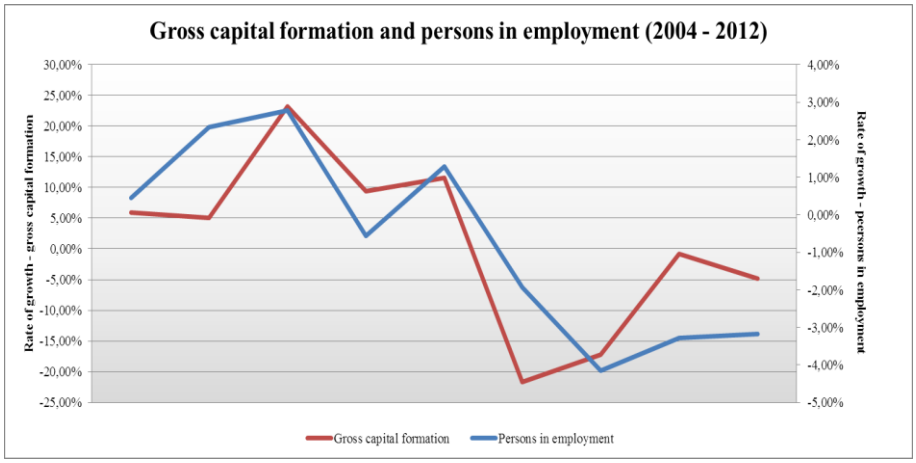
*Source: Authors illustration according to the web pages of the aforementioned ECFs, 2014*

ECF investments differ from industry to industry and were made in the financial industry, energetics, tourism etc. Table number 2 also gives an insight into the ECFs investment strategies. Some ECFs have a very concentrated strategy. For example, Alternative PE ECF specialized itself in the banking industry. Prosperus ECF has focused its strategy on to tourism and energetic while Quasteus PE has a diversified strategy which comprehends the medical industry, wood industry, agricultural industry and textile industry.

## *POTENTIAL EFFECTS OF ECONOMIC COOPERATION FUNDS ON THE CROATIAN ECONOMY*

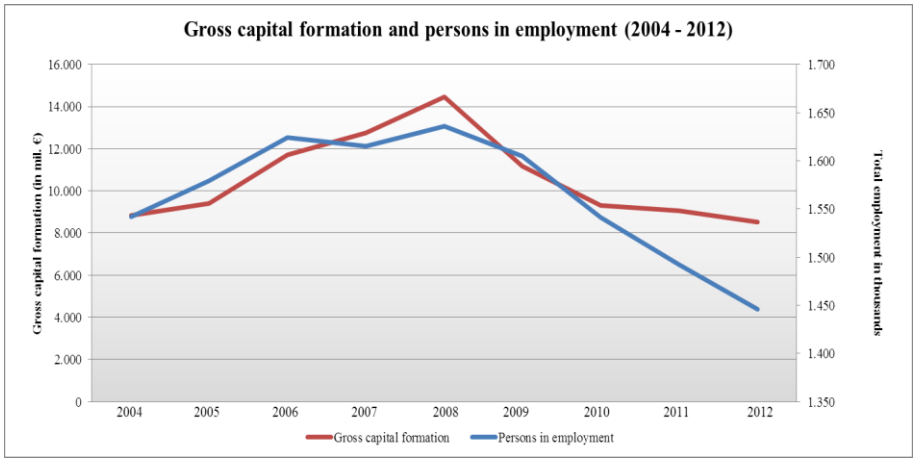
The purpose of the investments made by the ECFs is to enhance the overall economic activity. The ECF investments are based on the project assessments of the ECFs, because of that, the investments have clear microeconomic goals. However, the essential purpose of the ECFs is to accomplish a macroeconomic impact. To fully understand the grasp of the macroeconomic impact the ECFs can have on the economy, a comparative analysis of the ECFs investments and their effect on the economy must be made.

In order to accomplish their final goal (except the priority return on invested capital), to increase the rate of GDP growth, the main instrument of the ECFs should be investments into the real sector (gross capital formation). With these types of investments, the goal is to revivify two key components needed for the wanted economic recovery – growth of persons in employment and growth of GDP. The following graphs show gross capital formation, persons in employment and GDP movements in the period since 2004 until 2012:



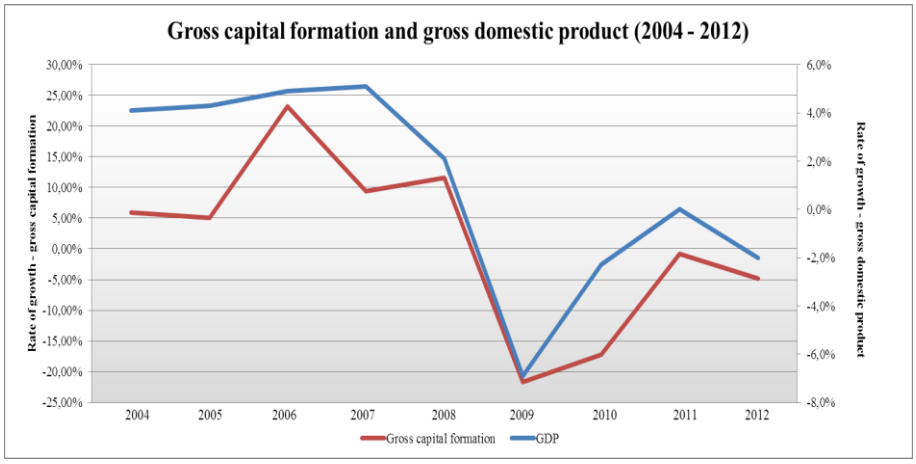
*Graph 1: Rate of growth – gross capital formation and persons in employment*

*Source: Authors illustration according to the Croatian Bureau of Statistics (CBS), 2013*



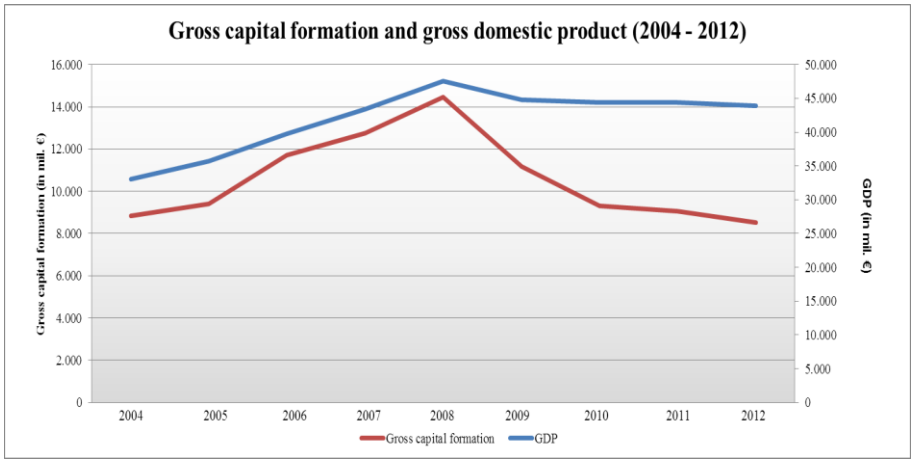

*Graph 2: Amount of gross capital formation (in mil. €) and persons in employment (in thousands)*

*Source: Authors illustration according to the CBS, 2013*




*Graph 3: Rate of growth – gross capital formation and GDP*

*Source: Authors illustration according to the CBS, 2013*




*Graph 4: Amount of gross capital formation and GDP (in mil €)*

*Source: Authors illustration according to the CBS, 2013*

Every graph impeccably shows the impacts of the 2009 recession. Clear breakpoints on all graphs can be seen in the year the recession started. For this paper, it is important to determine the relations between the variables in which lays the possibility for the macroeconomic impact of the ECFs.

The graphs also show correlation between the gross capital formation rate of growth and the GDP rate of growth (correlation coefficient of 0,90) and a slightly lesser correlation between the gross capital formation rate of growth and the persons in employment rate of growth (correlation coefficient of 0,78).

Furthermore, it can be seen from the graphs that, excluding 2007, the gross capital formation rate of growth trailed the persons in employment rate of growth and vice versa. However, when we take into consideration the total average rate of growth for the selected time period, the data shows that the gross capital formation rate of growth equaled 1,18% while the employment rate of growth was negative -0,70%.

In other words, taken into consideration that one of the main goals of the ECFs activities is to stimulate the economic growth by increasing the number of persons in employment, this strategy could turn out to just be "groping in the dark" in respect that the long-term average GDP rate of growth showed positive and the long-term average employment rate of growth was negative. Nonetheless, the most sizable reason for the negative rate of growth was the fact that the recession years have brought a much greater decline in number of persons in employment than the progressive years have brought the rise of persons in employment.

On the other hand, the GDP rate of growth ideally trails the gross capital formation rate of growth until 2012 when, with a negative GDP rate of growth, the gross capital formation rate of growth was minimally positive. In other words, when the gross capital formation rate of growth was positive, the GDP rate of growth was positive as well, and vice versa. When the selected period of time is

observed overall, it can be concluded that the total average GDP rate of growth equaled 1,03% and the gross capital formation rate of growth equaled 1,18%. These numbers suggest that, in long-term, the movement of the gross capital formation rate of growth should be trailed by the GDP rate of growth.

If the data in the period when the rise of the amount of gross capital formation was trailed by the rise in the total number of persons in employment (2004, 2005, 2006 and 2008) is examined, it can be seen that, on average, for the creation of one workplace, it was necessary to invest around 49.000 euros of gross capital formation. Taking this into consideration, from the total expected investments of the ECFs that round to about 266 million euros, it can be expected that an additional 5.400 workplaces will be directly opened. However, taking into consideration that the time estimated for the investments of the ECFs to be made is in the first five years of its existence and the other five to seven years are presumed to be left for the projects to be completed and exited , it can be concluded that the average workplaces that the ECFs could create is just short of 1.100 annually, which equals 3,92% of the average growth of persons in employment for the selected period of time in which the rise of the amount of gross capital formation trails the rise of the amount of persons in employment.

In the aforementioned selected period of time, the average rate of growth in employment equalled 1,71% or 27.500 workers annually while the average rate of growth of gross capital formation equalled 11,45% or 1,1 billion euros annually. In the same period of time the GDP rate of growth averaged at 3,85% or 3,4 billion euros. On the other hand, during the decline of GDP in the time period since 2009 until 2012, the average fall in the employment rate equalled 3,14% or 47.500 workers annually. The average fall in gross capital formation rate of growth equaled 11,14% or 1,3 billion euros annually. Observing the data, it can be concluded that the decline in the number of persons employed almost doubles in relation to the rise in the progressive years (47.500 to 27.500 workers) while the amount of gross capital formation also note a decline, but in a lesser volume (1,1 billion euros in relation to 1,3 billion euros). For the same period of time, GDP has declined for 2,80% or 0,9 billion euros annually. That means that GDP declined slower in the recession years than it had risen in the expansion years. When all the data is taken into consideration, it can be concluded the number of persons employed will in the expansion years rise at a rate lower than it had declined in the recession years. This consequently means that it will take more expansion years than the recession years in order to accomplish one of the main goals of the ECFs – to increase the employment to the pre-recession levels.

Furthermore, concerning the changes of the GDP rate of growth, when the years in which GDP increases (since 2004 until 2008) are examined, it can be seen that the average share of the gross capital formation in the GDP equals 35%. In other words, every euro of gross capital formation has created 2,89 euro of GDP. Thus, it can be concluded that the total expected investments of the ECFs that round to about 266 million euros should create about 769 million euros of additional GDP. Again, taking into consideration that the time estimated for the investments of the ECFs to be made is in the first five years of its existence and the

other five to seven years are presumed to be left for the projects to be completed and exited, the additional GDP should amount to 154 million euros annually or 5,09% of the average amount of GDP given the selected period of time.

To summarize all of the mentioned computations and their results, it can be expected from the ECFs that, in the next five years, they should increase the number of persons in employment for about 5.400 and create an additional 769 million euros of GDP. When these numbers are put in relation with the ones that Croatia underwent during the recession (from 2009 to 2012), when the accumulated loss of jobs totaled 190.000 and the accumulated GDP loss equaled to 5,4 billion euros, then it can be concluded how the total jobs which will be created by the ECFs will be 2,84% of the accumulated jobs lost during the recession. The additional GDP created will equal only 14,37% of the accumulated GDP loss. However, the multiplicative effect of the ECF investments is not taken into consideration in these computations, but more on that in the next chapter.

## *THE ACCOMPLISHMENTS OF THE ECONOMIC COOPERATION FUNDS SO FAR AND PREREQUISITES FOR FURTHER DEVELOPMENT*

In order for the ECFs to achieve their main goal (economic growth), it is necessary to optimize two things – the dynamics of the investments and the circulation of money. The previous chapter has shown us what should be the effects of ECFs on GDP through gross capital formation, But as the GDP data shows – Croatia has accumulated a decline in GDP since 2009 until 2012 over 11%, which implies that the ECFs did not fully accomplish their purpose. To be able to clearly understand why the ECFs failed in their intention, it is necessary to look at the limitations that are not necessarily related to the economy.

The first problem, the dynamics of investment, refers to the time required in order for the ECFs to invest all of their available capital and thereby achieve their expected sizes. Due to the fact that their management fee is, in the later years, dependent on the investments that they realized, it seems that the ECFs have a great incentive to invest their capital as soon as possible. Of course, a situation like this surely carries a certain amount of rushing with decision making, but still, it is not the main risk. The main risks and barriers to quality dynamic investing are bureaucracy and legal regulation. When we look at studies of the online site "Doing Business"(www.doingbusiness.org) we can see how the two aforementioned problems concern the entire Croatian economy. Croatia, according to a report conducted by the research of 189 economies of the world, found itself on the 152$^{nd}$ place when it comes to obtaining building permits (on average, it takes 317 days for 12 documents), 106$^{th}$ place when it comes to registering property (on average, it takes 102,5 days for 5 documents), 157$^{th}$ place when it comes to protecting investors and 98$^{th}$ place when it comes to resolving insolvency. Particularly noteworthy is the last criteria, because the ECFs partly decided to fund

just such, fallen companies (it will be very interesting to see the effects of the pre-bankruptcy settlement).

If the above information is put in relation with countries that have similar procedures, then we can see that, for example, in the Czech Republicfor obtaining construction permits, on average it takes only 86 days (27% of time needed in Croatia), but during that same time 33 documents are obtained (275% more documents than in Croatia)! When registering property in the Czech Republic, on average it takes only 24 days for 3 documents, in investor protection they rank 98th, while in resolving insolvencies they rank at a high 29th place. For the Czech Republic, the International Monetary Fund predicts a rate of growth of 1,90% in 2014 and 2,00% in 2015 while Croatia is expected to decline 0,60% in 2014 and a growth of only 0,40% in 2015 (http://www.imf.org/external/pubs/ft/weo/2013/01/pdf/c2.pdf).

Generally speaking on the fluency of starting a business, from 189 economies of the world, Croatia has found itself on the 89th place and has dropped for one place when compares to the previous year. Singapore found itself in first place while Hong Kong came in second with New Zealand in third place. At the very bottom there are Chad, the Central African Republic and Libya. As for the countries in the region, Macedonia and Slovenia find themselves on high 25th and 33rd place; Hungary is on 54th, Albania on 90th, Serbia on 93rd and Bosnia and Herzegovina on 131st place.

The effects of the aforementioned problems in investing can be seen in the data regarding total investments of the ECF in table 3:

*Table 3: Economic Cooperation Funds total investments since 2011 until September 30 2013*

| Economic Cooperation Funds - ECF | Investment fund expected size | Investment fund net asset as of 30 September 2013 |
|---|---|---|
| Alternative Private Equity ECF | 79.221.040 € | 6.582.570 € |
| Honestas ECF | 20.465.435 € | 663.486 € |
| Nexus ECF | 50.173.325 € | 11.188.927 € |
| Prosperus ECF | 44.891.923 € | 5.832.106 € |
| Quaestus Private Equity Kapital II | 71.298.936 € | 11.622.244 € |
| **TOTAL** | **266.050.659 €** | **35.889.333 €** |

*Source: Authors illustration according to the CFSSA, 2013*

From the above table it can be seen that the ECFs, since 2011 until the 30 of September 2013 have invested 35,89 million euros or 12 million euros per year. Again, taking into consideration the anticipated period for investing (the first 5 years since the starting of the ECF), there comes a certain worry that, with this dynamics of investing, the ECFs will not reach the quarter of their expected sizes.

The other issue, the circulation of money, refers to the investment multiplier. The investment multiplier is a number which, by multiplying the changes in investments, results in the changes in production and GDP. However, its classical definition will be partially modified for the purposes of this paper and will describe how many monetary units of one monetary unit invested by the ECFs can be created. In other words, the question is how many monetary units invested by the ECFs will the other market participants reinvest in that same market: Keynesian multiplier.

One of the elements that largely favor the circulation of money is the fact that the Regulations on the participation of the Croatian Government in Economic Cooperation Funds stipulates that the ECFs can only invest in companies that are domestic-owned and they cannot invest in shares of companies with the aim of short-term profit. Establishing the regulation framework in such a manner ensures two things – the provided investment capital remains in the hands of Croatian companies and, at the same time, they are invested long-term.

The above mentioned segments of the regulatory framework are colossal parts of the Regulations on the participation of the Croatian Government in Economic Cooperation Funds and they provide a background which gives the opportunity to optimize the investments and help achieve maximum value added through the circulation of money. In order to achieve the aforementioned, it is important that the anticipated capital that the ECFs will invest in the domestic companies will be, as much as possible, again re-directed into the companies that are domestic-owned.

For example, in Table 2, it can be seen that Prosperus ECF has invested its capital in the tourist company HTP Korčula PLC. By choosing to invest in this company, we can assume that the mentioned ECF will restructure the company, as well as with the existing organization within the company and the existing assets, all in order for the company to recover and begin operating profitably. In this restructuring process it is essential to re-direct the capital towards, for example, domestic consulting companies or domestic contractors. If the ECF decides to refurbish the external appearance of one of the hotels, it will have to choose a contractor that will be paid to perform the job properly. By selecting a domestic contractor, the capital, raised by the domestic private investors and the Croatian Government that has been invested in the company, will be forwarded to the contractor for his services, and he will be able to use that same capital in order to pay his (domestic) workers which will increase their purchasing power, and they will either deposit that same capital in the domestic banks or spend it in the domestic retail chains. Furthermore, the domestic contractor can spend that same capital by investing it in their own equipment or for the purchase of materials, preferably again from domestic suppliers. This process creates a continuing circulation of capital between the domestic market participants. If the capital was truly to flow in the described manner, it would surely optimize the circulation of the capital and keep it within the Croatian borders, and the investment multiplier would increase with each reinvested Kuna.

## *CONCLUSION*

Since the financial crisis does not seem to be abating for the sixth consecutive year, the Croatian Government has decided to participate in the forming of the ECFs as a specific instrument that should, contribute to the recovery of the Croatian economy. In this paper, we focused on the causal connections of the gross capital investments growth, the persons in employment growth and the GDP growth. The gross capital investment growth is of crucial importance for the GDP growth and of slight lesser importance for the persons in employment growth. It seems that the ECF concept is a good idea which is implemented in the wrong country, considering the fact that Croatia is legally insecure and import-oriented.

It is difficult to believe that some sort of a revolution or a great sour in GDP growth will take place given that the two biggest problems of the Croatian economy cannot and will not be resolved in short-term. The import-oriented economy is a result of the collapse of the Croatian production industries and its export (with the exception of tourism). The ECFs appear that they could be, at least partially, a resolution for reestablishing the production and service industries, and act as a starting impulse for the continuation of the prosperity of the economic activities.

This paper can be interpreted as a critical review of one of the economic measures that the Croatian Government carried out. The idea of the ECFs as a sort of a public-private partnership investment initiative is admirably well conceptualized. The investment funds that were established have made clear-cut goals investments that carry their own economic weight, but two problems remain. The first problem comprehends the total capital managed by the ECFs and, even more so, the total amount of capital that the ECFs will invest. The total amount of capital that will be invested seems to be too small and as such, cannot have a greater economic impact. This problem is seen clearer by the 5.400 workplaces that should be created by the ECFs investment, whilst Croatia lost 200.000 workplaces during the, still ongoing, recession. The second problem is somewhat abstract. The ECFs are well conceptualized, but have a realization issue because of the other participants in the economy (also known as bureaucracy).

The ECFs have showed themselves as well planned anti-recession projects, but know it is necessary for the initial concept to be taken to the next level. This can be accomplished by increasing the amount of capital available to the ECFs and by creating a faster and more efficient regulatory framework by reducing bureaucracy which the ECFs encounter during their market activity.

## *REFERENCES*

[1] Alternative Investments Fund Act (2013), Zagreb, Narodne novine
[2] Bokan, N.,Grgurić L., Krznar, I.,Lang, M. (2010): The effect of the financial crisis and the reaction of monetary policy in Croatia, Zagreb, Croatian national bank
[3] Regulations on the participation of the Croatian Government in Economic Cooperation Fund (2013), Zagreb, Narodne novine
[4] Makek M., Puljiz H., Banović D., Zemlić Z., Terzić V., Marović M. (2011): How to finance business with private equity venture capital funds?, Zagreb, Croatian Private Equity and Venture Capital Association (CVCA)
[5] Santini, G. (2007), The illusion and reality of the Croatian economy, Zagreb, Rifin
[6]http://www.capitalforenterprise.gov.uk/uiif
[7]http://www.doingbusiness.org/
[8]www.hnb.hr
[9]www.dzs.hr
[10]www.hanfa.hr
[11]www.cvca.hr
[12]www.fondovi.hr
[13]www.imf.org

# *CURRENT AND POSSIBLE RISK MANAGEMENT STRATEGIES FOR INVESTMENT FUNDS - CASE OF MACEDONIA*

*Vera Karadjova, PhD*[19]

*Katerina Angelevska Najdeska, PhD*[20]

## *ABSTRACT*

*Performing mediation between individual investors and securities issuers Investment Funds as non-bank financial institutions take up an important position in countries with developed financial structure. Risks diversification as a fundamental principle of investment policy requires a need for investments in a full range of securities, versus investing only in a few of them. Investment Funds provide just that, which means collection of financial funds from individual investors and invest them in the potential range of securities or other assets. Thus, Investment Funds provide a mechanism of "teamwork association" of small investors in order to gain the benefits of large-scale investment. In this sense, Investment Funds can play an important role in the investment activity of small and medium-sized businesses.*

*Republic of Macedonia as a country with bank-centric financial structure despite the stimulation of non-bank financial institutions such as insurance companies and pension funds, stimulate the development of Investment Funds too. Having in mind their relatively recent occurrence and the small participation in the financial system, risk management in Investment Funds have no experiential elements. The process of risks management must rely on theoretical knowledge, as well as on the experience of countries with many years of tradition. In this sense, the paper explored current and potential strategies for managing risks in Investment Funds.*

***Key words:*** *Investment Funds, Risk Management Strategies, Risk Diversification, Republic of Macedonia, Financial Structure*

***JEL Classification:*** *G23*

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[19]Vera Karadjova, Faculty of tourism and hospitality, Ohrid, Republic of Macedonia, verakaradzo@yahoo.com

[20]Katerina Angelevska Najdeska, Faculty of tourism and hospitality, Ohrid, Republic of Macedonia, k_angel_naj@yahoo.co.uk

## *INTRODUCTION*

Investment funds (mutual funds) that function as non-bank financial institutions perform mediation between individual investors and issuers of securities as surplus and deficient economic entities. In this, they implement the strategy of risk diversification as a fundamental principle of investment policy which in turn implies a need for investment in a whole range of securities, as opposed to investing in only a few of them. Investment funds provide just that, i.e. mobilization and accumulation of "small" amounts of surplus subjects and their investment in the potential range of securities with different risk and maturity. Thus, investment funds allow the use of the benefits of large-scale investment. Funds are managed by investment companies - Companies for managing Investment funds that provide professional management of the fund. Basic activities that investment companies (management companies) pursue for the investment funds are:

- Administration and documentation recording;
- Diversification;
- Increased liquidity;
- Professional management;
- Tax incentives; and
- Low cost of transactions.

The management companies often own and manage several investment funds. The main feature of the investment funds in terms of legal separation of the assets collected and invested in different targets gives them a character of professionally managed groups of securities that are owned by a group of investors. Monetary assets of the members are units in the fund, and the basic difference of the units from stocks is that units entitle the profits from investments of the fund, but not the right of management or that right is limited. The founders of the fund itself undertake the organization of the fund assets professional management.

## *TYPES OF FUNDS AND FUNDS YIELDS*

Two basic types of investment funds are known as *open* and *closed* investment funds.

- Open-ended investment funds (open - end, Mutual funds, Unit trusts) are ready at any moment to buy or sell their shares. Thus, the extent to which the fund dispose has not been fixed, but continually adapt to the mood of investors. By investing money in the fund new shares are created and the volume of the fund increases. At the request of its members, the fund is obligated to buy back the sold shares, and any such repurchase means reducing the number of units and the size of the fund. At any moment the

fund is ready to sell new, but also to buy back the issued units by the current market price. Funds spread or lower depending on demand. Emitting additional units, the fund collects funds for buying new securities. The limits of expansion and reduction of the fund is determined solely by market demand and investor interest.

- Closed Investment Funds (closed - end, Investment trusts) emit a fixed amount of securities which will initially will be sold on the primary market by public offer. The number of units is fixed and the Fund shall not buy back. Securities of closed-end funds are sold on stock exchanges or on the OTC market at a price determined by supply and demand. This means that the price may rise above or fall below the net value of the security. According to the directives of the European Union, open funds are treated as investment funds, while closed-end funds are treated as companies. Closed funds function as classical joint stock companies and funds collected from the sale of shares invest in securities.

Although historically closed investment funds occurred before the open, today dominate open investment funds. "The relationship between the assets of open and closed funds is approximately 20:1 in USA. In Germany and some other countries of continental Europe only open investment funds exist", (Ćirović, 1995, pp. 205). In developed countries, investment funds dominate the traditional markets of other financial institutions, including those of banks when we talk about time deposits and loans, pension funds when we talk about pension plans and insurance institutions in the field of life insurance. This dynamic growth of investment funds is due primarily to: (Maksimović, 2006, pp. 3)

- possibility of achieving relatively high yields (much larger than the interest on term deposits);
- greater diversification of the portfolio, which provides a greater degree of certainty;

High level of liquidity (ability to obtain invested funds in short term on the attached bank account).

Development of the Investment funds in developed countries result in a particular specialization of Investment funds, so there are generally three different categories of funds according to the market material in which they invest: (1) funds that invest in stocks (Stock funds); (2) investment funds that invest in bonds (Time bond funds); (3) investment funds that invest in market money instruments (Money market mutual funds). Funds can also be classified according to that whether they are or they are nor the subject of tax payment. Further specialization of funds according to specific investment objectives enabled the emergence and development of many subspecies of investment funds, including: funds that invest in indexes (Index funds), for example S&P 500; branch funds; national funds; regional funds; global funds; international funds; Funds for risk covering (hedge funds); green and other ethical funds; etc.

The yield that units owners in investment funds realized consist of two components: (a) returns realized in the form of stock dividend or interest on the bonds that are in the portfolio of the fund; and (2) part arising from the current value of the net assets of the investment fund, which fully determines the market price of the units of the Fund. This earned revenues (reduced by fees and expenses) the fund distributed or paid to investors in accordance with their participation in the Fund.

After setting the investment strategy, the investment funds are required to publish the *Prospectus of the fund*, which will provide a detailed insight into the fund, the fund's objectives, expected costs, management that will manage the fund and so on. All potential investors must obtain a Prospectus, before deciding their funds to invest in a specific fund.

The most significant parts of the Prospectus are relating to:

- Investment objectives - which are divided into three categories: achieving current income, providing future growth or a combination of the previous two objectives;
- Investment programme;
- Method of management;
- Mode of buying and selling units;
- Payment of fees and costs - through with operating costs reimbursable. The fees cover the costs of portfolio managers, expenses that fund have on financial markets, as well as the cost of advertising which are especially important in open investment funds. The fees range from 0.5% to 8.5%, depending on which securities the fund invests, although fees can usually be between 3 and 5%;
- Effects of investing;
- Operations results - performances of the fund in the past or whether it was realized a profit or loss in the operation of the fund. Fund performance can be assessed in three ways:

1.By monitoring the changes in the prices of units in the fund or the net value of the property, which has grown by expanding the portfolio of the fund and it is calculated:

$$Changes\,in\,assets\,net\,value = \frac{\text{fund value}}{\text{number if units in the fund}} \tag{1}$$

2.By calculation yields

$$Yield = \frac{\text{divident by unit}}{\text{price of a unit}}\% \tag{2}$$

3.By calculating the total revenues, calculated on an investment in a specific period

$$Total\ Yield = \frac{\text{number of units} \times \text{net value}}{\text{price of the initial investment}} \tag{3}$$

## *INVESTMENT FUNDS IN MACEDONIA*

Investment Funds in Macedonia started to work even in 2007, although it was legal possibility for that from 2000. Namely, The Law on Investment Funds was adopted in February 2000 and published in the Official Gazette No.9/2000 from 10.02.2000. It has changed with amendments of 09.03.2007, when actually starts the practical operation of investment funds in Macedonia. At the end of 2007 began working two Companies for managing Investment funds. That year there were eight private investment funds that do not sell their units publicly and did not have status of legal entity. Among other factors, one reason for opening the funds was reducing initial capital required for the work of open funds from 2,000,000 to 500,000 Euros, (Petkovski, 2009, pp. 350). The legal changes in 2007 allowed the possibility of opening private investment funds too. However, in 2009 a new Law on Investment Funds (Law on Investment Funds, No.12, 2009) was adopted, which law passed in 2000 and amended in 2007 was repeal. Law on Investment Funds provides that within two months after the announcement of the public offer for subscription of units in open-end fund, open fund have to collect funds in the amount of at least EUR 300.000,00 in Denar equivalent, using an intermediate exchange rate of the NBRM on the day when the funds are fully collected, (Law on Investment Funds, No.12, 2009, Article 58, paragraph 2).

Law on Investment Funds defines investment funds as affiliated monetary assets intended for investment, collected from investors through a public offer or private call, managed on behalf of investors by a fund management company. The value of the investment fund assets is the sum of the value of the securities in the investment fund portfolio, the fund's cash deposits in banks and other assets of the fund. The net value of the investment fund is the value of the assets less the amount of the liabilities of the fund. The Company for managing Investment funds is a joint Stock Company based in the Republic of Macedonia which has been granted a license by the Commission for the Securities to perform activities about establishment and management of investment funds. One company for managing investment funds can manage multiple investment funds. Least nominal amount the basic capital required for the establishment of a management company is 125,000 Euros in denar counter-value, at the average rate of the National Bank of the Republic of Macedonia on the day of application submission for permitting activities of managing investment funds to the Securities and Exchange Commission, (Law on Investment Funds, No.12, 2009, Article 5, paragraph 1). Supervise the operation of investment funds and investment funds management companies performed Securities and Exchange Commission.

According to the Securities and Exchange Commission Macedonia have 4 active companies managing investment funds, including:

*Table 1:Companies for managing Investment funds*

| No. | Full name of the Company for managing investment funds | Nominal amount the Company basic capital (in EUR) | Date of approval on the company | Date of entry in Register |
|---|---|---|---|---|
| 1. | Company for managing funds KB Publikum Invest AD Skopje | 700,000.00 | 15.01.2009 | 22.04.2009 |
| 2. | Company for managing funds Ilirika Fund Management AD Skopje | 500,000.00 | 02.07.2007 | 02.07.2007 |
| 3. | Company for managing funds Inovo Status AD Skopje | 167,654.00 | 08.08.2007 | 21.08.2007 |
| 4. | Company for managing funds KD FONDOVI AD Skopje | 695,000,00 | 19.05.2008 | 09.10.2008 |

*Source: http://www.sec.gov.mk/default.aspx?item=associationsuif&subitem=associationsuiflist*

Law on Investment Funds allows the existence of open, closed and private investment funds. Currently, Macedonia has active 11 open and 15 private funds. In February 2010 liquidated two investment funds that failed to cope with the consequences of the economic crisis on the financial markets were liquidated and only six survived and later 5 more open investment funds were established. Open funds which remain secured census of 300 thousand Euros, which impose to them Ministry of finance, and which is actually the legal imperative. Despite the risks and problems that are realistic in the long term is expected stabilization and profitable operation. In the investment funds in Macedonia in 2009 were invested 2.5 million Euros, which is the lowest amount of money in the region. In the funds in Serbia were invested 10 million, 160 million in Bulgaria, Croatia even 1.6 billion Euros, while in Slovenia 1.9 billion Euros. In 2012, investment funds still have very little importance within the Macedonian financial system. Despite the relatively rapid growth, their share in the total assets of financial institutions accounted for only 0.1%. Inflows of funds from the sale of unit certificates in 2012 increased, but it is also observed increased outflows of funds from investment funds based on the redemption of unit certificates. However, net - proceeds on this basis contributed to the increase in the assets of open-end investment funds. Moreover, due to favorable movements of the financial markets that investment funds have invested, in the last quarter of 2012 nominal annual yield of the investment funds received positive values. However, companies that manage investment funds continue to operate with a negative financial result, (Statement of financial stability in the Republic of Macedonia 2012, July 2013, pp. 139). The analysis in the previously mentioned Statement not include private investment funds and management companies of private funds, having in mind the fact that according to the Law on Investment Funds, (Law on Investment Funds, No.12,

2009, No.67, 2010 and No.24, 2011), in the Republic of Macedonia there is not planned supervision of private funds or companies authorized to manage private funds nor the obligation to submit regular reports to the appropriate authority.

*Table 2: Open-end funds in the Republic of Macedonia*

| No. | Full name of the open-end fund | Date of entry of the open Investment fund in the Register | Full name of the Company for managing investment funds |
|---|---|---|---|
| 1. | Ilirika Global – Emerging open-ended investment fund | 31.10.2007 | Company for managing funds Ilirika Fund Management AD Skopje |
| 2. | Ilirika Southeast Europe open-ended investment fund | 26.10.2007 | Company for managing funds Ilirika Fund Management AD Skopje |
| 3. | Ilirika Cash Fund open-ended investment fund | 28.12.2012 | Company for managing funds Ilirika Fund Management AD Skopje |
| 4. | Innovo Status Akcii open-ended investment fund | 31.10.2007 | Company for managing funds Inovo Status AD Skopje |
| 5. | KD BRIC open-ended investment fund | 09.10.2008 | Company for managing funds KD FONDOVI AD Skopje |
| 6. | KD Cash Depozit – open Investment fund | 12.07.2012 | Company for managing funds KD FONDOVI AD Skopje |
| 7. | KD Nova EU open-ended investment fund | 09.10.2008 | Company for managing funds KD FONDOVI AD Skopje |
| 8. | KD Top Brends open-ended investment fund | 12.05.2014 | Company for managing funds KD FONDOVI AD Skopje |
| 9. | KB Publikum – Balansiran open ended investment fund | 22.04.2009 | Company for managing funds KB Publikum Invest AD Skopje |
| 10. | Open-ended investment fund KB Publikum – Cash | 17.03.2011 | Company for managing funds KB Publikum Invest AD Skopje |
| 11. | Open-ended investment fund KB Publikum – Bonds | 17.03.2011 | Company for managing funds KB Publikum Invest AD Skopje |

*Source:*
*http://www.sec.gov.mk/default.aspx?item=openfunds&subitem=openfundslist*

It is evident that two companies for managing investment funds (Company for managing funds Ilirika Fund Management AD Skopje and Company for managing funds KB Publikum Invest AD Skopje) manage three investment funds, Company for managing funds KD FONDOVI AD Skopje manages four investment funds and Company for managing funds Inovo Status AD Skopje manages only one investment fund.

# *MANAGING RISKS IN INVESTMENT FUNDS IN THE REPUBLIC OF MACEDONIA*

Investment funds fall within non-bank financial institutions whose participation in countries with underdeveloped financial structure is relatively small. In this sense, Republic of Macedonia stimulates increased participation of non-bank financial institutions, including insurance companies, pension funds and investment funds. Considering their relatively recent phenomenon and the small participation in the financial system, they have no experiential element in risk management. The process of risk management must rely on theoretical knowledge and the experience of countries with many years of tradition.

When making the decision to invest in investment funds, investors are mostly governed by the amount of the yields in a certain period, while very rare or little are concerned about the amount of risk the fund has taken in the selection of securities in which investments (formation of its portfolio). "The risk of the Fund is directly transferred to investors, rather than just submitting by the fund as a financial intermediary"(Vasiljević,2002, pp.116). Very often, especially in underdeveloped financial structures, investors cannot be thoroughly informed about the relationship between the amount and impact of risk and returns that funds exercise, nor by the funds work statements. Risk as uncertainty that represents the difference between the future and the expected yields in nature is neither positive nor negative category.Therefore, the objective of risk management is not risk elimination, but finding an adequate relationship between the risk taken and the expected yield. The difference between the risk taken and the realized rate of return on risk-free securities is defined as the Risk premium. The Risk premium is determined by uniting the various types of risks including: market risk, business risk, inflation risk, financial risk, political risk, currency risk, liquidity risk etc. "Conditioning between the yield and the risk (Risk-Return Trade-off) in the investment process is the ability of a investor to estimate the extent of acceptable risk which accompany the expected yield",(Vasiljević,2002, pp.59). In this, it must be taken into mind the fact that a very little number of investors (or a fraction of their investment) would like to invest only in risk-free securities, i.e. in government bonds.

The classification of the risk of investment portfolio to systematic and unsystematic risk leads to the development of modern portfolio strategies. Analyzing the systemic risk as the risk connected to the market, and unsystematic as a risk connected to unique factors (conditions) of certain specific portfolio of the investment fund, the risk management of investment funds may use some of the already developed statistical measures that help in determining the level of the investment risk. By using these methods, can be determine:

- The volatility of the fund (standard deviation);
- The extent to which the fund has expressed particular market index ($R^2$);
- $\beta$ index (volatility related to the corresponding market index);
- $\alpha$ index (level of risk depends on the managers abilities).

The standard deviation as a measure of dispersion represents the oscillation of individual returns in correlation to average returns in a certain period of time. Although it may be acceptable as average expressed yield, the risk that has large oscillations (several extremely good and extremely bad years in a long time) can be evaluated by investors as unacceptable.

Coefficient $R^2$ shows the results of the Fund expressed in percentages, or the results depending on the market impact (systematic risk). The difference among the value of the $R^2$ and 100% shows how much the yield of the fund is the result of the fund specific characteristics (unsystematic risk) and how much is it is under the influence of the market actions. As the risk category in general, the $R^2$ coefficient itself is neither good nor bad, but the resulting value only helps to better reflect and determine the risk characteristics of a particular fund. Thus, investors who chose passive strategy should choose funds whose coefficient $R^2$ is close to 100%. Active investment approach means that fund managers will choose to invest in specific securities or sectors they believe are undervalued. The interpretation of the value of the $R^2$ coefficient depended also on its comparison to adequate benchmark index. Depending on the specifics of the portfolio and the calculated coefficient $R^2$ should be put in relation to the index (fast growing - high risk stocks, moderately risky stocks, sectors, markets ... etc.).

β coefficient sorts the changes in yields in relation to the market as a whole, that shows the expected percentage of change in the fund value in accordance to the percentage change in benchmark index. The calculated value is a relative number. If for example the calculated value of the fund amounts to β 0.86 (<1), which means that the fund have a volatility of 86% compared to the observed market (growth/decline of the fund would be reflected in a change of +/- 86%). In performing the conclusions it is important to emphasize that it is of a great importance to compare the obtained β coefficient with the corresponding benchmark index, in order the results make sense.

The coefficient α represents the difference between the results derived by the fund and the results that are expected based on the degree of risk that the fund manager takes. Proper determination of this indicator provides an opportunity to separate the contribution of the manager of the fund for its yields. Like the coefficient β, the coefficient α is also a relative indicator of the performances. If the fund achieved a result that is equal to the perceived risk, then the coefficient α for this fund will be equal to zero. Positive value of α indicates that the manager produces a yield which is higher than expected, considering the taken risk. In order to calculate the value of the coefficient α, the actual performance of the fund is compared to the expected income adjusted to the undertaken risk.For example, if the income of the S&P 500 (as a benchmark index) during one year was 10% higher than the income of T-bills (such as risk-free securities), then the coefficient β has the value 1.2 (volatility relative to the benchmark index is 120%), and the fund had a score of 15% better than T-bills, it shows that the coefficient α is 3% (i.e. the contribution of the risk managers strategy can be perceived through increasing the yield of the fund for 3%). A negative value of the coefficient α indicates that managers do not adequately reward investors for the risk they are exposed, respectively that the investors yield is lower because of the risk managers strategy.

Managers whose α coefficients have a positive value during a long period of time, have a good recommendation to investors to invest in funds headed by them.

In Macedonia these and similar indicators for the performances of the investment funds, especially relative indicators for their performances are not available. Because of that, only remains mandatory to be respected the provisions for risk management that are prescribed by the Low, as: (Law on Investment Funds, No.12, 2009, Article 5, paragraph 22)

- The management company must establish a system of risk management that will enable the calculation and monitoring of risks in investment portfolios of individual clients in every time, and also for the total investment portfolio of the Fund.
- The system of risk management must provide accurate and independent determination of the values of derivative financial instruments traded on regulated markets and financial derivative instruments traded over the counter.
- The management company shall notify the Commission for each investment fund and individual client, for the types of derivative financial instruments in the portfolio of the investment fund and for the portfolios of the individual clients, associated risks, the quantitative limits and implemented methodology for calculation of the risks associated with positions and transactions connected to those derivative financial instruments, in accordance with the rules prescribed by the Commission.
- Exposure of the investment fund to individual financial instruments on which a financial derivative instrument is based on must not be inconsistent with the investment limits prescribed by law, the prospectus and the statute of the fund.
- When the security or the instrument on the money market contains embedded derivative financial instrument, it must be considered in accordance to the calculation of exposure of the investment fund referred to in paragraphs (3) and (4).
- The Commission prescribes the methodology for calculating the risks of investments in financial derivative instruments.

## *PERMISSIBLE AREAS FOR INVESTMENT, RESTRICTIONS ON INVESTMENTS AND OVERDRAFT OF THE RESTRICTIONS*

Investment funds as financial intermediaries that collect funds from many small investors through the sale of shares and use the revenue so collected to purchase securities, are facing a number of financial risks. Through the process of transformation of assets, issuing shares in small denominations and buying large blocks of securities investment funds use a range of advantages over brokerage fees, and purchase diversified portfolios of securities, creating on a that way an opportunity for risk management.

In terms of legal solutions to the risk management of investment funds, the Macedonian Law (Law on Investment Funds, No.12, 2009) stipulates that the management company must establish a system of risk management that enable in every moment the calculation and monitoring of risks in investment portfolios of individual clients, as well as for total portfolio of the investment fund. The system of risk management must provide accurate and independent determination of the values of derivative financial instruments traded on regulated markets and financial derivative instruments traded over the counter. The management company shall notify the Commission of each investment fund and individual client, of the types of derivative financial instruments in the portfolio of the investment fund and portfolios of individual clients, associated risks, the quantitative limits and implemented methodology to calculate the risk associated with positions and transactions to those derivative financial instruments in accordance with the rules prescribed by the Commission, (Law on Investment Funds, No.12, 2009, Article 22, paragraph 1-3).

Exposure of the investment fund to individual financial instruments that is based on financial derivative instrument must not be inconsistent with the investment restrictions prescribed by law, the prospectus and the statute of the fund. When the security or instrument of money market contains embedded derivative financial instrument, it must be considered in accordance with the calculation of exposure of the investment fund. Securuties and Exchange Commission shall prescribe the methodology for calculating the risks of investments in financial derivative instruments, (Law on Investment Funds, No.12, 2009, Article 22, paragraph 4-6).

The law also specified allowable areas for investment, restrictions on investments and restricted investments overdrafts, separately for open and closed investment funds. Such rigid legislation imposes towards investment fund risks exposure minimization, i.e. protection of the entities that have invested in it.

In addition, within the allowable investments, stipulating that the assets of the open-ended Fund may only consist of: (Law on Investment Funds, No.12, 2009, Article 66)

- Transferable securities and money instruments traded on regulated markets in the Republic of Macedonia, the EU member states and member states of the OECD and applied to official listing on the stock exchange or other regulated markets of countries that are not members of the EU and the OECD, provided that the statute and the prospectus of the Fund provide such investment;
- Newly issued transferable securities under certain prescribed conditions;
- Units or shares of investment funds registered in the Republic of Macedonia or countries which are members or not members of the EU and the OECD, also under conditions prescribed in the Law;
- Deposits in authorized banks in the Republic of Macedonia, which mature within a period not exceeding one year;

- Forwards and options contracts and other derivative financial instruments traded on regulated markets as defined in the first paragraph of this listing and/or financial derivative instruments traded over the counter, stating specific requirements to be met;
- Instruments on the money market which are not traded on regulated markets, as well as the conditions under which it can be done; and
- Money on the account.

The following are restrictions which aggregate can be expressed through two basic types: (a) percentage limitations for certain types of investments from of the Fund assets net value and (b) restrictions on investments in securities of a single issuer, also as a percentage the net value of the assets of the Fund.

Managing risks in a closed fund is also instructed by the Law on investment funds by setting the allowed investment opportunities. In this sense, the assets of the closed-end fund can only consist of: (Law on Investment Funds, No.12, 2009, Article 90)

- Securities;
- Units of investment funds registered in the Republic of Macedonia, EU Member States and OECD countries;
- Deposits in authorized banks in the Republic of Macedonia which mature within a period not exceeding one year;
- Forwards and options contracts and other derivative financial instruments traded on a regulated market of securities and/or derivative financial instruments traded OTC under the conditions indicated; and
- Money on the bank account in the Republic of Macedonia.

In the closed-end funds just as with the open-end funds regulatory authorities regulate restrictions on investments, as well as exceeding the limits. The limits are expressed as a percentage of the net value of the fund's assets in terms of the types of investments and in respect of the instruments issued by a single issuer. In any case, the principle of the risk diversification and protection of the interests have to be respected. In a case of exceeding the legally specified limits, which are a consequence of the market prices movements, the management company tries to protect the interests of the shareholders. Management Company also is required to harmonize the investment of the closed investment fund within one year starting by the day the overdraft occurred, taking into account to minimize the risks of incurred overdrafts in investments.

## *BASIC RISK MANAGEMENT STRATEGIES FOR INVESTMENT FUNDS*

Human resources are the decisive factor for the success of every kind business entity, so human resources are of greatest importance for determining risk management strategies in investment funds. Logically managers pay great attention to the staff management in order to create an appropriate staff structure and to lead a personnel policy aimed at achieving strategic goals and directions for the investment fund development. Therefore, it is necessary staff planning, as well as training, developmentandstaff improvement policy, in direction of their acceptance and learning of the modern trends in the business they perform. In this way conceptualized business entity staff structure makes so called subjective factor, i.e. the philosophy of the institutions management.

Basically there can be two basic philosophies of the risk management:

- Aggressive philosophy and
- Philosophy of risk aversion.

The aggressive philosophy and aggressive type of managers are largely oriented to liabilities management and acquiring liquid assets by using credits on financial markets. The aggressive strategy and its nature largely depends on the nature of the personality of the manager who selects and implements that strategy, and it suits to progressive, young, ambitious, creative, entrepreneurial manager spirit who accepts hazard ventures, but normally with the necessary dose of sanity and measurement of risks that may occur, as well as the possibilities for its coverage. Such an aggressive strategy means intentionally entering into risky ventures, when it is expected favorable movements of the market performances and the opportunity to increase earnings.

The managers showing risk aversion are mainly oriented towards providing liquidity through asset management, or through the use of secondary reserves in the assets of the institution, why they are called assets managers. This type of managers increasingly accept situations in which there is not a great risk, and such transactions mean less risk of loss, but smaller yields too. In their specific actions managers with risk aversion tend to establish:

- Less interest exposure,
- Lower FX (foreign exchange) exposure,
- Coverage risk ventures by hedging, other forward transactions, and
- Using of derivative financial instruments (futures, options, warrants, etc.).

Behind numerous quantitative procedures in determining the risk management objectives, identifying existing risks, their measurement, quantification and monitoring, procedures and methods of planning and selection of the best tools for managing such risks, management control etc., it is necessity to combine all these procedures and the application of certain qualitative methods and procedures. The

models that are based on mathematical-statistical risks quantification by a probability distribution for losses on risk positions exercise intention of enforcing them, and found wide application in large and sophisticated financial institutions, but they always do not give enough good results. Having in mind the uncertainty of the future and the possibility of the occurrence of unforeseen situations, there is always a probability of occurrence of extra unforeseen events, which if occur they will disable further prediction and quantification by extrapolation of past trends. Due to the existence of the possibility of such events, it is considered that the most effective risk management strategy is a combination of qualitative and quantitative approach. This means that successful risk managers must find ways to harmonize the mathematical modelling with market experience. In this context Risk Management models based on quantitative procedures are complemented with qualitative methods such as stress tests that large institutions prepare for the event of any catastrophic disruptions. It is a high stress scenario that carries very small possibility to occur, but large and sophisticated subjects often think that they have to be prepared for such situations.

Before definitively state the basic Risk Management strategies, it must be mentioned the basic forms of Risk Management:

- risk management by avoidance;
- risk management by retention;
- risk management by transferring (hedging);
- risk management by sharing (diversification); and
- risk management by reducing.

One of the essential goals of the risks analyze is to detect existing theoretical - application risk management strategies, as well as to identify potentially possible combinations thereof for use in the certain business entity such as investment funds. In this sense, as the most important among them, can be list: (Karadjova, 2012, pp. 325-382)

- Strategy of internal rating systems;
- Strategy of protective clauses;
- Strategy of limits (institutional or custom);
- Diversification strategy (portfolio diversification and products diversification – diversification of the products range);
- Insurance and reinsurance strategy (as well as some other forms of guarantees);
- Liquidity and liabilities structure strategy;
- Strategy of capital adequacy;
- Securitization strategy;
- Hedging - a strategy of hedging risks with financial derivatives (forward contracts, futures, options contracts, swap agreements); and
- Strategy of prices variability (commodities prices, services prices, interest rates and premium rates).

The strategy of internal rating systems means setting criteria and standards for financial institution or other entity that approves some kind of credits customer rating in respect of debtors and other securities issuers that participate in the mentioned subject financial portfolio. It is a system of quantitative or qualitative criteria that the creditor management sets (i.e. solely internally for their own needs), and which obligation is based only on the subjects business policy. So set value systems that must be meet by the customers practically shows the minimum level of rating (reputation) that the customer should have to be considered that it will not jeopardize the operations and financial position of the creditor – because of default or untimely payment of interest, dividends and other cash flows expected from the investments. That would mean that in this way an internal rating system is constructed as a strategy for risk management, completely independent of the rating agencies and institutions involved in the ranking of business subjects. Through internal rating systems, financial institutions and other entities that exercise some kind of crediting, rate the subjects of their business - technical cooperation and the fundamental criteria for ranking is the credit risk or widely default risk.

Investment funds and other lending entities can also apply the Strategy of protective clauses that would prevent such debtors conduct during the duration of the credit relationship which may exacerbate their creditworthiness or prevent from some customer behaviour during all the time of the credit relation which would put them in a position of not being able to pay regular payments. Also, during the terms of any contractual relationship, parameters of the subject would be followed and avoid its irrational behaviour by which it would put into a situation that cannot pay regular cash payments previously agreed. As clause against credit risk for example can be mentioned that if the borrower violates any of the protective clauses, the entity that gives the loan have the right to terminate currently the credit relationship and to seek redress for the former default. This clause is used to put pressure on debtors to adapt their behaviour to the provisions of the protective clauses and to return the level of their credit risk on its previous level.

There are several important reasons for that the financial system is one of the most regulated in the certain countries economies. Basically it happens because:

- Increase of the information available to investors; ;
- Ensuring the stability of the financial system; and
- Increased control over the conduction of the monetary policy.

Institutional limits are set in order to eliminate the problems of adverse selection and moral hazard that reduce the effectiveness of the operation of financial markets. In that sense, government regulation can reduce the problems of adverse selection and moral hazard in financial markets and to increase their efficiency by increasing the quantity and the quality of the information available to investors. In ensuring the stability of the financial intermediaries, developed economies pose numerous institutional limits, everything in direction of preventing from so-called financial panic that could lead to the collapse of financial intermediaries. On the other hand, various financial institutions, although with the same approach to risk can set various forms of their own investments restrictions due to various circumstances in which they are. In the frames of the prevalent

circumstances can be cited: the tax status, the need for liquidity, trends in portfolio incomes or different legal restrictions. Pension funds and investment funds as the most common among them, respect the legal limits concerning the structure and regulation of their activities, but also post their own in order to maintain their liquidity and increase the effectiveness of operations. Some of the possible limitations in this regard may relate to: the maximum percentage of investment in certain institution, the maximum amount of investment in one certain national economy taking into account the country risk, investments only in securities with fixed income, various percentage restrictions on investments in securities with variable income, restrictions on investments in corporate securities (with an emphasis on investment in government securities, etc.), maximum maturity of invested assets, coefficient of the correlation between risk and total assets, ratio of certain parts of the assets over their respective counterparts in liabilities, maturity structure of assets in correlation to the maturity structure of liabilities and estimating the duration of investments etc.

Diversification as a general known rule for reduction and sharing of the risk arises from the basic investment rule "do not put all your eggs in one basket". The application of such a rule provides an opportunity to reduce the overall risk or the risk of the portfolio. It means practical actions of the principle of portfolio aggregation in which the sum of all individual risks entering the portfolio is greater than the single portfolio risk, because of the existence of a negative correlation between the various types of assets.

The situation in investment funds regarding the risk management and opportunities for the use of insurance are almost identical with those of the pension funds. There is no legal obligation for regulated insurance, but insurance and reinsurance can be used as strategies for risk management. In particular, it is the practice among large investment funds, with a long tradition and those who represent some combination of investment funds, pension funds and insurance companies. It is about investment funds that raise funds through the sale of life insurance policies, and offer programs for payment of life-long rents (pensions). Often such non-banking financial institutions insure their property in large insurance companies, and they do reinsurance in reinsurance companies.

The development of liquidity strategy begins with an analysis of supply and demand of liquid assets and determining the net liquidity position at a given time (Lt). Based on this calculation of net liquidity position, liquidity managers contemplating between two extreme situations: (1) the situation when the demand for liquidity is greater than the supply and they need to prepare for the liquidity deficit, i.e. to decide when and from where they will provide additional liquidity; (2) the situation when the demand for liquidity is less than supply and they need to prepare for the surplus of liquidity, i.e. to decide when and how to invest the excess of liquidity in a cost-effective way. In terms of solving the problem of liquidity the practice has detected three basic strategies which with some modifications, depending on the specific conditions may be applied by the managers of financial institutions and other commercial entities. These include: (1) providing liquidity based on assets – assets liquidity management; (2) reliance on borrowed liquidity (liability management); and (3) compliant liquidity management (assets – liabilities management - ALM).

In reference of determining the strategy of capital adequacy, particularly in reference to determining the required level of capital for non-banking financial institutions (investment funds, pension funds etc.) legal solutions are used, that predict the level of capital required for these institutions. But, for formulating the strategy of capital adequacy for investment funds essentially important is their net worth. The minimum of net value that investment funds in R. Macedonia is obliged to maintain is legally prescribed and shall be: (Law on Investment Funds, No.12, 2009, Article 102)

- The net value of the open fund is the value of the fund's assets less liabilities. Net value per unit is the net value of the fund divided by the number of fund units at the time of calculating the net value of the fund's assets.
- The net value of the closed-end fund is the value of the fund's assets less liabilities. Net value per share is the net value of the fund's assets equally allocated to each share issued by the fund at the time of calculating the net value of the fund's assets.

The use of securities guaranteed by the capital is one of the important strategies for risk management. The changes in interest rates on financial markets affect both: interest income and the cost of interest and at the same time affect the value of the assets of the economic entity. Securitization and developing a strategy through which it will be implemented provides an opportunity for financial institutions to carry out geographical diversification of their portfolio, avoiding thus losses on a local level. Also, the strategy of securitization is a tool for managing interest rate risk whereby financial institutions adjust their portfolio of assets in a way that maturity (period) of assets at least approximately coincided with the maturity (period) of the liabilities. The non-banking financial institutions among them investment funds also are not deposit institutions and their basic function is not credit, yet they are not immune to credit risk and develop opportunities to participate indirectly in lending to deficit sectors. This further complicates the process of securitization, but does not make it impossible. Giving as collateral portions of their assets for the loans they take and raise new funds by a non-banking financial institution is a practical tool for managing their interest rate and credit risk.

Hedging as a strategy for hedging risks with financial derivatives is also useful for investment funds. An important point in the use of derivatives (derivative securities) as a hedge is the fact that although they may have a protective function, they carry their own risk and that risk mast be calculated by the managers. The four basic types of derivative instruments that may be used are:

- Forward contracts;
- Futures;
- Options; and
- Swap contracts.

There are many mathematical and graphical methods for the application of the certain proposed strategies, which exceed the space opportunities for their presentation here. All of them, can be a subject of particular analyze.

## *CONCLUSION*

Investment funds as specialized institutions which perform collective fundraiser to invest in securities or other financial instruments have a significant role in countries with developed financial structure. The importance of investment funds can be perceived in their success in retrieving the relatively small capital from legal entities and individuals, and investment of that capital in a carefully selected portfolio of investments, primarily in securities. In this sense, the choice of strategies for risk management is an essential segment of their scope of work. Unlike small private investors, funds are informed investors, because they know more about the functioning of financial markets and because they are managed by professional managers. Funds at first appeared primarily in the USA, but in the last 30 years they develop by strong pace in many developed countries in the whole world.

The lack of funds in a market considered a weakness in that market, in many ways. There is no mechanism in the market which will animate free private funds from small investors to invest in certain portfolio of investments. When they are gone, private investors buy shares on the capital market without having done a good analysis of the market. Competent market monitoring is expensive, and requires proper knowledge and dedication. Such monitoring reduces the risk of investment. Funds that professionally manage the collected funds are legally required, but in the same time directly interested to develop strategies to manage the risks they face during doing investments. Therefore, investment funds have professional managers who competently manage a portfolio of investments, but that does not mean they cannot misrepresent. Investors are not protected from losses due to bad investments.

The need for investment funds arising from the numerous advantages they have, among which can be included:

- Risk dispersion (funds invest in many different securities, which contributes to reduce the investment risk);
- Professional management (investment funds have professional and experienced staff who daily analyze trading on the securities markets);
- Liquidity (all investors in open-ended investment funds may at any time apply to the sale of theirs units in the fund);
- Simplicity in investment (investment funds provide a simple way of investing through electronic banking, by standing order, etc.).

The main disadvantages in investing in investment funds is variability in yields and the lack of a state guarantee for money, while in the classical bank savings yields are reliable and there is a guarantee of the state for the part of the money invested in the bank. Among the numerous risks that arise when investing into investment funds and why it is necessary to develop an appropriate strategy for risk management can be stated:

- Riskiness of the investment (consisting of unsystematic risk that can be reduced through diversification of investments and systematic risk that cannot be reduced through diversification of investments);
- Liquidity risk (liquidity risk is changing on a daily basis or depends on the amount of additional liquidity flowing into the fund);
- Risk of changes in the exchange rate - currency risk (The risk is reduced through diversification of investments in securities in different currencies);
- Operational Risk;
- Default Risk;
- Risk of investing in other investment funds (When investment fund will invest a part of the funds to another fund, the existing charges would additionally increase);
- Political Risk (political events in the country can have an adverse effect on the value of the shares on the Stock Exchange, and thus significantly reduce the value of the fund. Political risk is a systematic risk and a Company managing with investment funds cannot avoid this risk);
- Risk of change in taxes (In a case of changes in tax laws and thus this risk kind adversely affect the profitability of investing in the Funds).

For potential investors, one of the most important things when choosing a specific fund is a fund's prospectus. The prospectus of the fund includes fund objectives, investment policies of the fund, its management, fees on entry or exit from the fund, the fees that are charged to the fund, the minimum amount to invest in the fund, the fund's operation in the past and other significant characteristics about the fund. Briefly, Prospectus explains the program and policy which are managed by managers in order to achieve the investment objective. Rate of return of the fund and the expected risk can be determined on the basis of its investment policy or it can be specified in the prospectus. The general rule is that investment funds with higher yield to have a higher risk. Investors should be aware that the yield is associated with a certain risk. The main regulator of the investment funds activities (excluding private funds) on the Macedonian market is the Securities and Exchange Commission, in accordance to the Low on Investment funds and bylaws arising from the previously mentioned Low.

Legal regulation on the operation of investment funds in the Republic of Macedonia have few changes till today. Namely, the first law passed in 2000 was changed in 2007, then again in 2009. The new amendments provide greater protection of minority shareholders and greater competition on the capital market. In terms of these changes, the possibility for existence of private funds is given. The operation of private investment funds should enable the revival of the economy in Macedonia, through restructuring and entry of major new investments. This model of private investment funds could grow into a driving force of economic development. The first challenge facing investment funds is a manner to gain the trust of the citizens, who as a rule are the most numerous investors. Investing in investment funds is a kind of long-term savings that can bring significantly higher yields.

## *REFERENCES*

[1] Ćirović, M. (1995), Bank Management. Belgrade: Economic Institute.
[2] Karadjova, V. (2012), Principles of Risk Management. Ohrid: CNIR FTU.
[3] Maksimović, P. (2006), Investment Funds. Belgrade.
[4] National Bank of the Republic of Macedonia, Sector for Supervision, Banking Regulation and Financial Stability, Department for financial stability and banking Regulations (2013), Statement of Financial Stability in the Republic of Macedonia 2012. Skopje.
[5] Official Gazette of Republic of Macedonia (2009),Law on Investment Funds, No.12. Skopje.
[6] Official Gazette of Republic of Macedonia (2010),Law on Investment Funds, No.67. Skopje.
[7] Official Gazette of Republic of Macedonia (2011),Law on Investment Funds, No.24. Skopje.
[8] Petkovski, M. (2009), Financial Markets and Institutions. Skopje: Faculty of Economics.
[9] Vasiljević, B. (2002), Basics of the Finance Market. Belgrade: Zavet.
[10] www.sec.gov.mk/default.aspx?item=associationsuif&subitem=associationsuiflist (21.06.2014)
[11] www.sec.gov.mk/default.aspx?item=openfunds&subitem=openfundslist (21.06.2014)

# *FINANCING OF LOCAL GOVERNMENT PROJECTS VIA MUNICIPAL BONDS*

*Milan Gavrilovic, MA*[21]

*Jelena Gavrilovic*[22]

## *ABSTRACT*

*Financing of local development is most problematic in the area of complex, developmental infrastructure projects, where the municipal budget funds and local knowledge are insufficient for their financing, starting and successful implementation.*

*Municipality so-so can cope with the demands for implementation of simpler projects and infrastructural interventions, whose conducting is their traditional concern, implementation of complex and expensive developmental projects often exceed their organizational and financial capacity. For these projects, there are no locally available resources, so they can not be financed from budgetary resources, as well as the range of their implementation can not be based solely on locally available management and technical capacities. In this paper we will show that for the financing of capital projects to the municipal authoritie ssuccessful alternative to raising taxes or borrowing from banks, may be issuing of municipal bonds. Municipal bonds can be issued by the state, cities, countiesor different districts to raise money to finance certain operations or projects. Projects that are financed in this way are hospitals, schools, power plants, office buildings, airports, etc.. Municipality in the financing of such projects firstrely on its ability to collect taxes, but if they need additional financial assets they issue municipal bonds. Generally accepted notion, that the practice has proved, is reflected through an active preference by investors for municipal bonds. Despite the fact that are valid for one of the safest investments, municipal bonds are not risk-free.*

***Key words**: Financing of Local Development, Municipal Bonds, Risk-Free*

***JEL Classification:** D53, G20, H54*

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[21]Milan Gavrilovic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia sagatagm@gmail.com

[22]Jelena Gavrilovic, MSc student at the Faculty of Tourism and Hospitality, Ohrid, Republic of Macedonia, sagatajs@gmail.com

## *INTRODUCTION*

Every financial system is composed of a large number of participants (financial institutions), in which the overall ambience of confrontation of supply and demand for financial assets and liabilities in the financial markets traded with money and different forms of financial receivables (financial instruments). Government securities represent one of the most important financial instruments that are used for macroeconomic useful redistribution of funds.

Government securities are financial instruments that emit government authorities, overnment agencies and organizations, as well as local authorities.

From a legal point of view, government securities are the obligatory legal securities which are based on the right to financial claims of owners to the issuer.This distinguishes them from the property law securities (which are based on a law of real property-proprietary: for example, bill of lading, warehouse receipt, consignment note, etc..) And securities entitled to participate (which contain property rights (participation in profits, the right to of assets in liquidation) or a personal right (participation in management), as well as stocks). From an economic point of view, government securities are a type of debt securities which provide investors with yield that is called interest, in contrast to the actions that are equity securities, and offer the owner a dividend.For the state that is the issuer, government securities are financial obligations, while for the investors they represent receivables - financial assets.

The funds that state and local governments collect issuing its own securities are intended to:

- financing gaps in income and expenditure of budget (the budget deficit),
- funding of specific development projects,
- satisfying o certain common needs of citizens and businesses and
- solving certain specific economic and financial problems.

Of all the motives of issuing government securities the biggest and most common is the need to finance the budget deficit. Between government debt and budget deficit, there is a very close connection.State that wants to spend more money than its budget revenues (budget deficit) is usually forced to obtain money by borrowing. The amount for which the state borrows inside or outside the country is called the public debt, and if the borrowing in the financial markets, then it comes to a market part of the government debt - debt based on the issued securities. Every borrowing implies future interest liabilities. If the state has a deficit from year to year and is financed by further borrowing, obligations for debt service may soon become one of the largest expenditure items in the budget. Finally, the state may get into a situation to be able to pay only the interest on the debt and has no money to fund other expenses - bankruptcy. Therefore it is closely monitoring the ratio of government debt, domestic product and the budget deficit.

On the basis of government securities have been built huge markets of government debt who grow from year to year and diverted financial assets from sectors that dispose their surpluses towards sectors where they are most needed, ensuring that the normal functioning of most developed economies. For the emerging economies, where belongs Serbian government securities represent initiators and catalysts of development of financial markets in general.

## *FEATURES OF GOVERNMENT SECURITIES*

The main features of government securities on the basis of which they were given a specific role in all developed financial markets are as follows (Veale, 2001, pp. 141-3)

- Reduced credit risk. Of all the financial instruments in a given financial market investors consider government securities the least risky, because the credit worthiness of the issuer, or the state is not in question. State has an arsenal of measures by which can guarantee execution of its duties. Some of them are tax increases, reduction of expenditure, and sale of foreign currency in the foreign exchange market and ultimately pressure on the primary emission of money. Since they have a very high credit rating, investors government securities often regarded as risk-free (risk free securities) and used to estimate the risk of other securities;
- High liquidity. Quantity of issued government securities, low costs and simplicity of secondary trading allows investors the ability to always be able to buy or sell, allowing them to increase the efficiency of asset management;
- A small gap between the buy and sell price is direct consequence of the high degree of liquidity. This span is called bid-ask spread and represents measure of the liquidity of some securities. When the bid-ask spread is narrower then the securities are more marketable. One study of liquidity of the U.S. bond market (Chakravarty, Sarkar,1998, p. 41) shows that treasury bonds and bonds of local authorities have smaller bid-ask spread than corporate bonds. The fact is that bid-ask spread in government securities are the narrowest and therefore they represent particulary attractive instruments for investors.
- Price transparency. Government bonds are the only way of funding that generates other useful informations to other participants in the the financial market. Namely, compared to other possibilities of borrowing (such as bank loans or direct loans from the central bank or from large institutional investors) government securities provide information regarding the price, which used participants who were not directly related to the transaction. The high degree of liquidity and a wide range of government securities traders affects to quickly and transparently determine their prices, that they become public and available to everyone.

- Wide range of different maturities. After issuing in a large number of different maturity government securities are adjusted to a large number of investors and their different needs, ranging from investments in a few months to invest for a period of several decades;
- Dematerialization. Today, in almost all countries, government securities be issued in electronic form. Even the previously issued government securities in physical form turned into electronic records, respectively immobilized in special institutions that keep records about the owners of government bonds - a central registry. Dematerialization and electronic trading for investors has a number of benefits: it eliminates the risk of loss, theft or destruction of securities, facilitating their trade, etc.;
- The possibility of high levels of leverage Participants in financial markets prefer to accept government bonds as collateral (insurance in the form of securities). Due to their great credit rating and high liquidity, loans that can be obtained are up to 90% of the nominal value of government securities;
- Favorable tax treatment. It is usually determines the relatively favorable tax treatment and of other government securities, which tends to increase their attractiveness and liquidity.

Thanks to these characteristics, market participants are gladly accept government bonds as collateral, the central bank as an instrument through which it is possible to regulate market liquidity, and the state as a tool that allows market fund budget and capital investment.

## *THE MAIN CHARACTERISTICS AND TYPES OF MUNICIPAL BONDS*

Municipal bonds can be issued by the states, cities, counties or different districts to collect funds to finance certain operations or projects. Projects to be financed in this way are hospitals, schools, power plants, office buildings, airports, etc.. Local authorities in financing such projects first rely on its ability to collect taxes, but if they need additional funding they issue municipal bonds.

Maturity date ranges from 1 to 50 years. Like other bonds can be purchased at a discount price.

So from the standpoint of issue time there are:

- Short Term Notes,
- Long-term bonds.

Short Term Notes are used for fundraising to cover the seasonal mismatch between revenues and expenses in the budget of the local government, and funds raised through the sale of long-term municipal bonds are used to finance capital investment, ie. projects of local government in the public interest.

Municipal bonds are considered to be relatively safe investment relative to the risk of default of payment. After they are issued, they can be sold to other investors in the secondary market - via the stock exchange or OTC market.

There are two basic types of municipal bonds, depending on whether they are secured or not:

- General Obligation Bonds
- Revenue Bonds.

General Obligation Bonds are unsecured bonds used for financing the operation of the tax entity that issues them. Have a maturity of 10 years or more. The only guarantee that investors have is the general creditworthiness of the issuer.

To evaluate general obligation bonds, the rating agencies assess information in four basic categorises: (Fabozzi, Modigliani, 2009, p. 492 )

- Information on the issuer `s dept structure and overall dept burden
- Issuer `s ability and political discipline to maintain sound budgetary policy
- Determining the specific local taxes and intergovernmental revenues available to the issuer
- Assessment of the issuer `s overall socio economic environment.

General Obligation Bonds fund projects that do not provide revenue. The issuer repays liabilities for issued bond funds from their earnings or by selling assets. If the issuer is unable to pay, ultimately use taxation as a means of collecting additional funds.

Revenue bonds are bonds insured by future revenues from projects for which funding is being used. These revenues can be tolls, rents, revenues from ticket sales or rentals. Partly insurance provide holders of revenue bonds donations of certain companies or individuals.

There are different types of revenue bonds:

- industrialrevenue bonds - which the finance public projects;
- project notes - which are short-term debt and used to finance public housing construction;
- special tax bonds - which are insured by certain excise taxes, such as excise taxes on cigarettes and alcohol;
- double covered bonds -which are insured with income from funded projects and the creditworthiness of the issuer;
- anticipatory note -that enable you to the works on a project to start as soon as possible, while local authorities expected income from other sources. They technically are not bonds because their maturity is too short - up to a year.

Revenue bonds carry an extra feature: they can be insured by different agencies that undertake the obligation to repay the funds to bond holders in the event of default in payment of the issuer. Insured bonds have a higher price than the uninsured, but carry a lower interest rate.

*Table 1: Comparative analysis - general obligation bonds vs revenue bonds*

| CHARACTERISTICS | GENERAL OBLIGATION BONDS | REVENUE BONDS |
|---|---|---|
| Issuer: | State agencies and local government, and cities and municipalities | State agencies and local governments and other levels of government, such as agencies, commissions, secretariats or ministries. They are issued in order to collect funds for a specific project |
| Coverage: | Creditworthiness and solvency of the issuer (local government) | Income generated by the project. Due to the uncertainty, this type of bonds are insured by major insurance companies |
| Approval of the referendum: | Necessary approvals to referendum | It is not necessary approval to referendum |
| Special types: | "Double-barreled" bonds. They have unlimited guarantee of local government and have their direct source of funding in the budget. | "IDRB-Industrial development revenue bonds." Bonds for industrial development. Covered by commercial loans.<br>"Special tax bonds." Securities covered by a special state taxes such as customs duties, excise taxes on oil, tobacco, luxury goods and the like.<br>"Moral obligation bonds" - are covered by the regulatory and moral obligations of the state, that in case of need, pays best local government liabilities |
| In the analysis: | The attitude of the local community about borrowing?<br>Creditworthiness.<br>The demographic characteristics.<br>What is the rate of unemployment?<br>Tax policy.<br>The potential value of projects that will be built.<br>Opportunity to request assistance from the state in the event of inability to pay off | The economic justification<br>Are the benefits of borrowing outweigh the costs (interest)?<br>Preparation of feasibility study<br>The ratio of debt service coverage |

*Source: http://www.krediti.rs/downloads2/vodic-kroz-municipalne-obveznice.pdf*

The main advantage of municipal bonds is freedom from income tax. This feature is bestsuited for investors who buy municipal bonds as this can optimize their tax burden.

*Table 2: Main characteristics of municipal bonds from the issuer and the investor*

| From the issuer - Local governments | From the standpoint of investors<br>- Buyers of issued bonds |
|---|---|
| • Public Borrowing<br>• promotion of the municipality as a leader in the financing (creating the image and increase the ranking of investment destinations)<br>• the ability of the population to participate in the financing<br>• a number of small creditors<br>• the possibility of higher borrowing<br>• a more flexible way of using resources<br>• Fixed interest rate - conditions are known advance and are immutable throughout the funding period<br>• provided the conditions for favorable financing in the future - potentially cheaper borrowing | • The process is carried out in the capital markets allowing secondary trading<br>• Investment risk is relatively lower because of the favorable rating of the issuer<br>• Fixed interest rate - conditions are known in advance and unchanging throughout the funding period |
| The disadvantages for the issuer:<br>• a longer process of raising funds in respect of credit borrowing<br>• uncertain assignment (depending on the success of registration and payment of the bond issue) | |

*Sours: Savanović, 2009, p. 25*

## *TECHNIQUES OF ISSUING OF MUNICIPAL BONDS*

The legal system of Serbia has built the basic elements of the concept of issuing municipal bonds.

The public offering to institutional investors and the private offering to small groups of investors are two primary techniques by which local authorities carry out new bond issues.

In case when the purchase of emissions emerge investment banks or departments of commercial banks which are specialized in municipal bonds, in that case we speak aboutpublic offer. It may be held on the principle of competitive bids, which means that the participant who offers the best price to buy a bond issue or direct negotiation with an interest in the issue of bonds.

Issuers of municipal bonds is often faced with the conflict between the adjustment of issue by the wide preferences of investors and increasing standardizing products to promote liquidity. In an effort to meet the demands of the

market, issuers are sometimes designing securities according to specific investors or groups of investors, such as pension funds and insurance companies. This technique of selling municipal securities (on a particular group of investors), is called a private placement. If you apply to banks, private placements are very similar to syndication. Emissions that are directly placed to investors may be better suited to the issuer when the rest of the market is in troubled condition.

Private placements do not contribute to the liquidity like other techniques,because the bonds placed in that way usually held with customers by the end of maturity, so that they are rarely traded. For these reasons, private investments carry higher costs and less contribute to the development of the secondary market rather than public offerings. In the United States absolutely dominates issuing through a public offering.

*Table 3: Different techniques of issuing bonds*

| Techniques | The time required for obtaining strengthening resources | Term | Benefits | Disadvantages |
|---|---|---|---|---|
| First issuance of bonds, public plasaman | Immediately | Max. High. 5 years | • Repayments of principal and interest can be more flexible,<br>• No expansion imposed by the bank,<br>• For good investments citizens can be involved in the purchase of bonds. | • There are limited resources that can be included,<br>• Relatively expensive organizations issue there is a lack of expertise,<br>• She has a bad image in the household |
| 2 Emition bonds, private placements, | From a small | Max. High. 5 years ago | • More flexible than a bank loan. | • There is a limited resource that can be included. |
| 3rd international issuance of bonds | Immediately | There may be more than 5 years | • Repayments of principal and interest can be more flexible,<br>• More resources can be included. | • The risk of exchange rate differences,<br>• Conditions depend on the country's credit rating,<br>• The only value when a large amount of money involved. |
| *Source: Vigvari (2003), p. 251* | | | | |

*Source: Momirović, 2009, p. 231*

## *FINANCING OF MARKET PARTICIPANTS AND LIQUIDITY MANAGEMENT*

Besides the municipal bond allows local government financing of the budget deficit through the market and the financing of infrastructure projects, allow all categories of market participants effective funding and liquidity management.

Patterns of investment in the market depending on the various market participants that would occur with a variety of motives on the market.

Buyers of municipal bonds may be:

- individual investors,
- companies,
- financial intermediaries,
- institutional investors,
- foreign investors,
- state.

Individual investors, as a rule, do not have sufficient resources to be able to buy a sufficient amount of securities that guarantee a diversified portfolio, or an acceptable risk investments. While in developed markets, they can invest their funds in the example. mutual funds of the money market and thus achieve the required diversification, in developing countries there is no such possibility. Therefore, for the average investor (with risk aversion) municipal bonds are an ideal investment. When investing individual investors usually have a medium-term time horizon, because they are investing for personal savings. Investors who have a longer time horizon are interested in indexation of securities, because it allows real return. Individual investors are not particularly interested in secondary trading with securities. Thus designed securities in developing countries can have a social function if there are no reliable alternative for savings. Moreover, if the level of potential savings in this sector is extremely high, well-designed security may prove to be an important and relatively inexpensive method of financing.

Companies can invest in municipal bonds instead of bank in order to save funds for future financing inventories. Companies that have cyclical cash-folow invest large amounts of funds in a short period, usually in the short-term notes as the least risky secirities. Since buying mainly short-term securities, even companies are not particularly interested in secondary trading. An indirect benefit that companies may have of developed secondary trading is the yield curve of government bonds: the yield of government bonds serve as a criterion for evaluating the investment projects. For an entrepreneur to move on from the opportunity identification stage to the exploitation stage, he has to be convinced the potential value he may acquire from that opportunitywould exceed the loss he may procure (Elyas et al.,,2012, p. 8 )

Banks as financial intermediaries invest in government securities mainly from safety reasons. Though banks are seen as competition to financial intermediation,

they are actively using government securities in the asset and liability management (ALM management). Banks usually require relatively short-term securities with fixed nominal yield (or securities whose yields associated with eg. Three-month interbank rate, or short-term government securities), because it provides a relatively high level of capital security. When the duration (time-weighted average of future cash flow of the bond) is lower, this securities will have less volatile prices. Banks are very interested in a liquid secondary market for government securities and fast and efficient clearing and settlement procedures that could quickly come up with cash at relatively low costs.

Institutional investors , such as large capital pension funds or insurance companies, have a longer time horizon of investing than banks and are usually more interested in the medium-term yields than short-term safety of capital. To them they are interesting and bonds that have a fixed cash-flow (because partially compensate for fluctuating cash flow,which is expected from investment in shares) and long-term coupon bonds, which correspond to the structure of their liabilities.

A decision to restrict certain forms of deposits and investment funds technical reserves and the highest amount of individual deposits and investment guarantee reserves of insurance companies.("Official Gazette of RS", no. 87/2012)

This decision sets out the limitations of certain types of depositing and investing funds to cover technical reserves of an insurance company set under Article 114 of the Insurance Law.

*Table 4: Limits of deposits and investments of funds to cover the technical reserves of insurance companies (amounts in thousands)*

| Restrictions on deposits and investment funds to cover the technical reserves of insurance companies | Technical reserves |
|---|---|
| Bonds or other debt securities | 10% Life, 10% of non-life |
| for individual placement: - in bonds or other debt securities of autonomous provinces and local self-government | 10% Life, 10% of non-life |
| The Total value of technical reserves in the insurance business of insurance companies, for the fourth quarter of 2013th | 92,991,785 |
| The maximum amount of certain types of deposits and investments of assets covering technical reserves of insurance companies | 9,299,178.5 |

*Source:http://www.nbs.rs/export/sites/default/internet/latinica/60/60_2/izvestaji/T6_IV_2013.pdfad*

*A decision to restrict certain forms of deposits and investment funds of technical reserves and about highest amount of individual deposits and investment of the guarantee reserve of an insurance company,*
*Official Gazette of the Republic of Serbia no. 87/2012. item 3 and 4*

Insurance Companies may invest in debt securities from items. 3 and 4 of the Decision issued by the autonomous province and local governments, if they meet the following requirements:

- that there is guarantee of the Republic of Serbia for their emissions, or the legal entity or the state (government agencies), with a credit rating, that the rating agencies Standard & Poor's or Fitch-IBCA determined, at least "A", by Moody's of at least "A2"
- and that they are issued by a credit rating at the credit rating of the Republic of Serbia, and not less than the rating agencies Standard & Poor's or Fitch-IBCA determined, at least "BB-" by Moody's of at least "Ba3".

If the securities referred to in paragraph 1 of this item does not meet the requirements of this point, companies may, in the securities of a single issuer, invest up to 5% of technical reserves.

Pension funds, which have future liabilities that are indexed prices and average wages are particularly interesting indexed bonds. As banks and institutional investors are particularly interested in the liquidity of the secondary market for government securities and fast procedure of clearing and settlement.

For Foreign investors domestic government securities may be interesting, because they carry higher yields than in their home countries with acceptable risk. They usually focus on government securities that are issued in a foreign currency because they attempt to achieve arbitrage gain at differences in rates of return on government bonds between the two countries. If foreign investors have some cash inflow from operations in a country denominated in the national currency of the country, they may be interested in short-term securities denominated in local currency. In general, foreign investors require a liquid secondary market with rapid clearing and settlement procedures.

Finally, the very state ,that certain state funds (such as rail trust fund, life insurance for employees, the Federal Pension Fund, etc..) often occur as buyers of government securities. In the U.S., for example, part of the national debt held by these funds and other state officials called non-market government debt (Intragovernmental dept).

Effective liquidity management market participants enables the use of municipal bonds generally accepted as collateral.

Municipal bonds allow for better mutual fund market participants, because they represent generally accepted collateral, or insurance that the lender will not be damaged in the event that the borrower does not repay the loan. Guarantee lender is a liquid market for government securities over which the at any time may be charged. Therefore, when approving loans based on the collateral of government securities loan approved in a very high percentage of their market value (over 90%). Globally, the U.S. Securities represent the most widely accepted and most frequently used collateral (Mathieson, Schinasi, 2001, p. 89). Long-term investments can deliver a sustainable economic growth and make better stewardship's relations between companies, investors and intermediaries (Čizmović, Kovačević, 2013, p. 45).

## *THE RISK FOR INVESTORS*

Investors of any investment, in any financial instrument, expect some return. The yield is not always certain: it can be higher or lower than expected, and sometimes it does not happen. Risk is the uncertainty of investments ,that may be manifested in the results of the investment which is the probability measure. When investing in bonds investors can achieve higher or lower yield, depending on the features of the bonds and external factors.

Potential risks which may arise are as follows:

- Credit risk (default risk) - the risk that an issuer not can perform its financial obligations under the issued securities in full and on time. Since the credit risk related to the creditworthiness of the issuer of bonds it is, by definition, in government bonds equal to zero;
- Interest rate risk is the probability of changes in market interest rates that determine the price of the bonds in the secondary circulation. Changes in market interest rates inversely affect the price of bonds
- Inflation risk is the possibility of occurrence of unanticipated inflation that could result in all bond investors realize losses in the real purchasing power of money;
- Liquidity risk is probability that the purchased bonds can not be secondarily sell. It is all the greater if the market is "shallow." The measure of liquidity is the spread between buying and selling rates bonds on the secondary market. What is the spread narrower market is more liquid;
- Reinvestment risk is refers to the risk of reinvesting the cash flow from bonds at an interest rate higher than the established f particular yield.
- Exchange rate risk is the uncertainty of income based on the investment of funds in single currency in securities in other currency, because of potential changes in the exchange rate.
- Risks directly affect the formation of the bond yield. What a bond carries a higher risk that an issuer must offer higher interest rates to make the bonds more attractive.

## *THE PROCESS OF DETERMINING CREDIT RISK FOR INVESTING IN GOVERNMENT SECURITIES (MUNICIPAL)*

When an investor decides to invest its funds in any financial instrument, he usually uses a special organization which specializes in providing information on the quality of the securities, or the creditworthiness of their issuers. These organizations are called rating agencies. The process of determining credit risk for investment in the securities is called rating, the rating mark is the rating of credit quality of any issuer of securities. Bond rating helps investors to identify the level

of risk and uncertainty when making decisions about investing in bonds. The longest tradition of the rating of bonds exist in the United States. The three best-known rating agencies are Standard & Poor's, Moody's and Fitch's Investors Service.

When bond rating takes into account a number of factors such as: the level of indebtedness of the issuer, the size of the issue of securities, the likelihood that the issuer will make debt obligations within the stipulated time, the variability of income flows of the issuer, etc.. The safest long-term investments are designated letters A (large or small, depending on the agency) and they show that the debtor is extremely strong to meet its financial obligations. Securities of such issuer are the best and therefore often carry the lowest yield for a given maturity. Companies Moody's, Standard & Poor's and Fitch's use the following ratings for long-term bonds:

*Table 5: Of the rating of long-term bonds*

| Moody's | S& P | Fitch's | Definitions |
|---|---|---|---|
| Aaa | AAA | AAA | Maximum safety |
| Aa1 | AA + | AA + | |
| Aa2 | AA | AA | High quality |
| Aa3 | AA- | AA- | |
| A1 | A + | A + | |
| A2 | A | A | Higher mean score |
| A3 | A- | A- | |
| Baa1 | BBB+ | BBB + | |
| Baa2 | BBB | BBB | The lower mean score |
| Baa3 | BBB- | BBB- | |
| Ba1 | BB + | BB + | Without investment grade |
| Ba2 | BB | BB | Speculative |
| Ba3 | BB- | BB- | |
| B1 | B + | B + | |
| B2 | B | B | Highly speculative |
| B3 | B- | B- | |
| Caa1 | CCC+ | CCC | Moderate risk |
| Caa2 | CCC | - | Risk |
| Caa3 | CCC- | - | |
| Ca | - | - | Extremely risky |
| C | - | - | The possibility of not fulfilling obligations |
| - | - | DDD | Default-probably not the fulfillment of obligations |
| - | - | DD | |
| - | D | D | |

*Source: http://www.bondsonline.com/Bond_Ratings_Definitions.php*

- "Investment grade". The issuer of these kind of securities have adequate credit rating to response to financial obligations without problem.
- "Speculative grade." These securities have speculative elements, because their issuer,in case of unfavorable market circumstances, would not be partially or completely unable to meet its obligations.
- "The risk of no execution." In these securities marked with this rating the issuer probably will not be able to meet one or more financial obligations; The issuer is partially or totally creditworthy incapable.

The best quality securities, been rated with A markings and carry the lowest rates of return.Securities that are relatively safe investments are marked with investment grade, by Standard & Poor's to BBB, with a Moody's to Baa. Securities issued below the the rating ie. speculative grade, are risky for investment and is often referred to as junk bonds. In order to these securities have been attractive to investors, issuers must offer high rates of return. Delineation of securities in these two categories is particularly important if the financial market there are certain institutions that by law to invest only in investment-rated bonds (eg U.S. pension funds and insurance companies). The fact that government bonds are usually top-ranked in a single financial market.

Since the state is trusted issuers, their credit rating is usually the highest. However, any, even the smallest changes in the creditworthiness of the issuer is carefully registered in credit rating, so adding commonly added to signs +, - or the numbers 1, 2, 3, which shows the increase or decrease in the creditworthiness of the issuer within a group. With a rating of issuers, investors follow and additional signs as indicators of healthy economic development of the country of the issuer, as well as the safety of their investments in the future.

Rating of the state – issuers, that performs company Standard & Poor's, shows her opinion about the ability and willingness of the governments of those countries to service the commercial requested financial obligations in full and on time. Rating of the state-issuer is not the rating of the country, as it is often misinterpreted. Rating of the state-issuer applies only to the credit risk of the national government, but not to other risks of other issuers. The rating of an entity within the state is usually the same or lower than that assigned to the state as the issuer but may also be higher.

*Table 6: The credit rating of the Republic of Serbia*

| | **Standard and Poor's** | **Fitch Ratings** | **Moody's Investors Service** |
|---|---|---|---|
| **Rating** | BB- / negative outlook | B+ / stable outlook | B1 / stable outlook |
| **Date** | 11. 04. 2014. | 17. 01. 2014. | 14. 07. 2013. |
| **Activity** | Confirmed rating | Reduced rating | Assigned rating |

*Izvor: http://www.nbs.rs/internet/latinica/18/18_3/18_3_2/rejting_srbija.html*

As of June 2010. Three cities in Serbia, Novi Sad, Kraljevo and Valjevo, received a credit rating from a rating agency Moody's Investor Service, and certainly represent a real example to other cities and municipalities in Serbia. Kraljevo and Valjevo are by Moody's Investors Service has assigned a rating of B1, while Novi Sad received a slightly higher rating of Ba3 (Vučetić, Jovanović, 2011, p. 182).

## *REGISTERED MUNICIPAL BONDS IN SERBIA*

The role of government in providing public services has increased, ie in organizing the delivery of these services, this process is called decentralization of the state budget (fiscal decentralization) (Vigvari et al.,2003, p. 19).

The budget of a large number of local communities meet the needs of financing operating expenses and intervention for solving social problems, health care, utilities, while the financing of development projects of local importance can not allocate significant funding from this source (Savanović, 2009, p. 99).

Benefits of market financing of infrastructure projects by issuing municipal bonds has been recognized by some local governments in Serbia.

*Table 7: Registered financial instruments-debt securities in the Republic of Serbia (Pancevo, Stara Pazova, Novi Sad)*

| | | | | | |
|---|---|---|---|---|---|
| **ISIN** | RSPAMOD55449 | **CFI kod** | DBVUBR | **Tiker** | PAMOOB5449 |
| **Currency** | RSD | **Total issued** | 10700 | | |
| **The nominal value of a security** | 10,000.00 | **Date of maturity** | 107,000,000.00 | | |
| **Date of registration** | 27.04.2012 | **Datum dospeća** | 27.04.2019 | | |
| **Desription of issue** | I ISSUE OF SECURITIES OF SO PANČEVO SERIES A (I TRANS) | | | | |
| **Description of CFI** | DEBT SECURITIES,BONDS,VARIABLE RATE,UNSECURED/UNGUARANTEED,AMORTIZATION PLAN WITH POSSIBILITY OF CLAIM,REGISTRATED | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **ISIN** | RSSTPZD25429 | **CFI kod** | DBFUBR | **Tiker** | STPZOB5429 |
| **Currency** | RSD | **Total issued** | 12500 | | |
| **The nominal value of a security** | 10,000.00 | **Date of maturity** | 125,000,000.00 | | |
| **Date of registration** | 10.02.2014 | **Datum dospeća** | 10.02.2024 | | |

| | |
|---|---|
| **Desription of issue** | DEBT SECURITIES,MUNICIPAL BONDS |
| **Description of CFI** | DEBT SECURITIES,BONDS,FIXED RATE,UNSECURED/UNGUARANTEED,AMORTIZATION PLAN WITH POSSIBILITY OF CLAIM,REGISTRATED |

| | | | | | |
|---|---|---|---|---|---|
| **ISIN** | RSSGNSD69309 | **CFI kod** | DBFUAR | **Tiker** | SGNSOB9309 |
| **Currency** | EUR | **Total issued** | 15000 | | |
| **The nominal value of a security** | 1,000.00 | **Date of maturity** | 15,000,000.00 | | |
| **Date of registration** | 13.10.2011 | **Datum dospeća** | 13.10.2023 | | |
| **Desription of issue** | I ISSUE SERIES A | | | | |
| **Description of CFI** | DEBT SECURITIES,BONDS,FIXED RATE,UNSECURED/UNGUARANTEED,AMORTIZATION PLAN,REGISTRATED | | | | |
| **ISIN** | RSSGNSD60746 | **CFI kod** | DBFUAR | **Tiker** | SGNSOB0746 |
| **Currency** | EUR | **Total issued** | 14000 | | |
| **The nominal value of a security** | 1,000.00 | **Date of maturity** | 14,000,000.00 | | |
| **Date of registration** | 10.04.2012 | **Datum dospeća** | 13.10.2023 | | |
| **Desription of issue** | II ISSUE SERIES A | | | | |
| **Description of CFI** | DEBT SECURITIES,BONDS,FIXED RATE,UNSECURED/UNGUARANTEED,AMORTIZATION PLAN,REGISTRATED | | | | |

*Source: http://www.crhov.rs/?Opcija=5&TipHartije=dugoročne*

Pancevo has spent funds to build two of industrial zone, street reconstruction and construction of an olympic swimming pool. The repayment period is seven years, at an interest rate of 9.5%.

Stara Pazova has spent funds for renovation of the central part of the municipality, improving transport infrastructure and relocation of cable installation and Novi Sad to build 110 km of sewerage network and the completion of the construction Boulevard of Europe.

Borrowing by issuing municipal bonds proved more flexible than borrowing through a loan, as can be seen from the example of Novi Sad.

Example: (Richter et al.,2012, p. 36) Namely, in the public procurement of loans, the best offer that met all the requirements of a public invitation had fixed

effective interest rate of 7.5% for a period of 12 years (2 year grace period and 10 years of debt repayment). On the other hand, the offer submitted by the underwriter, UniCredit Bank, has implied guarantee of issuance of bonds by the maximum effective fixed interest rate of 6.25% bonds with the same maturity as the loans. The effective interest rate for the bond consisted of coupons in the amount of 6.2% and fees for underwriter. The aforementioned savings in absolute terms over 3 million in the amount of the issue of 35 million euros.

Legal regulation in the Republic of Serbia, allows local governments to borrow municipal bonds with a note that long-term borrowing for capital investment expenditures can not be greater than 50% (Public Debt Law, Article 36, paragraph 1) of total current budgetary revenues of local governments in previous year. All local governments without the city of Belgrade reached only 20.6% (Brnjas et al.,2013, p.15) of the said limits. Based on that research clearly shows that there is considerable scope for local government borrowing in the open market capital.

## *CONCLUSION*

In the Republic of Serbia from 2011, according to the data of the Central Registry of Securities registered two municipalities and one city as issuers of municipal bonds (the city of Novi Sad 35mil.eura), the municipality of Stara Pazova (125 million dinars), the municipality of Pancevo (107 mil. dinars ) where the funds collected will be spent on infrastructural projects.

Finding funding by issuing municipal bonds compared to fiscal instruments allows to local governments more efficient development.Increasing taxes is the instrument on which the fiscal authorities are very reluctant. Besides being politically unpopular measures, it may negatively affect the production capacity of the economy, so it is not recommended in low productive capacity and economic recession. Besides, the effects of tax increases to finance the budget deficit after a certain limit exhausted because you can not indefinitely increase taxes.

For countries in transition, which have a high extra costs - eg. restructuring of the banking sector, certain public services and parts of the real sector of the economy, financing the budget deficit is the particularly difficult problem. As an alternative remains the market concept to finance the budget deficit - issue municipal bonds at market interest rates (Fry, 1997, pp. 49- 68). Issue of municipal bonds at market interest rates allows the voluntary transfer of surplus liquidity of the sector with surplus liquidity in the local government.

Besides municipal bonds allow local government budget deficit financing through the market, as well as the financing of infrastructure projects, allow all categories of market participants effective funding and liquidity management.

## *REFERENCES*

[1] A decision to restrict certain forms of deposits and investment funds of technical reserves and the highest amount of individual deposits and investing of the guarantee reserve of an insurance company. Official Gazette of the Republic of Serbia no. 87/2012.points 3,4 and 8.
[2] Brnjas, Z., Drašković, B., Stošić, I., (2013), Condition and dynamics of borrowing of local governments in Serbia (2006-2012), Finance, 1-6. pp. 9 – 22.
[3] Chakravarty, S., Sarkar, A.,(1998), Liquidity in U.S. Fixed Income Markets: A Comparison of the Bid-Ask Spread in Corporate, Government and Municipal Bond Markets, Federal Reserve Bank of New York, p. 41.
[4] Čizmović, M., Kovačević, M.,(2013), The role of institutional investors in corporate governance and sustainable development, Entrepreneurship: Economic Development and finance, Belgrade, Faculty of Business Economics and Entrepreneurship, pp. 35- 53.
[5] Elyas, G. M., Ansari, M. Mafi, V., (2012), Impact of social capital on the indetification and explotacion of entrepreneurial opportunities, International Review, No.3-4, pp. 5- 18.
[6] Fabozzi, J. F., Modigliani, F, (2009), Cpital Markets: Institutions and Instruments, Prentice-Hall International, Inc., USA.
[7] Fry, M., (1997), Emancipating the Banking System and Developing Markets for Government Debt, The Bank of England, London, pp. 49-68.
[8] Mathieson, D, J., Schinas, G, J., (2001), International Capital Markets, World Economic and Financial Surveys, by Staff Team led by. and IMF.
[9] Momirović, D, (2009), Municipal Bonds - novelty or innovation in the capital markets, Finance, 64/1-6, pp. 226-255.
[10]Pavlović, V., Marinković, M., Drašković, V., Bućić, A., Richter, K., (2012), The guidelines for the issuance of municipal bonds, a guide for municipalities, Municipal Support Programme IPA 2007, Belgrade.
[11]Savanović, S, (2009), Financing of Local Development, Banja Luka, Agency for development of enterprises Eda.
[12]The Law on Public Debt, "Official Gazette of RS", no. 61/2005, 107/2009 78/2011
[13]Veale, S., (2001), Stock, Bonds, Options, Futures, 2$^{n}$ edition, New York Institute of Finance, New York.
[14]Vigvardi A., Raičević B., Brnjas Z., (2003), The Principle of Budgeting and Local Government Finance, European Movement in Serbia, Belgrade/ Prometej, Novi Sad.

[15]Vučetić, D., Jovanović, M., (2011),Legal and economic settings using municipal bonds to finance local economic development and improve the competitiveness of the public sector in the Republic of Serbia, improving the competitive advantage of the public and private sectors through networking competences in the European integration of Serbia: a thematic collection of papers / editor Bojan Krstic. - Niš: Faculty of Economics, p. 171-191.

[16] http://www.krediti.rs/downloads2/vodic-kroz-municipalne-obveznice.pdf Date of access: 25.06.2014.

[17]http://www.nbs.rs/internet/latinica/18/18_3/18_3_2/rejting_srbija.html Date of access: 27.06.2014.

[18]http://www.bondsonline.com/Bond_Ratings_Definitions.php Date of access: 15.05.2014.

[19]http://www.crhov.rs/?Opcija=5&TipHartije=dugoročne Date of access: 29.06 2014.

# *REPO TRANSACTIONS - THEORETICAL ASPECTS AND PREREQUISITES FOR THEIR REVIVAL IN REPUBLIC OF MACEDONIA*

*Snezana Dicevska, PhD*[23]

*Vera Karadjova, PhD*[24]

## *ABSTRACT*

*Repo market is one of the largest and most active sectors of developed money markets, and in time of crisis of financial markets, play a key role in providing liquidity to the financial system.*

*Today, repo transactions represent an important instrument for many central banks, commercial banks and financial institutions.*

*Many market participants begin repo transactions because of their simplicity and ability to adapt to different market conditions. The existence of the repo market increase significantly affect the market liquidity of bonds and stocks, reducing costs and enabling issuers better protection against risks.*

*The purpose of the paper is a contribution to a better understanding of the role of the repo market, the importance of efficient repo market for financial markets and market participants. The paper gives a brief elaboration of the main features of repo transactions and the manner of repo transactions.*

*This paper covers an overview of repo markets in some of the countries in transition in order to understand which conditions need to be fulfilled to enable the development of financial markets, and thus the financial repo transactions.*

*Finally, the paper will cover the current level of development of the repo market in Republic of Macedonia, as well as preconditions for its rapid development.*

***Key words:*** *Repo Transaction, Financial Markets, Securities, Bonds, Banks*

***JEL Classification:*** *G19*

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[23]Snezana Dicevska, Faculty of tourism and hospitality, Ohrid, Republic of Maceedonia, sdicevska@yahoo.com

[24]Vera Karadjova, Faculty of tourism and hospitality, Ohrid, Republic of Maceedonia, verakaradzo@yahoo.com

## *INTRODUCTION*

The current financial crisis on international markets has caused significant changes in the money markets. Since 2002 the activity in all segments of the financial market dropped significantly. The main reason for the reduction of activities, despite the general market risk, was the credit risk. On the one hand due to perceptions of increased credit risk, many banks have reduced or withdrew credit lines for unsecured transactions they had with banks which collaborated on the money market. On the other hand, difficult access to liquidity that faced some institutions led to the emergence of excess liquid assets in their balance sheets and increased financing costs.

Repo, or contract for sale and repurchase, implies sale of securities associated with the agreement to repurchase the securities at a specified price at an agreed time. The important factor, which affects the price, expressed in repo rate, is the credit risk premium. The amount of the premium for credit risk depends on the quality of the assets used as collateral, given that they protect the borrower's liquid assets from financial loss if the borrower fails to return the funds. In addition, quality of collateral allows the borrower liquid assets to used the collateral in order to provide liquidity, thereby reducing the liquidity premium at repo rates.

The current financial crisis has shown that even large and well developed financial institutions can become victim of insolvency. Therefore in future is expected more attention to be paid to the efficient management of collateral and its ability to quickly mobilize. Hence, repo markets concentrate on the type of collateral securities who has high demand, traded on liquid secondary markets of securities, which allows rapid conversion in most liquid assets with minimum cost.

In the Republic of Macedonia the most abundant is traditional segment of money market - the unsecured deposit market, participation of 99% of total turnover. The short-term securities emphasize 1% of the total market activity on the money market, the market of deposits secured (repo market) down to overnight loan approval by National Bank, while the derivatives market completely absent. (Central Banking operations and foreign currency reserves, The money market in the RM and the EU: a comparative approach, pp.4)

Repo transactions are not involved in the interbanking trading, and banks indicated that, among other things, the reason for this situation is the lack of knowledge of the techniques of settlement and accounting records of repo transactions.

The potential for deposits provided market development is relatively high because there can be use different types of securities as collateral concluding repo transactions treasury bills, government securities, etc.

## *THEORETICAL ASPECTS OF REPO TRANSACTIONS*

The term repo is a shortcut of sale and repurchase agreement, which means a contract for sale and re-purchase or repurchase agreements. In a repo financial transaction one of counterparties sells securities with an obligation to buy in future, on predetermined day at a previously agreed price. From another aspect repo transactions are defined as initial purchasing of securities followed by post- resale and therefore are called reverse repo, or they are repo transactions for one of the parties in the transaction versus repo transactions for other side (Steiner, 2007, pp. 71). At the conclusion of the contract repo rate is determined, and it remains fixed throughout the term of the contract. Upon maturity seller receives back the appropriate type and quality of the securities that he sold, and returned borrowed funds plus interest. During the financial transaction the right of ownership of the securities is transfer, which greatly facilitates the process of recovery, and increases the level of security. Because there is an obligation to return the securities, the sellers bears the possible risks, and uses changes in the price of securities.

There are classic repo financing transactions where the sale and purchase are part of the same transaction, i.e. the seller sells securities, and at the same time accepting to repurchase in the future at exactly specified day at determined price. (Technical Committee of the IOSCO and the CPSS, 2013, pp. 6). Buyer temporarily buys securities and the role of collateral usually occur bonds and stocks. The whole transaction is regulated by signing a contract, and it is not required to sign separate contracts for the sale transaction and re-purchase.

Depending which side initiated repo transaction, distinguishes repo operations and counter repo operations. If the transaction is initiated by the seller (selling securities), we talk about repo operations, and if the transaction is initiated by the buyer (buying securities), it is contrary repo operations.

There is a transaction of sale and re-purchase (sell/buy-back) repo operations where buying and selling are two completely separated and independent transactions, where the sale of securities are performed at spot prices, and repurchase of securities is done by future-forward prices. The future-forward prices does not reflect the movement of the market price of the securities in the future but include the amount of funds obtained through the sale of securities, increased by the amount of interest on borrowed funds. The difference between the spot price and the future-forward prices represents yield. This form of transactions is developed on markets where there is no standardized repo contract, where systems for execution are not developed and there is no information technology required for the repo transactions.

*Table 1: Differences between classic repo transactions and sell/buy-back transaction*

| Classic repo transactions | Sell/buy-back |
|---|---|
| • Sell/buy-back<br>• Determined repo rate | Prompt sale, term sell/buy-back<br>Repo interest is implicit calculated as the difference between term and prompt price |
| • Identical selling and buy-back price | Different selling and buy-back price |
| • The yield is calculated at the repo rate | he yield is difference between the term price and prompt price |
| • Funds of charged coupons immediately are transferred to the seller | Funds of charged coupons are transferred to the seller on the date of completion of the transaction |
| • The transaction is regulated by a standardized contract | There is no standardized agreement |
| • Initial margin can be calculated | Initial margin can be calculated |
| • It is possible to request and passing the margin of variation | There is no possibility for request and passing the variation margin, unless a formal agreement is signed |
| • To executed the transaction requires special systems for dealing with repo | Transactions can be executed using system for dealing with bond |

There are repo transactions called securities lending operations that actually are temporary transfer of securities in exchange for collateral, where the role of collateral can be cash and securities. If the repo transaction is initiated by providing certain securities, the buyer will lend such securities, pay a fee, and essentially comes neither to a sale or re- purchase, but it is a temporary use of certain funds by paying fee for their use. The transaction is a typical example in which the owner gives securities as a loan, and the borrower is obliged to return the same borrowed securities. The cost for using the securities is determined as a fixed fee, according to the price of the securities that are the subject of a loan, and payable on the date of completion of the transaction. If the date of completion of the transaction is specified, there are more similarities with classic repo operations. Very often, date of completion of the transaction remains open, which means that every morning there is the opportunity to close the transaction or to continue the next day.

*Table 2: Differences between classic repo transactions and lending of Securities*

| Classic repo transactions | Lending of Securities |
|---|---|
| • Entering the repo transaction the owner of the securities becomes seller<br>• The second side in the transaction is buyer | • Entering the repo transaction, the owner of the securities is loan lender<br>• The second side of transaction is loan recipient |
| • The funds received as collateral are deposited on deposit account or are further invest | • The funds received as collateral are deposited on deposit account |
| • After completion of the transaction, the seller return the funds obtained by the sale, plus interest | • After completion of the transaction, the lender returns the collateral; the borrower pays compensation for the use of funds and he return the securities |
| • The net effect for the seller is the difference between the interest paid to the buyer and the amount generated from deposited / investment of funds obtained by selling | • Lender's earnings is fixed, calculated on the use of loan |
| • If during the transaction came to payment of coupons, the funds are transferred to the seller | • If during the transaction came to payment of coupons, the funds are transferred to the lender |
| • At the end of the transaction the seller's purchase securities at a price set at the beginning. Purchase price is the amount of sales, plus interest | • The borrower returns the borrowed securities and he gets back collateral passed at the beginning of the transaction |

Repo operations are included in the group of interest instruments in the money market because essentially repo lending operations have a high degree of certainty. The high degree of certainty is perceived by significantly reducing credit risk, but it that does not mean complete elimination of other risks related with this transaction. Due to its flexibility and increased reliability, repo transactions are often used in financial markets as an alternative for lending with collateral. In the process of lending where the securities are given as collateral, repo operations have significant advantages because the right of ownership of securities is transferred at the time of negotiating the repo operation, and thus the process of collection of receivables and sales collateral is much simpler. Both contracting entities are provided with securities or cash (Choudhry, 2002, pp. 93).

## *BASIC FEATURES OF REPO TRANSACTIONS*

The main features of repo transactions are:

- The period of maturity
- Collateral
- Yield
- Risks
- Margin

Term repo operations have precisely defined maturities and repo rate. The repo transactions terms of maturity vary from one day to one year, but it is possible to conclude repo agreement with maturities longer than one year. On financial markets dominate repo operations with maturities of one day to three months, because of that these transactions are considered as an instrument on the money market.

In open repo operations the date of maturity is not defined, and in that case both parties have the right to request completion of the transaction. During the transaction the seller is obliged every morning to confirm further extension of repo transaction for another day. Regards the daily extension of the duration (term) of the repo transaction, the repo rate is determined daily. On completion of the transaction the seller should request the return of collateral.

In pursuit of repo operations, securities - subject of the transaction are also collateral. In repo operations term collateral has a different meaning than by default. The standard meaning of collateral means a value which is given as a guarantee where the contracting parties are not exchange ownership of it. In repo transactions comes to transfer the right of ownership of the collateral (Steiner, 2007, pp. 71). As collateral commonly appear securities, primarily including government bonds. Repo operations with government bonds represent the largest segment of the financial repo market. Besides government bonds as collateral may occur Eurobonds, Corporate bonds, Mortgage bonds, Short-term government bonds and securities.

Cash can also act as collateral. In the opposite repo operations or transaction lending of securities, securities are subject of loan, until the money are collateral. In certain cases as collateral can be use letter of credit, if an agreement is reached between the two sides. Differs general and specific collateral. In general collateral buyer has no any special requirements regarding collateral to engage in repo transactions.

It is necessary the security to be of adequate quality, so in the form of general collateral bonds occur. Unlike general collateral, specific collateral concerns exactly certain securities that can be used for supply as collateral in repo operations. Special collateral commonly used in opposite repo operations and transactions of sale and re-purchase, or when the repo transaction is initiated by the buyer (Fleming, 2012, pp. 3).

The yield in the repo transaction is the interest paid by the seller of borrowed funds. It actually represents the price paid for the use of cash. Interest is a key element in which repo operations differ from conventional purchase and sale transactions. In repo transactions yield is calculated according to the repo rate. In classic repo transaction, the repo rate is explicitly specified at the beginning of the transaction, and according on its height is determined the yield that seller should pay when the transaction is complete.

In purchase and resale transaction, realized yield is calculated implicitly, i.e. as the difference between sale and purchase price. Repo rate is determined by the ratio of supply and demand on the money market, rates applicable to similar instruments on the money market, the maturity period of repo operations and type of collateral.

Basic risk which occurs in repo transactions is credit risk - the risk that a borrower will not fulfill its obligations. In repo operations credit risk is significantly reduced, but not eliminated, because the transaction is secured by collateral existence. In repo operations there is an issuer risk connected with the nature of the collateral and refers to the possibility that the issuer of bonds occur in the form of collateral, does not meet its obligations.

Repo market risk in financial transactions concerning the change in market value of the collateral for the duration of the transaction. Because the buyer is interested market value of the collateral to be at least equal to the amount of borrowed funds, it requires putting the margin that will provide a minimum value below which the value of the collateral will not be reduced.

In order to reduce the level of risk exposure for the duration of the transaction, the buyer often requires from seller laying margin. The margin refers to increase in value, i.e. provide additional collateral - securities or cash. The margin may be determined at the beginning of the transaction, in which case it comes to initial margin, and if the margin is determine during the transaction, called variation margin.

## *MANNER OF REPO TRANSACTIONS*

In the process of negotiating the repo transaction is involved dealers employed in commercial units-money market desk, treasury desk or government bonds desk. In front office is run a book of concluded transactions, and following the movement of the relevant rates. Settlement is made in the back office. At the conclusion of the repo agreement are determined following details of repo operations (Faborr, 2011, pp.28):

- Type of collateral - should determine whether it is general or specific collateral. If it comes to general collateral, and at the time of negotiating the correct collateral is not determined, determines the back office.
- Date of the transaction and the date of maturity - if the date of maturity is a non-working day, the rule used are on the next working day. If the next

working day of the month is different from the original due date month, use the rule of modified working day, when the due date is transferred to the first working day before the original maturity.

- Repo rate which will be calculated in the transaction - the repo rate depends on the maturity date of the transaction, the relationship of supply and demand on the money market, demand for securities that serve as collateral, and the movement of other rates on the money market.
- The value of the repo agreement – the contract usually includes the purchase and sale price. The purchase price is the price at which the securities are purchased or money borrow, and the sale price is the price at which the securities are sold, or the price the seller is willing to pay for using cash.
- The amount of initial margin - if in repo transaction agreement is required to enter the amount of the margin, on its height will affect the creditworthiness of the participants in the transaction.

The foregoing elements are inserted in each repurchase agreement transaction. In addition, there are some other standard determinations that are agreed upon in advance and usually apply to all transactions concluded between two identical contractual sides. Some of the standard determinations for which both sides can be agreed are related to the following (Faborr, 2011, pp.32):

- Settlement procedures and clearing – for example, indication of Euro clear or clear stream as agents through which clearing will be performed.
- Rights and institutions connected with the substitution of collateral.
- Status of coupons and dividends collected during the duration of the transaction In classic repo transactions billing coupon immediately forwarded to the seller, until the transaction of sale and re-purchase, buyer keeps billing coupon until completion of the transaction.
- Margin form - the buyer has the right to choose whether the margin will be paid in the form of securities or cash. If he decides for securities, then usually paid securities that represent collateral.

As in other instruments on money market, participants in repo transactions are exposed to credit risk. Therefore, both parties mutually assess creditworthiness and assess the collateral quality. As a result, these estimates are determined the required margin amount. Passing the margin is done when the opposing side of the transaction has low credit ability. In practice there are cases when initial margin is not deposit, but if the need arises during the transaction it is required to deposit margin of variation. The margin of variation is required in cases where the value of collateral significantly vary during the transaction. Therefore, the calculation of the margin of variation requires continuously monitoring the price of the collateral on the market. Usually is used reference price determined during negotiation of the transaction. It is necessary to determined limits to which the price of collateral can oscillate over the duration of the transaction. If prices exceed the lower or upper limit, are required to deposit a margin of variation (in case of a fall in the price), or return excess collateral (in the case of price growth)

If the variation margin is submit in cash, the transaction is completed within one day. Old transaction (before laying additional margin) ends, and the new begins, starting from the date of passing new margin. Because of continuity, originally specified maturity remains unchanged in the new transaction. Parties should agree whether, and at what rate will be calculated interest on deposited funds. If the margin is placed in securities, there are two ways of execution. The first is identical to previous described - the old transaction is completed and a new beginning, with increased amount of margin and identical maturity. An alternative method is the old transaction to proceed, and the treatments of laying additional collateral to be as free delivery. In this way this collateral is treated as part of the new repo transaction, with zero repo rate and no payments.

## *REPO MARKETS IN DEVELOPING COUNTRIES*

The data available for repo markets in developing countries only apply to repo operations involving the Central Bank, which initiated the development of repo markets. The Central Bank policy refers to development on financial repo market and implements measures of monetary policy. In developed market economies, the Central bank conducts monetary policy using indirect monetary policy instruments such as open market operations, reserve requirements, and permanent relief. Thus, the Central bank turns from direct control (by prescribing the level of interest rates or loan volume) to indirect control over the supply and demand of funds (CGFS Publications No.10, 2012, pp.15). Most Central banks simultaneously use multiple types of indirect instruments in conducting monetary policy.

However, the introduction and use of indirect instruments of monetary policy, and thus repo operations as part of open-market operations, it is necessary to exist certain conditions, first of all, having adequate market infrastructure which allows smooth functioning of financial markets. In fact, it is the difference between developed and developing financial markets. The basic prerequisites that must be fulfilled for development of the financial market are: existence of competitive institutions, developed payment system, application of international accounting and reporting standards, law regulations relating to banking, collateral, bankruptcy, financial instruments and so on (Balino & Enoch, 1995, pp. 7). The introduction of open market operations is necessary to ensure a stable banking system that will fully based on market allocation of loans rather than unlimited lending by the Central bank at any interest rate.

In many developing countries there are active repo financial markets. Mostly, the subjects of purchase are government securities, while some markets applied foreign currency. The terms of maturity range between six and thirty days, and in most countries operations are used for exploiting surplus funds.

In Hungary repo operations were first used in early 1993. Initially, they were used for inclusion of liquidity in the banking sector, and in the middle of 1995 net effect of repo operations have shifted to the opposite side, i.e. repo operations are

used to withdraw excess funds. During the development of repo operations, the National Bank of Hungary used repo operations with maturity of seven days to one year. At the beginning repo was used within the existing facilitates, and later the National Bank of Hungary began by organize auctions. Repo rate acts as a reference interest rate (interest rate on two-week treasury bills) regards it is the rate at which banks can always get short-term loans from the Central bank (National Bank of Hungary, Financial Stability Report, 2014, pp.33).

Croatian National Bank in repo transactions always participate as a buyer of securities (treasury bills and CNB bills from the Treasury), and uses repo operations to provide liquidity to banks. Since 1997 when the first repo auction held, until 2002 repo transaction regularly maintained. In 2002 and 2003 was not held auction, which indicates that the liquidity of the banks in these years was greater. In 2004 comes to recovery on repo operations. As a basic tool to control liquidity in the banking sector is the newly introduced marginal reserve requirement ratio (Jelic, 2000, pp. 9).

In Poland repo operations start to use at the beginning of 1993. The main purpose of repo operations was sterilization of liquidity created for approving loans from the Central bank to the government. Repo operations with treasury bills until 1996 had been the main instrument of open market operations. Since then the importance of repo operations are reduced and the main instrument of open market operations become treasury bills of the National Bank of Poland. Like other Central banks in emerging markets, Poland's central bank uses reserve requirements, deposit and loan operations as a monetary policy measures.

Central Bank of Republic Czechoslovakia began conducting open market operations in 1993. The leading instruments for absorption of liquidity were repo operations. Usually the maturity is 14 days, although the Central bank of the Czech Republic if necessary, agreed repo operations with shorter maturity. Central Bank of Czech Republic organized repo auctions with variable rate, which means that the declared repo rate serves as the maximum rate that is accepted. The offers in the auction are classified according to the American auction procedure, which means that first are accepted offers with the lowest repo rate. Besides, two weeks of repo auctions, the Central Bank of the Czech Republic used quarterly repo auctions. The three months repo auction does not serve as a benchmark for market interest rates (Czech National Bank, Financial Stability Report, 2013/2014, pp.55).

## *DEVELOPMENT OF THE REPO MARKET IN SERBIA*

The development of the repo market in Serbia is associated with implementation on open market operations by the National Bank of Serbia. The first repo transactions on the open market are carried at the beginning of 2005 stream on 31 January 2005$^{th}$. In the coming years the importance of repo transactions grew, especially after the adoption of a new framework for monetary policy in 2006.

Monetary policy in 2006, which was defined by the program of monetary policy of the National Bank of Serbia in 2006 was aimed at significantly reducing the rate of inflation regarding to 2005 and maintain the stability of the financial system. In conducting monetary policy, the National Bank of Serbia applied mostly indirect instruments and strengthens the role of market instruments of monetary regulation, mainly open-market operations (National Bank of Serbia, Program for Monetary Policy, 2014, paraphrased).

The concept of repo operations that used by the National Bank of Serbia is no different from the generally accepted status of repo operations (Ferri, Lots, 2004, pp. 29).

- For the duration of repo operations comes to change of ownership over the purchased securities, regards the fact that the securities which are subject to repo transaction are transferred directly to the account of the buyer ownership. During the period of repo operation buyer can freely dispose securities that are subject of the transaction, with an obligation on the date of completion of repo operations (repurchase date) to sell the same securities to the seller bought at the beginning of repo operation (date of purchase). In case of non-performance the obligations of a contracting sides, the day when repo transaction ends, repealed the obligation for repurchase price, and purchased securities still owned by the buyer.
- Interest income from securities - subject of repo operations, which is charge during the repo transaction, belongs to the seller and the buyer will pay the full amount of income on the seller account.
- The purchase price in repo transactions is determined by applying the percentage of the nominal value of the securities subject to repo transactions in which the National Bank of Serbia buys securities, or by applying the percentage increase of the securities that are the subject to repo transaction in which the National Bank of Serbia sells securities.
- Repurchase price of repo transactions is the amount that the seller is obliged to pay to the buyer on the repurchase date for the securities subject to repo transactions. Repurchase price is determined by applying the repo rate of the purchase price for the number of days lasted the repo transaction.

The primary objectives which are set to the National Bank of Serbia are achieved and maintain financial stability and prices stability. For achieving financial stability National Bank of Serbia undertake indirect measures to regulate bank liquidity and aggregate demand. Regards the steady surplus in the banking sector, the National Bank of Serbia despite the open-market operations apply other instruments such as obligatory reserve. The extent to which the National Bank of Serbia will use additional measures depends on how market instruments are effective in withdrawing excess liquidity.

In 2005, the main instrument of the National Bank of Serbia is the obligate reserve, and in 2006 the open market operations took over the role. Already, after the first year of introduction of repo operations, its importance grows as an instrument of monetary policy. Obligate reserve and further used as an instrument

of monetary policy of the National Bank of Serbia, but from year to year its impotence decrease. The obligate reserve is an instrument that is used in all countries that are struggling with liquidity in the banking sector as a result of capital inflows caused by the influx of foreign borrowing. (National Bank of Serbia, Program for Monetary Policy, 2014, paraphrased)

## *DEVELOPMENT OF THE REPO MARKET IN REPUBLIC OF MACEDONIA*

The role as a leader of development of the money market in the country is mainly a Central Bank of the Republic of Macedonia, given the fact that the developed money market enables more efficient conduct of monetary policy measures or functioning of the transmission mechanism. By default, the first segment of the repo market is evolving between a central bank on one side and commercial banks on the other side. Participating in repo operations indicates the commercial banks in an appropriate way for insured loans, which can be performed on the interbank market. Over time, banks and other participants mutually agree to start repo operations without the participation of the central bank. This kind of mutually beneficial affect lending and reducing pressure on the central bank's assets or borrowing abroad, especially in emerging markets.

The development of the repo market in the country is associated with open market operations of the National Bank of Republic of Macedonia. In 2005 the foundations were laid for development of the repo market in the country, by adopting rules for trading and settlement of over counter markets and by developing general repo agreement. Because of structural excess liquidity in the banking system, the National Bank does not use repo transactions as a regular instrument for liquidity issue, as it is case of developed economies, where central banks manage in terms of structural liquidity shortage. However, in order to increase the reliability of operations related to credit approval, Intraday and Lombard loans, the National Bank began using repo since 2005(National Bank of Republic of Macedonia, Annual Report of the NBRM, 2012, pp.53).

For effective functioning of the repo market in the country, the essential is existence of several structural elements and good market practices. In this sense, especially important is existence of (NBRM, Development of the repo market in the Republic of Macedonia, pp.9):

- Adequate and effective legal framework which allows a clear definition of the repo agreement. It should be clear certainty about legal rights in relations between the contracting parties in case of not fulfilling the obligations.
- Safe and efficient settlement system which will provide low exposure to risks. Having in mind that the repo transactions are accomplished two related transactions: transfer of funds against transfer of ownership of securities, the simultaneous failure of any of these transactions leading to increased credit

exposure to counterparties. Exposure to credit risk can be reduced through the development and application of safe settlement procedure which is based on a “delivery versus payment “.

- Existence of appropriate market valuation of collateral. Repo transactions are secured, with is reduced exposure to credit risk. Among market participants can be appear credit exposure arising from changes in the value of collateral, because of not fulfilling the obligations. Therefore, the determination of appropriate coefficients of cover (haircuts, margin calls) restricts exposure to counterparties and provides appropriate and timely adjustment of the value of the collateral to the amount of appropriations.

Besides, previously mentioned essential assumptions, there are other attributes and good marketing practices that contribute to the development of efficient repo markets.

In this sense, the National Bank or Republic of Macedonia undertakes numerous activities for development of the repo market as a segment of the money market, which were aimed at defining the conceptual structure of repo transactions, and implement a regulatory framework for the negotiation and settlement of these transactions:

The project for introduction repo transactions started in 2005 by setting up the basics of over counter markets, as competitive infrastructure for trading and settlement of securities with low transaction costs. The trading through over counter markets is based on setting system of listings, and settlement of transactions is conducted through systematic solution, which is based on existing links between Macedonian Interbanking Payment System, banks and the Central Depository of Securities. These institutions allow settlement in real time by applying the principle of "delivery versus payment". A general repo agreement was promoted in 2005, and in the initial phase was provided repo transactions with in short-term securities. Next 2006 General repo contract was extended by continuous government bonds, and there was the opportunity for involvement other securities in accordance with the development of financial markets and the needs of market participants. Establishing the over counter market and defining the General repo agreement created conditions for conducting repo transactions as part of monetary operations. In this regard, in 2005 the National Bank started to approve Intraday and Overnight loan through repo transactions, and the next year was adopted regulations for implement auction repo transactions. Respectively, were determined and the coefficients of cover - as percentage ratio between the market value of the security instruments (high quality securities) and cash amount. Activities that took the National Bank for setting repo markets follow the experiences of developed repo markets, particularly in the legal framework, the process of trading, settlement and risk management.

*Table 3: Average balance of bills, treasury bills and government securities*

| Year | Continuous government bonds | Treasury bills | Bills |
|---|---|---|---|
| 2005 | 500 | 3000 | 5000 |
| 2006 | 1500 | 6000 | 7000 |
| 2007 | 2000 | 10000 | 13000 |
| 2008 | 2000 | 12000 | 22000 |
| 2009 | 2000 | 10000 | 10000 |
| 2010 | 1000 | 14000 | 23000 |
| 2011 | 1000 | 13000 | 24000 |
| 2012 | 1500 | 12000 | 26000 |
| 2013 | 1300 | 13000 | 23000 |

*Source: National Bank of Republic of Macedonia, Report of Directorate of central banking operations and foreign exchange reserves, pp.16*

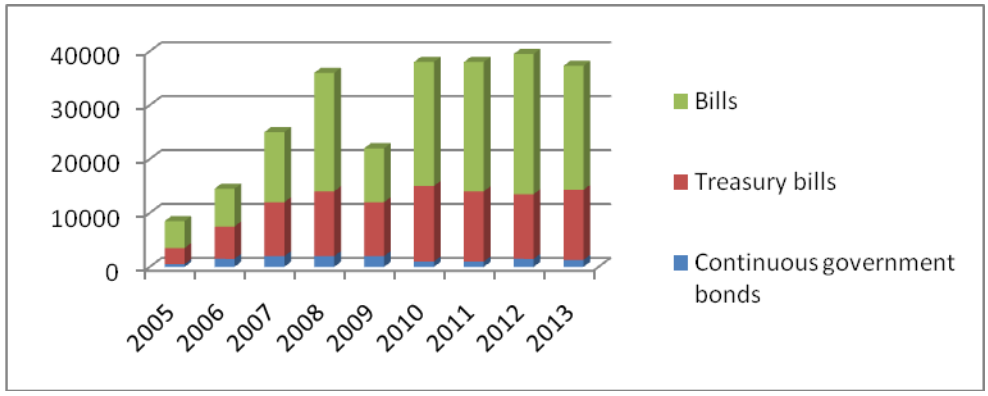


*Figure 1: Graphic presentation of average balance of bills, treasury bills and government securities*

*Source: National Bank of Republic of Macedonia, Report of Directorate of central banking operations and foreign exchange reserves, pp.16*

If we compare the average condition of the bills, treasury bills and continuous government bonds and the average daily turnover in the money markets, it can be concluded that the amount of available provision is significantly higher than the average daily volume of trading in money markets, or daily circulation of money markets has averaged 0.7% of the average amount of treasury bills and continuous government securities.

## *WHAT ARE THE REASONS FOR THE ABSENCE OF REPO TRANSACTIONS IN THE FINANCIAL MARKET OF THE REPUBLIC OF MACEDONIA*

Regards the fact that repo operations have advantages for the parties, the logical question arises “why the repo transactions absence from the Macedonian financial market”. To answer this question it is necessary to see the liquidity position of the banking system, which determines the appropriate placement of the instruments of the National Bank. National Bank is interested for development of the money market, including repo market, because this segments of the financial markets is a key link in the transmission of monetary policy in the banking system and the economy as a whole. Recent year the National Bank of Macedonia undertook a number related activities aimed at defining the position of repo transactions and implementing the regulatory framework for the negotiation and settlement of repo transactions. Some of the activities are related to: (NBRM, Directorate for Central Banks, Foreign Exchange Reserves and Operations, Recent trends in the money market in developed countries, pp.3)

- The introduction of repo transactions in 2005, laid the foundations of over counter markets as competitive infrastructure for trading and settlement of securities with low transaction costs. The trading through over counter markets is based on setting system of listings, and settlement of transactions is conducted through systematic solution, which is based on existing links between Macedonian Interbanking Payment System, banks and the Central Depository of Securities.
- A general repo agreement was promoted in 2005, and in the initial phase was provided repo transactions with in short-term securities. Next 2006 General repo contract was extended by continuous government bonds, and there was the opportunity for involvement other securities in accordance with the development of financial markets and the needs of market participants.
- Establishing the over counter market and defining the General repo agreement created conditions for conducting repo transactions as part of monetary operations. In this regard, in 2005 the National Bank started to approve Intraday and Overnight loan through repo transactions, and the next year was adopted regulations for implement auction repo transactions.

In 2005, period of introduction the repo until 2012, National Bank approved only overnight loans in form of repo transactions, and regular repo operations for issue of liquidity in the banking system - repo auctions, during that period are not applied. The reasons for this are the liquidity of the banking system "vis-á-vis" the National Bank, or the structural excess liquidity, which in the period 2001 to 2007 was marked by steady growth, from 1.1 % of gross domestic product (GDP) grew at 6.0% of GDP. In 2008 and 2009, structural excess liquidity observed a moderate decline, but still maintain a level of about 3% of GDP. These conditions contribute to consistently use monetary operations to withdraw liquidity from the banking

system - primarily through treasury bills, in order to maintain stability of the exchange rate. To resolve the occasional fluctuations in liquidity, banks use reserve requirements, which through a system of average maintenance allows flexible liquidity management (National Bank of Republic of Macedonia, Annual Report of the NBRM, 2012, pp.55).

One of the reasons for low use of repo transactions by banks in the country, lies in under developed and liquid secondary market for government securities, which are the most important tool for ensuring the conclusion of repo transactions, making complicated the system of collateral valuation on a daily basis.

Next reason is the settlement of repo transactions, which is slower than unsecured transactions.

In terms of dominance of overnight transactions, there is a perception in the absence of credit risk in the interbank deposit market, which reduces the need to conclude repo transactions.

In terms of underdeveloped financial markets, lack of knowledge of the techniques of making, settlement and accounting records of repo transactions.

Market securities - primarily treasury bills and government securities in the Republic of Macedonia from small and underdeveloped segment, in recent years has continuous growth, and if we compare the average condition of government bills, treasury bills, government bonds and average daily turnover of the money markets, can be concluded that the amount of available collateral is significantly higher than the average daily volume of trading in money markets, or daily operations of money markets has averaged 0.8% of the average amount of treasury bills and government securities value.

This indicates that the provided deposits market i.e. repo market has huge potential to grow and meet the needs of banks and other entities in the money markets and securities. Moreover, its future development depends in significant part by the active listing and trading of securities by market participants, which would increase their liquidity and would provide adequate daily market valuation of collateral in repo transactions. Regards the reasons for insufficient use of repo transactions by banks are reduced to the necessity of defining policies for conclusion of repo transactions, settlement and accounting records, the National Bank prepared a presentation that explains through example concluding and accounting the repo transactions. We hope that this paper also contribute to activation of the repo market in order to successfully manage credit risk, increase credit exposure limits and cheaper financing.

National Bank started to conduct auctions of repo transactions on a regular basis since May 2012, and the same trend continued in 2013 due to support liquidity to the banking system and encouraging long-term investment. Auctions for liquidity were organized once a week, every Friday, with a maturity of 7 days. National Bank applied tender and the interest rate was set at the weighted average rate of the last auction of treasury bills and was average 3.73%.

*Table 4: Auctions of repo transactions in 2013*

| in mlrd denars | May 2013 | June 2013 | July 2013 | Aug. 2013 | Sept. 2013 | Oct. 2013 | Nov. 2013 | Dec. 2013 |
|---|---|---|---|---|---|---|---|---|
| offer | 0,8 | 0,75 | 0,9 | 0,7 | 0,7 | 0,6 | 0,5 | 1,6 |
| demand | 0,7 | 0,6 | 0,5 | 0,3 | 0,5 | 0,2 | 0,1 | 1,4 |
| realized | 0,68 | 0,6 | 0,5 | 0,3 | 0,5 | 0,2 | 0,1 | 1,4 |

*Source: Annual Report the operations of the Central Bank, 2013, pp. 53*

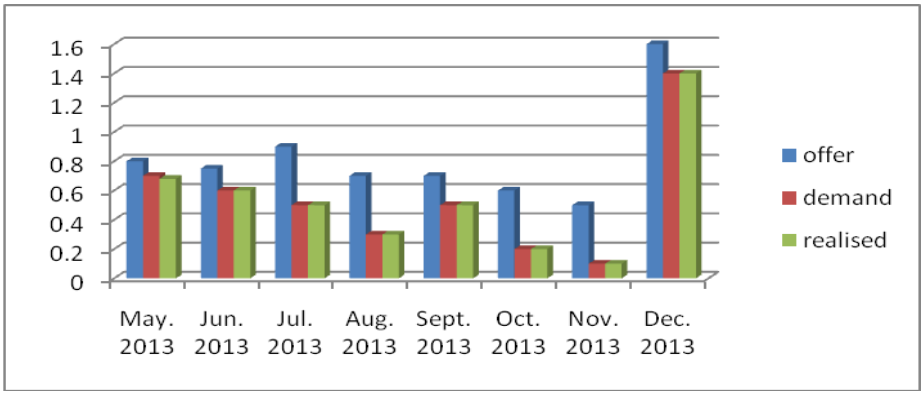


*Figure 2: Graphic presentation of auctions repo transactions in 2013*

*Source: Annual Report the operations of the Central Bank, 2013, pp. 53*

During the 2013 were conducted 34 auctions and the supply was usually higher than demand, on annual basis were emitted 2,700 million denars. Banks much more used this instrument in the period from 21 to 7 day before the end of the period of performance of the reserve, which was caused by the impact of autonomous factors, which in this time causing a decrease in liquidity.

In 2012, the National Bank organized a one day workshop for banks on "Repo transactions: practical aspects." The workshop was attended by 36 participants from the professional services of all banks that are directly involved in operational activities in the area of concluding transactions (front office), as well as settlement and recording transactions (back office). The workshop was organized in order to improve the theoretical and practical knowledge of colleagues from banks for repo transactions, before starting the regular repo auctions of the National Bank.

## *CONCLUSION*

The purpose of the paper is to contribute to a better understanding of the role of the repo market, meaning that the developed and efficient repo market influence on the development of the financial market and its participants. To achieve a given objective, it was necessary to observe the functioning of the repo market, and the use of repo operations by the various participants.

Repo operations have similar economic function as lending collateral; thereby provide a high degree of flexibility and reliability. These two features provide to market participants a tool for adequately managing liquidity risks they are exposed. Because of these characteristics, repo operations attract many participants in financial markets, which have different motives; central banks (repo operations use as an instrument of monetary policy), banks (liquidity management), dealers (for funding), investors (for ranking of free assets) and others. A number of different participants and different types of collateral increase the importance of the repo market development and functioning of other segments of the financial market, increasing the volume of transactions and liquidity of those segments.

The most important role of repo operations is their use as an instrument of monetary policy. Unlike the business banking, which has the role of providing funds or credit with low risk, the Central Bank used repo operations to control liquidity in the banking sector.

In 2005 the foundations were laid for the development of the repo market in Republic of Macedonia by adopting rules for trading and settlement markets over the counter and by developing general repo agreement. Regards the structural surplus liquidity in the banking system, the National Bank does not use repo transactions as a regular tool for issue of liquidity as in the case of developed economies where central banks manage in terms of lack of structural liquidity. However, in order to increase the reliability of credit operations associated with approval Intraday and Lombard loans, the National Bank started to use repo 2005.

On the other hand, a lack of repo transactions in interbank trading and banks indicated that, among other things, the reason for this situation is the lack of knowledge of the techniques of settlement and accounting records of repo transactions. In order to contribute to a better understanding of the characteristics of repo and its active use by banks, this papers deals with a explanation of basic concepts related to repo operations, the differences and similarities of repo operations with conventional lending transactions and transactions of baying and sealing of securities.

One of the basic prerequisites for revival of repo market is the existence of a developed and liquid markets for securities where daily prices of listed securities and enter into transactions which allows real valuation of collateral and determining the real cost of repo.

The significance and role of the repo market in the overall financial sector comes to the fore during the recent world financial crisis. It turned out that the

financial crisis that engulfed the uninsured bank loans and money market, had significant effects on repo markets, despite the presence of collateral. Central banks had to respond by including more collateral and in the future must be approach with more careful risk analysis.

For these reasons, countries with underdeveloped financial markets are interested in developing the repo market. A basic prerequisite for the development of the repo market is the existence of adequate legislation, general repo agreement, adequate payment systems and settlement systems. Thus the number of instruments for managing liquidity risk increases, for the monetary authority and the other participants in the repo market.

The experiences of central banks in transition countries faced with large inflows of foreign capital are identical - all the banks that were consistent in achieving its goal, such as price stability, submitted high costs. The transmission mechanism of monetary policy of the National Bank has significantly increased in the period when the repo rate has become an essential instrument of monetary policy.

## *REFERENCES*

[1] Annual Report the operations of the Central Bank, 2013.
[2] Balino, A. Enoch, C. (1995), The Adoption of Indirect Instruments of Monetary Policy, IMF Occasional Paper No 126.
[3] Choudhry, M. (2002), The Repo Handbook, Butterworth-Heinmann.
[4] Committee on the Global Financial System (2012), Implications of Repo Markets for Central Banks, CGFS Publications No.10, BIS, Basle.
[5] Czech National Bank (2013/2014), Financial Stability Report.
[6] Faborr (2011), Securities Lending and Repurchase Agreement, Wiley.
[7] Ferri, G. and Lots, C. (2004), Technical Assistance to the National Bank of Serbia in the Organization of NBS securities auctions.
[8] Fleming, M., Garbade, K. (2012), Repurchase Agreements with Negative Interest Rates, Current Issues in Economics and Finance, Vol. 10, No. 5, FED of New York.
[9] Jelic, M. (2000), Ugovor o reotkupu, Financijska praksa, Vol.24, br.4/2000, Institut za javne finansije.
[10] National Bank of Hungary (2014), Financial Stability Report.
[11] National Bank of Republic of Macedonia (2012), Annual Report of the NBRM.
[12] National Bank of Republic of Macedonia, Central Banking operations and foreign currency reserves, The money market in the RM and the EU: a comparative approach.
[13] National Bank of Republic of Macedonia, Development of the repo market in the Republic of Macedonia.
[14] National Bank of Republic of Macedonia, Directorate for Central Banks, Foreign Exchange Reserves and Operations, Recent trends in the money market in developed countries.
[15] National Bank of Republic of Macedonia, Report of Directorate of central banking operations and foreign exchange reserves.
[16] National Bank of Serbia (2014), Program for Monetary Policy.
[17] Steiner, R. (2007), Mastering Repo Markets: A Steep-By-Steep Guide to the products, applications and risks, Pearson education, London, UK.
[18] Technical Committee of the International Organization of Securities Commissions (IOSCO) and the Committee of Payment Settlement Systems (CPSS) of the central banks of Group of ten countries(2013) "Securities Lending Transactions: Market Development and Implications"

# *THE ROLE AND THE IMPORTANCE OF THE NATIONAL BANK OF SERBIA FOR THE DOMESTIC INSURANCE MARKET*

*Dusan Cogoljevic, PhD*[25]

*Ivan Piljan,PhD*[26]

## *ABSTRACT*

*Insurance companies, as institutional investors, are important participants on the financial market, but primarily on the capital market. Their importance and the consequent activities are reflected in the ensuring of financial stability as well as in the strengthening of competitiveness on the financial market. Insurance companies in the future could easily take on the position of leading financial investors, as they dispose with large capital (which is no longer measured in millions but rather, billions of euros) which they invest in various financial market segments. Observing the dynamic of the developing of world insurance in the last ten years, a growth of the share of insurance on the word market compared to the other financial institutions is evident.*

*According to the provisions of the Law on Insurance and National Bank Law, supervision over insurance activities is entrusted to the National Bank of Serbia, which is the first step to establishing an integrated supervision of the financial sector as a whole. Independence and the autonomy of the central bank, infrastructure and personnel qualifications for supervisory actions and connections between banks and insurance companies are the most important advantages of delegating this jurisdiction to the National Bank of Serbia.*

*By adopting the Law on Insurance, the National Bank of Serbia has established a sector for supervising insurance activities in order to successfully protect the interests of policyholders and clients. The National Bank of Serbia works on integrating the Republic of Serbia into the European Union by adapting the legislation in the insurance area to relevant EU directives.*

*The adoption of the Law on Insurance has set off big changes on the domestic insurance market area.*

***Key words**: Insurance Market, Institutional Investors, Insurance Activity, Supervision*

***JEL Classification**: I13*

***UDK: 336.711(497.11) 347.764(497.11)***

[25]Dusan Cogoljevic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, dusan.cogoljevic@vspep.edu.rs

[26]Ivan Piljan, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia,piljanivan@gmail.com.

## *INTRODUCTION*

The aim of this paper is analysis of the importance of the National Bank of Serbia in the business activities on insurance market of Serbia. From the moment when the National Bank of Serbia take on the role of surveillance over the business activities of insurance companies, until today, the insurance market is showing continual growth and slowly regaining of confidence in the insurance institution. Our opinion is that analyzing of the disadvantages in businesses of insurance companies in Serbia, which the National Bank of Serbia have noticed, should be analyzed and actions and procedures undertaken by the National Bank of Serbia to repair the noted deficiencies, also should be analyzed.

The National Bank of Serbia (hereinafter: NBS) is the central bank of the Republic of Serbia.

The basic functions of the national bank are to establish and implement monetary policy, to run the dinar exchange rate policy, preserve FX reserves and manage them, issue banknotes and coins and to ensure the functioning of payments and the financial system.

The basic goal of the NBS is to achieve price stability. In addition, it aims to preserve financial stability.

The law amending the Law of the National Bank of Serbia (Official Gazette of the Republic of Serbia no. 55/2004) has expanded the jurisdictions of the NBS to supervise over insurance activities (granting licenses to conduct the business of insurance, reinsurance, and brokerage).

According to the law, the NBS is independent and autonomous and does not seek or receive instructions from the state or any other authorities. Based on the established goals of the economic policy and key macroeconomic indicators adopted by the Assembly, the NBS independently establishes projections of monetary and credit aggregate growth and brings monetary policy measures to be undertaken in the purpose of achieving the set goals. The NBS governor attends government sessions at which issues connected to the NBS are discussed. The NBS gives an opinion about certain acts related to the budget, the economic and fiscal policy, legislation drafts and other regulations related to the NBS. With the consent of the government, the NBS determinates the dinar exchange rate, though itautonomously determines the dinar exchange rate policy. The NBS submits to the National Assembly an annual business report, a monetary policy report, as well as annual reportsregarding the statefinancial system and the monetary policy program for the next year (Kvrgić et al., 2013, pp.492-504).

According to the Insurance Law and the by-laws based on it, the NBS primarily makes decisions about licenses for insurance and reinsurance businesses, submitted by the founders of the joint stock insurance company or, in their name, the authorized persons. Besides the mentioned, the founders of mediation in insurance submit requests to the NBS for licenses to conduct insurance brokerage, while companies and individuals submit for insurance business licenses. Agencies for providing other insurance services also submit requests to the NBS for business licenses.

The new Insurance Law has clearly stipulatedguidelineswhich have contributed to restoring the trust of the citizens in the insurance sector, whichwas lacking during the previous years due to economic and political instability in Serbia. The most significant change in the area of regulating solvency in insurance on the EU level is the Solvency II directive which started to be applied in October 2012. The key request which Solvency II imposes to insurance companies is risk management and the allocation of adequate capital for covering these risks, in which for the first time operational risk is included in the capital requests (along with credit, market and insurance risk).

The deep recession which is the main feature of the macroeconomic environment of Serbia within which insurance companies operate is the result of the domestic social-economic and world financial crisis. Before the enactment of the law and the establishing of a supervisory body -the NBS, the domestic insurance market was exemplified by unfair competition, a lack of transparency in the financial reports, no unique insurance statistics, not many insurance products and an undeveloped segment of life insurance.

By adopting the Law of Property and Personal Insurance, Banking Law, Foreign Exchange Act, Law on Payment Transactions and Law on the Securities Market and other financial mechanisms, a good foundation for the functioning of the financial system in Serbia was established. With the Insurance Law entering into force, the NBS took control and charge of the insurance companies, which until 2004 were under supervision of the Ministry of Finance. The functioning of insurance on the domicile market, along with the Insurance Law, is regulated by other bylaws and regulations which the NBS has established to protect insurance users and improve the functioning of the insurance business. Along with this, the new law clearly defines the legal regulations which have contributed to restoring citizens' trust in the insurance sector, which was nonexistent for years due to political and economic instability.

The insurance law classifies life insurance and non-life insurance, insurance and reinsurance, increasing the capital threshold for all insurance forms and enabling the entry of foreign investors. By adopting the new law, insurance company can obtain a license solely from the NBS (for life and non-life insurance).

Serbia is actively working on EU integration and one of the conditions to become an equal member is adapting legal regulations to EU directives. According to experts in the insurance area, the domestic Insurance Law is essentially qualitative, although certain adjustments must be carried out so that Serbia is integrated into the EU insurance market. In other words, for those countries which wish to modernize their legislation in the insurance area, knowledge and harmonization of legislations with those of European countries, which have been applying these for many years is very important. Compared with European regulations, the Serbian Insurance Law is very modest. It is, however, indisputable that European legislation has helped development not only in European countries, but also in the others which have adopted this regulation in the insurance area. In

order to access the EU, Serbia has to comply with the following four conditions in the area of insurance:

- The possibility of free entry on the market by foreign investors;
- Elimination of price controls;
- Regulation of the necessary capital minimum and
- Establishing a professional supervisory body in the insurance sector.

## *THE ROLE AND IMPORTANCE OF THE NBS*

To achieve and preserve the stability of the financial sector, it is necessary for the NBS to establish adequate and continuous supervision over financial institutions. Establishing a supervisory body contributes to a more qualitative and quantitative assessment of business dealings and a proactive identification of risks which represent a threat to financial institutions (Marčetić et al., 2013, pp.505-519).

Article 18 of the Insurance Law stipulates that the NBS has the task to supervise insurance activities in Serbia. As supervisor, the NBS is obliged to prevent financial problems and violations of legal regulations in the insurance area. The main goal of the NBS is to establish a financially reliable and stable insurance market for the protection of insurance users' interests, while special attention is given to business control, risk management and the risk assessment to which insurance companies are exposed.

The primary goal in insurance supervision, along with the protection of clients' rights, is also the protection of domestic insurance companies and preserving of funds for investing in the domestic financial market, what has a positive impact on the state's balance of payments.

To realize the set goals on the insurance market, the NBS has consecutively worked on the following:

- Sector stabilization,
- Restoring the trust of citizens,
- Creating a basis for developing the insurance sector,
- Improving supervision functioning and
- A continued training of employees.

*Table 1:Overview of NBS activities in the insurance sector during the 2004-2011period.*

| | |
|---|---|
| **2004** | *NBS insurance supervisor<br>*created and developed supervision<br>*technical and organizational training<br>*NBS became IAIS member<br>*beginning of stabilization and restoring the trust of the public |
| **2005** | *15 by-laws, 8 actuarial<br>*established modern system of statistic and financial reporting |
| **2006** | *started program for improvement of the actuarial profession<br>*licensing of actuaries<br>*published Strategic Development Plan for the 2006-2009 period<br>*established automated calculation of CARMEL indicators<br>*beginning of bank insurance<br>*harmonization of DO business with DPF Law |
| **2007** | *decision about the system of internal control and risk management<br>*center for financial users protection<br>*introduced advanced method of damage reservation and established automated system of calculation of damage reservation bytriangulation method |
| **2008** | *involvement in the implementing of NPI in the insurance area<br>*MoU –actuarial training is transferred to faculties<br>*completed transfer of life insurance policies from Austria |
| **2009** | *Law on Compulsory Traffic Insurance<br>*project of development of control calculators for mathematical reserve calculation<br>*harmonization of DZO implementation with DZO Statute<br>*“Meet the Client” decision |
| **2010** | *mathematical reserve decision (maximum interest rate)<br>*calculation of solvency margin for additional health insurance<br>*implementation of bonus-malus system and determination of AO police establishing<br>*IPA project for improvement of NBS capacity<br>*supervision colleges |
| **2011** | *startedcontrolcycle of applying Law on Compulsory Traffic Insurance<br>*harmonization of licensing of actuaries with the Education Act<br>*started project of insurance risk from natural disasters<br>*SEEC CRIF (ratified loan agreement) |

*Source: Results of the control and supervision of the insurance market in Serbia during the period 2004-2012, June 2012.*

## *SURVILLANCE AND CONTROLE OF INSURANCE COMPANIES*

Thereby, in order to successfully realize strategic goals in the insurance area, the NBS has developed a modern system of supervision which monitors the businesses of insurance companies and their exposure to market risks. The function of control and supervision over insurance companies within the NBB is entrusted to the Sector for Surveillance over the performance of insurance activities (hereinafter: SSI).

Besides the surveillance of the insurance companies, SSI issues licenses for carrying out insurance activities, reinsurance, brokerage and activities directly connected to insurance. Table2showsa summary of issued licenses by supervision bodiesand during specific years.

*Table 2: Number of issued licenses by surveillance companies during specific years.*

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|
| **Insurance and reinsurance** | | | 1 | 4 | 4 | | | 2 |
| **Insurance brokerage company** | | | 6 | 7 | 10 | 1 | | |
| **Insurance companies** | | 10 | 8 | 2 | 3 | 2 | | |
| **Entrepreneurs-insurance agents** | 1 | 20 | 42 | 31 | 22 | 9 | | |
| **Agencies for providing other** | | 1 | 1 | 1 | 1 | 1 | | |
| **Legal entities** | | 2 | 1 | | | | 11 | 3 |
| **Banks** | | | | 4 | 7 | 2 | 1 | 3 |
| **Tourist agencies** | | 1 | | | | | | |

*Source: National Bank of Serbia, Jubilee of the supervising sectorin insurance: five years of the activities of the supervising sector ininsurance businesses, p. 6.*

The task of SSI is to appropriately and adequately introduce and apply corrective measures and procedures as well as to completely synchronize activities with international procedures and standards which are applied in the supervision of EU insurance companies. According to the NBS Insurance Law, surveillance and control of insurance companies on the territory of the Republic of Serbia can be carried out by direct or indirect control. Within the SSI,along with the department for direct and indirect control there are departments for actuaries and statistics andthe legal affairs department.

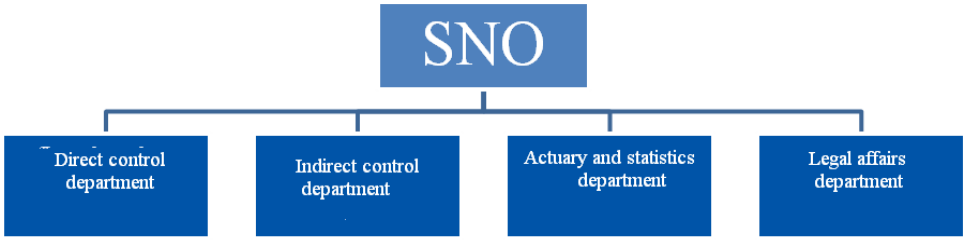


*Figure 1: Structure of the sector for supervisory activities ininsurance businesses*

*Source: http://www.nbs.rs/export/sites/default/internet/latinica/15/informator.pdf (17.03.2013)*

The department for direct control carries out the following activities:

- Collecting, following data and data analysis from insurance company reports;
- Considering requests for licensing, removal and changing of insurance company licenses;
- Approving status changes and changes of organization forms and
- Suggesting measures for improving the insurance market.

The results of indirect control, at least one per year, are forwarded to the department of direct control which then makes the plans and schedules of indirect control.

*Table 3: The number of controlled IC per year.*

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|
| Number of controlled IC | 40 | 8 | 10 | 5 | 8 | 7 | 8 | 12 |

*Source: National Bank of Serbia, Report of the Insurance Sector in Serbia from 2005 until 2011, modified.*

Table 3 shows that the SSI in the period from 2004 until 2011 carried out 98 controls of insurance companies. During the mentioned period, the further irregularities were noted:

- During the period of stabilization of the sector in 2004– 2005,irregularities have been identified in anover-emphasis of assets and under-emphasis of liabilities (unrealistically presented technical reserves, disorderly bookkeeping, untimely claim payment, unreliable data of policies sold, etc.).
- During the second half of 2005 until the beginning of 2007,irregularities were identified in an inadequate appliance of MSFI, assessment of balance

and off-balance positions, technical reserve and guarantee reserve calculations, lack of management, lack of internal control system, work of internal revision, etc.

- During the second half of 2007,until 2010, irregularities were identified in the loss reserves calculation, structure of investment in technical reserves, coordination of receivables and liabilities, program of solution in the financial accounting systems, internal control system, bookkeeping, application of laws, etc.,
- During 2011, there was a focus on the control of compulsory car insurance, as well as identifying irregularities in the deadlines for processing and payment of claims for damages, lack of coverage of overhead costs, commercial costs, propaganda and leasing of office space, etc.

The department for direct control is obliged to do the following:

- Carry out direct control over insurance companies (in their business space);
- Carry out direct control over the activities of brokerage companies and insurance agencies;
- Prepare acts derived from control procedures, and
- Adapt measures for eliminating violations and irregularities in the procedure of direct control.

In the supervising function over insurance companies in the period from 2004 to 2011, SSI direct control was carried out in three cycles:

The first cycle started by the new Insurance Law entered into force, with which the NBS was required to protect the interests of the insurance company clients and establish a stable insurance system.

The second cycle of direct control covered the period from mid-2005 until January 2007. In this period, the activities of insurance companies were checked according to the efficiency CARAMEL indicator. In this cycle, three insurance companies lost licenses, while, during the control activity, all insurance companies arrived at a correction of profit.

The third cycle of NBSdirect controlwas undertaken in the period from the end of 2007 until the end of 2010, this control including 27 insurance companies. The focus of control was the degree of compliance with the regulations in business activities, as well as business risk management which in this period was the NBS strategic orientation.

## *ACTIVITIES AND TASKS OF NBS*

The most common irregularities in business activities can be observed in the sales network (hiring persons who are unauthorized to be engaged in representation), an improper displaying of business activity data and financial reports, insufficient capital (as per the legally set threshold) and similar.

In accordance with the basic principles of insurance supervision, advocated by the International Association of Insurance Supervisors-IAIS, the NBS set a few guidelines to improve the surveillance of insurance companies. At the end of 2009, the NBS set out six guidelines:

- Transparency – transparency and availability of insurance company data;
- Corporative management - points to the necessity of insurance company management;
- Market risk - requires control of market risk and competition on the insurance market;
- ALM (Asset Liability Management) – model of asset liability management;
- Prevention of money laundering – prevention of money laundering and financing terrorism, and
- Fraud– prevention, discovering and removal of fraud causes in the insurance businesses.

To ensure a competitive and fair business environment in the insurance area, the key challenge in the supervision of the financial sector, which includes the insurance sector, is the process of implementing directive Solvency IIwhich represents a key challenge for the CEA (CommitteeEuropean des Assurances). This directive represents the most significant change in the area of regulation of solvency on the EU level, while the beginning of its appliance was predicted for October 2012. The key request which the directive Solvency IIimposes to insurance companies is risk management and an allocation of an adequate amount of capital to cover these risks, whereby, for the first time, operational risk is included in capital requests (along with credit, market an insurance risks). Implementation of directive Solvency II should be based on economic principles and qualitative processes of risk management in order to protect the insured. The newest indicators of the effect of the performance measures of implementing directive Solvency II are given in the fifth study of QIS (Quantitative Impact Study V).

The NBS is obliged to check whether there is a capital minimum (census) for the founding of an insurance company stipulated by Insurance Law. An initial security fund (basic capital) is the prerequisite which must be complied with so that an insurance company can perform on the domestic market. A minimum capital amount for a business start is a guarantee to the first clients of payment for insured losses. It should be emphasized that this fund is only used as ultimate security (coverage of losses) in the future business activity. Article 28 of the Insurance Law stipulates the minimal initial capital in Euros(Table4), while the insurance

company is obliged to express the initial capital in RSD (calculated at the average exchange NBS rate).

*Table 4: Minimum of the initial capital for the founding of the insurance companies (in Euro)*

| Minimum of the initial capital for founding insurance companies **(inEuros)** | |
|---|---|
| **Non-life insurances** | **4,500,000** |
| **Compulsory liability insurance and comprehensive insurance** | **2,500,000** |
| **Other property and liability insurances, and other non-life insurances** | **2,000,000** |
| **Accident insurance and voluntary health insurance** | **1,000,000** |
| **All types of life insurance** | **4,000,000** |
| **Life insurance, except for voluntary pension insurance** | **2,000,000** |
| **Voluntary pension insurance** | **3,000,000** |
| **Re-insurance** | **4,500,000** |

*Source: Insurance Law (Official Gazette of the RS, no. 55/2004, 70/2004-corr., 61/2005, 61/2005-etc. law, 85/2005-dr. law I 101/2007), Article 28, p.9.*

The National Bank of Serbia, along with supervision over the insurance businesses, is also obliged to dothe following:

- Assess the abilities of the insurance companies to fulfill their obligations (present and future) in total;
- Assess competence of insurance company management to manage taken risks;
- Assess the adequacy of the system of internal control and its implementation;
- Opportunely identify and assess the taken risks and
- Opportunely and consistently undertake certain measures.

In accordance with the strategic goal-creating and the maintenance of a secure and stable insurance market to protect the interests of clients and insurance companies and provide services and insurance products in an optimal and transparent way, the SSI in 2010 continued to direct their activities in several directions, these being: the preservation of the insurance sector stability, taking measures and continuous surveillance, creating conditions for the further development of this sector, adopting by-laws based on EU directives and international practice by increasing the transparency of NBS and company activities; also, further development of the supervisory function in accordance with international standards and IAIS principles, based on risk assessment and with a

continuous licensing of actuaries and training of employees. Namely, during 2010, the SSI carried out 8 indirect control activities over insurance companies, of which 6 were controls of the total business activities of the insurance company while 2 control operations relied on the already performed controls (checking the implementing of the arranged measures at one company and a subsequent verification of facts and evidences obtained by NBS via another company).

Besides the mentioned controlactivities of insurance companies, 18 control activities of the entities engaged with representation were carried out (17 control activities of shops) as well as brokerage insurance (1 control activity).

In the aim of removing all the irregularities found by the controls, during 2010 the NBS brought 5 decisions which set up supervisory measures (4 related to insurance companies, 1 to insurance agents) and 2 decisions aboutlicense cancellation (one agent and one broker) (NBS, 2010, pp.3).

Within the legal and by-law framework in the area of insurance,the following decisions were made in 2010:

- Changing the rules on the content and form of insurance company financial reports and the rules on the contents of accounts for insurance companies,
- Amendments to the decision on data contents which an insurance company submits to the NBS as well as the deadlines for submitting the data,
- Amendments to the decision on submitting statistics and other data of insurance companies, and the decision on detailed criteria and method of calculating mathematical reserves and profit sharing,
- Amendments to the decision on the method of determining the solvency margin,
- Decision on the basic criteria of the bonus-malus system, the data for appliance of this system and the highest bonus,
- Decision on the content of the insurance policy regarding self-insurance and the method of policy record-keeping in damages compensation,
- Decision on submitting statistics and other data of insurance companies and the deadlines for submitting annual data.

With amendments to the Decision on the criteria and the method of calculating mathematical reserves and profit sharing,a further harmonization with the EU Directive 2002/83 was carried out by the NBS, therebydetermining the highest interest rates. Also, in accordance with the mentioned directive, insurance companies have the obligation to calculate mathematical reservesusing a gross method, in order to show the difference between the mathematical reserves calculated by a net and gross method in their financial reports.

Amendments to the Decision on the method of determining the solvency margin amount, help to determine thecalculation method for the solvency margin for supplementary health insurance and with the life insurance for which mathematical reserves are calculated.

In accordance with the obligations stipulated by the Law on compulsory transportationinsurance, the NBS has brought a Decision on the basic criteria of the

bonus-malus system, the data for applying such a system and the highest bonus, as well as the Decision on the content of the insurance policy and the self-insurance method and record-keeping. According to the Decision on the basic criteria of the bonus-malus system, the data for applying this system and the highest bonus determine the basic criteria for this system, where the determining of the premium rate under the bonus-malus system is considered, and depending on the fact if the insured in the previous period has reported any claims. According to theDecision on the content of the insurance policy on self-insurance and the record-keeping method, there is a detailed content of the self-insurance contract–the self-insurance policy and the record-keeping method.

The Government has adopted aRegulation on compensation fordamaged persons which determines the method and criteria for material damage assessment, as well as the method and criteria for non-pecuniary damage assessment, depending on the gravity of body injuries and/or impaired health, or depending on the degree of partial work incapacity, and also on the persons which have right of reimbursement and the maximum amount of compensation for pain suffered due todeath or serious disability.

When the new Insurance Law entered into force on the territory of the Republic of Serbia, there were some 40 insurance companies, but by the end of January 2005, due to non-compliance with regulations, 15 of the companies were banned.

In 2012, there were in Serbia 28 insurance companies and this number has not changedcompared to the previous year. Some 24 companies deal with insurance, and 4 with reinsurance. Of the companies which deal with insurance, 7 of them deal exclusively with life insurance, 11 with non-life insurance, and 6 with life and non-life insurance. Regarding the structure of capital ownership, of 28 insurance companies, 21 aremajority foreign-owned, and 7 insurance companies are mostly domestic-owned (NBS, 2012, pp.8).

During 2012, the NBS continued with the control activities and with applying the Law on compulsory traffic insurance within the insurance companies which deal with self-insurance. The control cycle which started at the end of 2010 and which involved 14 controlactivities, including 11 insurance companies which deal with self-insurance, has now ended. In accordance with the planned activities in the final trimester of 2012, there was also a control of activities of one insurance company founded on other bases, and the control of the activities of these insurance companies was completed at the beginning of 2013.

Control activities performed during 2011 and 2012, with the goal of removing the established irregularities and due to a failure to comply with risk management rules, according to the decisions of the NBS, resulted in imposing measures of surveillance in 13 cases (12 insurance companies and one insurance agency). These decisions also stipulated fines for insurance companies in 12 cases, andfor 6 cases of those responsiblein the companies. In two cases, the agreement between the Board President and the Managing Director was revoked. Three criminal charges ere were filed against insurance companies and the responsible persons in these companies. Also, the NBS revoked the insurance agency's license(NBS, 2012, pp.8).

In 2012, the following were enacted within the framework of laws and by-laws involved with the area of insurance: changes in the Law on the National Bank of Serbia, changes in the Insurance Law, changes in the Law on mandatory traffic insurance, changes in the decision of criteria and method of calculating mathematical reserves and participation in the profit, and a new decision on the limitations of certain deposits and investing funds in technical reserves and the highest amount of certain deposits and investments, as well as investing guarantee reserves of the insurance company.

The National Assembly of the Republic of Serbia adopted changes in the Law on the National Bank of Serbia, in the aim of, among other things, a further improving of its prudential and control functions. The changes helped to form a Board for the supervision over financial institutions (hereinafter: Supervisory Board) and it wasstipulated that the regulations within the area of supervision are brought by the Executive Board of the NBS, which also issues and takes away licenses at the proposal of the board. Along with this, it was also stipulated that the Supervisory Board is to carry out all supervisory and controlling functions in order to further improve the controlling of financial institutions, including insurance companies, and with the aim to promote the protection of users of financial services.

The National Assembly of the Republic of Serbia adopted the changes in the Insurance Law which extended the deadline for separating companies which render life and non-life insurance services until December 31, 2013. Also, the National Assembly adopted the changes in the Law on mandatory traffic insurance which initiative the application of the stipulated lowest insurance amounts for self-insurance, which was previously postponed until October 13, 2014.

With the Decision on changes on the criteria and method of calculating mathematical reserves and reserves of participation in profit, the final deadline was determined, by which the insurancecompanies were obliged to start applying the highest stipulated interest rate for all life insurance contracts in foreign currency and with a foreign currency clause, being December 31, 2013.

With the aim to coordinate with the new law on the capital market, and taking into consideration the effects of the economic crisis, the NBS brought a new decision on the limitations of certain deposits and investments of technical reserve funds and the highest amounts of certain deposits as well as investing a guarantee reserve of the insurance company. The stipulated forms, as well as the conditions for placing funds to cover technical reserves, including municipal bonds, were coordinated with the provisions of the law. In the aim of a further coordinating with European regulations and improving the investment process of the insurance companies, there was determined a commitment of the insurance company to place funds for covering the technical reserves and guarantee reserves, in accordance with the prudency principle andtaking into account the risk profile and the risk tolerance limits, as well as the commitment of bringing strategies and policies for fund placement risk management.

## *CONCLUSION*

The need to reduce the engaging of the NBS in controlling the insurance section is an indication that the domestic insurance market, with the improving of the business and risk management system as well as the development of the business awareness of insurance companies, is becoming increasingly stable. The NBS constantly improves its control function by improving supervision methods as well as the cooperation level with international supervisory bodies and participants on the domicile insurance market. The bringing of numerous laws and by-laws involved with insurance has gradually increased citizens'' trust in the financial sector and the possibility of choosing a financial institution for money investment.

The key areas which companies should be involved with, especiallyin the present day, are the following: corporative management, which, among others, implies an adequately established internal control system, improving risk management, expanding investment assessment techniques, strengthening transparency, consolidating good business practices and an optimal attitude towards clients and the training of potential clients. In this way, there will be increased client trust and conditions will be created for developing this financial system segment. Especially stressed should be the relevance of a consistent adhering to regulations from the area of compulsory traffic insurance, especially in regards to damage claims, insurance costs and the application of the bonus–malus system.

Also, there is the option of education and preparation for implementing a new methodological framework for risk management, Solvency II. Namely, an adequate risk management is of a key significance for the success of the insurance business. This is the essence of the Solvency IIdirective, according to which the insurance company is requested to review and quantify all types of risks to which they are exposed in business, as well as efficient managing of these risks. It introduces more sophisticated demands of solvency for the purpose of securing enough risk capital to which insurance companies are exposed. The application of directive demands, according to the draft of the new Insurance Law, has been planned upon the entry of Serbia into the EU.

## *REFERENCES*

[1] Doganjić, J. (2013), Nadzor tržišta osiguranja u Srbiji; Beograd:NBS.
[2] Kvrgić, G. Vujadin, R. Vujadin, N. (2013), Transmission mechanisms of monetary policy in Serbia with emphasis on the interest rate channel, Entrepreneurship: Economic development and finance, Beograd: VŠPEP, pp. 492-504.
[3] Marcetic, M. Maksimovic, D. Djuric, D. (2013), State and potentaial of Serbian banking sector for financing real sector, Entrepreneurship: Economic development and finance, Beograd: VŠPEP, pp. 505-519.
[4] Sektor osiguranja, (2005), Godišnji izveštaj, Beograd:NBS.
[5] Sektor osiguranja, (2006), Godišnji izveštaj, Beograd:NBS.
[6] Sektor osiguranja, (2007), Godišnji izveštaj, Beograd:NBS.
[7] Sektor osiguranja, (2008), Godišnji izveštaj, Beograd:NBS.
[8] Sektor osiguranja, (2009), Godišnji izveštaj, Beograd:NBS.
[9] Sektor osiguranja, (2010), Godišnji izveštaj, Beograd:NBS.
[10]Sektor osiguranja, (2011), Godišnji izveštaj, Beograd:NBS.
[11]Sektor osiguranja, (2012), Godišnji izveštaj, Beograd:NBS.
[12]Zakon o osiguranju ("Sl. Glasnik RS", br. 55/2004, 70/2004-ispr., 61/2005, 61/2005-dr. zakon, 85/2005-dr. zakon I 101/2007), Član 28, str.9.
[13]http://www.nbs.rs/export/sites/default/internet/latinica/15/informator.pdf (17.03.2013. 10:10h).

# *THE CONSUMER PROTECTION IN INSURANCE CONTRACTS IN SERBIA*

*Ljupka Petrevska, PhD*[27]

*Miroslava Petrevska, PhD*[28]

## *ABSTRACT*

*The main legal source regulating the matter of insurance is the Insurance Act. This law in a comprehensive manner regulates the issues of importance of the establishment, management, operation and termination of the insurance company. This is the result of the need to prevent the insurance carried out in the interests of the insurer as stronger contracting party but also to preserve the basic principles of the business.*

*The growth of the insurance market in Serbia continues as a result of action taken by the National Bank of Serbia. In accordance with the prescribed authority, the National Bank of Serbia has its direct monitoring function focused on insurance business control, intermediates and dealer network. The objective is to establish order and discipline in the financial entities engaged in brokerage and insurance. The most common irregularities observed in the controls are accounting and financial statements problems, unauthorized transfer of agency operations to other persons, record-keeping and conclusions of the insurance contract.*

*National Bank of Serbia in 2007, in order to develop the insurance market, compiled two laws that control the insurance market in Serbia. As part of the stabilization of the insurance plans is a continuation of the new control cycle with necessary measures of controlling the elimination of illegalities and irregularities, as well as monitoring the implementation of these measures by the controlled entities.*

*Providing conditions for the development of the insurance sector is reflected in the work on changes and amendments to the Insurance Act and regulations.*

***Keywords:*** *Insurance Law, The Insured, Insurance Company, Abuse, Insurance Contract*

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[27]Ljupka Petrevska,College of Professional Studies of Traffic Management,Nis, Serbia, ljupkapet@yahoo.com

[28]Miroslava Petrevska,Higher technological school of Applied Sciences, Sabac, Serbia, miroslavapet@yahoo.com

## *INTRODUCTION*

Generally speaking, consumer protection represents a group of laws and organizations which is designed to enable and ensure the rights of consumers and clients, but also to enable fair trade competition on the market, not mentioning the enabling an ensuring of free flow of truthful information in the marketplace, which is crucial for development of mutual trust, which in turn leads to the relations on the market that eventually end up with the flourished and blossoming market economy. With no such protection, mutual trust would be shaken, and it usually leads, in every time and in every country, not only to growing mistrust but to increasing number of frauds, fraudulent trials, and global slowing of the economical activities.

People usually say that the people in the developed countries are credulous or gullible, and therefore easy to con, as opposed to the people in countries where crises are frequent, but the opposite applies: the people in the developed countries are credulous an gullible exactly because they are relaxed and they do not think about frauds, knowing that they are legally protected. That is why they lose their ability of critical thinking and they are liable and likely to be conned in foreign countries where such consumer protection does not exist as such or to such extent.

These laws are basically designed to prevent businesses that engage in fraud or specified unfair practices from gaining an advantage over competitors; they may also provide additional protection for the weak and those unable to take care of themselves. Consumer protection laws are a form of government regulation, they are neither customary nor unspoken, and they aim to protect the rights of consumers and clients on the market, regardless of business they are involved in, and regardless of the fact that the subject of transaction or trade might be a product or a service: the laws apply equally. For instance, a government may require businesses to disclose detailed information about products—particularly in areas where safety or public health is an issue, such as food. In the area of service, it could be equally crucial, as we will see in further text: in insurance business, the clarity of the contractual obligations obviously leads to more satisfied customers, and hidden or unspoken conditions or terms would eventually lead to a diminished number of satisfied customers and to a diminished number of customers in whole.

Consumer protection is linked to the idea of consumer rights, and to the formation of consumer organizations, which help consumers make better choices in the marketplace and get help with consumer complaints. It is wrong to think that the consumer rights and consumer protection diminishes the profit of the business owners. Quite on the contrary, no client would like to buy "dog in a blanket". Everybody wants clear and just relationships in which neither side would have the obligation or need to double-check the opposite side. It would speed up business and facilitate the trade.

Other organizations that promote consumer protection include government organizations and self-regulating business organizations such as consumer protection agencies and organizations, the Trade Commissions, ombudsmen, etc. A consumer is defined as someone who acquires goods or services for direct use or

ownership rather than for resale or use in production and manufacturing. Consumer interests can also be protected by promoting competition in the markets which directly and indirectly serve consumers, consistent with economic efficiency, but this topic is treated in competition law. Consumer protection can also be asserted via non-government organizations and individuals as consumer activism.

All in all, we can conclude that consumer protection law or consumer law is considered an area of law that regulates private law relationships between individual consumers and the businesses that sell those goods and services. Consumer protection covers a wide range of topics, including but not necessarily limited to product liability, privacy rights, unfair business practices, fraud, misrepresentation, and other consumer/business interactions. It's a way of preventing fraud and scams from service and sales contracts, bill collector regulation, pricing, utility turnoffs, consolidation, personal loans that may lead to bankruptcy.

Consumer Protection Law regulates in a special way the following rights of the consumers:

- the right to protect economical interests of a consumer
- the right to be protected from the dangers for life, health and possessions
- the right to legally protect a consumer
- the right to inform and educate a consumer
- the right of consumers to unite in order to protect their interests
- the right of consumers to represent and participate in work of legal bodies that resolve questions of their interest

## *CONSUMER PROTECTION IN INSURANCE*

## *WHAT SHOULD THE STATE DO ABOUT IT?*

The supervisory authority sets minimum requirements for insurers and intermediaries in dealing with consumers in its jurisdiction, including foreign insurers selling products on a cross border basis. The requirements include provision of timely, complete and relevant information to consumers both before a contract is entered into through the point at which all obligations under a contract have been satisfied.

Consumer protection is a vital function in insurance business, since all the contractual obligations in insurance business are based upon the mutual trust and the lack of such trust may significantly diminish the volume of business. As mentioned previously, nobody is really into dealing with “pig in a poke”. Everybody wants clear and just relationships in which neither side would have the obligation or need to double-check the opposite side. It would speed up business and facilitate the trade. The unfair conditions and contract terms should therefore be eliminated from the body of the contracts. Such regime is usually referred to as “unfair contracts terms regime” and it is defined as the existence of at least one problematic term in the body of the contract.

Previously, the insurance contract were very vaguely and superficially covered by this regime and customer protection laws, but now the situation in all countries changed in recent times, and the best examples are the United Kingdom with separate legal acts in England (traditionally including Wales) and Scotland (which since 1997 have had its separate parliament but traditionally had its on legal system) and Australia, which is legally very much tied to the "mother country". The unfair contracts terms regime is being extended to all general insurance contracts (other than contracts for life insurance). Previously the life insurance contracts were under scrutiny of the lawmakers, but recently it has been noted that the fraud attempt and unfair contract terms are very frequent in the world of other insurance contracts. Thus, companies should commence implementing amendments to contracts and updating compliance materials, to ensure compliance with the regime. All relevant front line personnel should be across the unfair contracts terms regime, and other consumer law principles, so that they have regard to them in their interactions with consumers.

Figure 1.shown above explains the most common risks and problems all over the world.

| | *Insurance* |
|---|---|
| Wholesale Cost | Unknown at time of sale. |
| Retail Price | Specific price quotes available. Difficult for the public to comparison shop. |
| Limitations | Some people might only be eligible for limited forms of coverage. |
| Access | Available to all that meet underwriting standards. |
| Transparency | Underwriting standards generally unavailable to the public. |
| Suitability | Consumer generally can only determine suitability after a claim occurs. |
| Finality of the Transaction | An agent can arrange coverage but an underwriter might decide that the person is ineligible and cancel the policy on a prospective basis. |
| Compulsion to Buy | Some personal lines insurance products are mandated. Auto because governments require. Homeowners because lenders require. |

*Figure 1: Common problems in insurance industry*

*Source: NAIC. Personal Lines Regulatory Framework, September, 2006)*

## *AUSTRALIAN EXPERIENCE*

Like its UK counterpart, the Australian Federal Government has also recently been considering perceived deficiencies in consumer protection law as it applies to insurance contracts. In particular, the Australian government, in conjunction with industry and consumer lobby representatives, has been considering ways to address the imbalance between the protection currently offered to insurance consumers in the Insurance Contracts Act 1984 and that available to consumers of other non-insurance financial products and services under the Australian Securities and Investments Act 2001.

The Law Commission and the Scottish Law Commission commenced a joint review of insurance contract law and consumer insurance in relation to disclosure and representations in January 2006. As a result of the review, the Consumer Insurance (Disclosure and Representations) Act 2012 received Royal Assent on 8 March 2012 and is expected to come into force in 2013 (The Law Commission and the Scottish Law Commission, Insurance Contract Law (http://lawcommission.justice.gov.uk/areas/insurance-contract-law.htm)).

It is not surprising that the insurance industry was not at ease at the time of expanding the unfair contracts terms regime". Insurance industry representatives in Australia, for instance, have argued that there is no justification for having an unfair contract terms regime apply to insurance contracts, and ''to the extent there are unfair contract terms in insurance, they could be addressed by the existing laws'' (Treasury, Unfair terms in insurance contracts). Contrastingly, consumer advocates support the introduction of an unfair contract terms regime in the ICA (Insurance Consumer Act), arguing that "the existing protections in the ICA are insufficient" (Treasury, Unfair terms in insurance contracts)). The existing protections provided under the ICA offer significant protection to insured. For example:

- There are pre-contractual rules that are directed at an insurer informing an insured about the terms of a policy before it is entered into, for example, under section 37 of the ICA, insurers need to 'clearly inform' insured in writing, before a contract is entered into, of the effect of any terms 'of a kind that are not usually included in insurance contracts that provide similar insurance cover'.
- There is a reciprocal duty of utmost good faith imposed on the insured and insurer under section 13 of the ICA, which requires both parties to act with fairness, propriety and honesty. The effect of this is that a party is prevented from relying on a term of the insurance contract if to do so would be to fail to act with the utmost good faith (section 14 of the ICA).
- Section 53 of the ICA has the effect of rendering void an insurance contract term that allows the insurer to vary an insurance contract to the prejudice of a person other than the insurer. However, the Insurance Contracts Regulations 1985 declare certain classes of contract as exempt from the application of section 53, for example life insurance, superannuation contracts and certain types of commercial insurance contracts.

- Section 54 of the ICA provides relief to insured whose acts or omissions, that occurred after the contract was entered into, would otherwise entitle an insurer to deny a claim. For example, an insurer may refuse to pay a claim only if an act of the insured can be reasonably regarded as capable of causing or contributing to the loss claimed (section 54(2) of the ICA), or an act was necessary to protect the safety of a person or to preserve property (section 54(5)(a) of the ICA).

Nevertheless, the proposed definition of an unfair term specifically in relation to contracts of insurance is that the term:

- Would cause a significant imbalance in the parties rights and obligations under the contract
- Would cause detriment to a party if relied on
- Is not reasonably necessary to protect the legitimate interests of the party advantaged by the term.

For the purposes of determining whether a term in an insurance contract is reasonably necessary to protect a legitimate interest, a term will be reasonably necessary if it reflects the underwriting risk accepted by the insurer.

## *PROBLEMS WITH INSURANCE CONTRACTS*

Problems in insurance contracts were numerous. The law applying to insurance contracts differs from most consumer contract law by requiring consumers to volunteer information without being asked for it. Insurers are not required to ask questions. Instead, the law entitles an insurer to sit back and rely on the consumer to tell it everything that it needs to know. The most obvious problem is that most consumers are unaware that they are required to volunteer information. Even if they know that they are under a duty to disclose facts, they may have no idea what is relevant to the insurer.

Also, one of the problems with insurance contracts that were very frequent is that those policyholders may be denied claims even when they act honestly and reasonably. Ombudsmen in Scotland noticed the cases which show that some insurers continue to use extremely general questions, where it is not clear what information the insurer is seeking. It is easy for consumers to misunderstand such questions, and therefore give inaccurate answers, even if they are doing their best to answer truthfully. Where the question is considered one of fact rather than opinion the insurer may avoid the policy even if the consumer has acted reasonably.

In every country, ideally speaking, there should be a specialized insurance contracts section in the general insurance or contracts law, or ideally a separate Insurance Contracts Act. This should specify the information exchange and disclosure requirements specific to the insurance sector, the basic rights of insurer and retail policyholder and allow for any asymmetries of negotiating power or access to information (Tarr, 1989, pp. 12).

## *LEGAL GROUNDS FOR INSURANCE CONTRACTS*

Due to its highly specialized nature and very long history insurance remains largely subject to a separate specialized body of law. In Civil Code countries insurance contracts are almost inevitably covered by a separate section of the Civil Code, which will often refer to relevant sections elsewhere in that code. The Civil Code may be supplemented by more specific sections in the insurance law dealing with supervisory and prudential matters. Some common law countries have separate insurance contracts laws, and these may supplement a Civil Code in mixed law jurisdictions (e.g. the Czech Republic). Because commercial and industrial insurance usually precedes the development of consumer (retail) insurance markets, the corpus of the insurance law in most developing and many transition markets does not adequately cover B2C situations and such countries often eventually draw on industrial country models. Aside from specifying the minimal contents of an insurance contract (ideally differentiated by the fundamental nature of the coverage—long term, liability, property, etc.) good B2C contract regulations should differentiate between material and non material non disclosure, specify clearly when the contract goes into force (including cover note situations), when underinsurance justifies the application of average, notification requirements when an insurer wishes to cancel or alter a contract, how contracts will be interpreted in the event of dispute, minimum requirements regarding use of plain words, typeface etc and what clauses my not be included (e.g. warranty clauses, compulsory arbitration on the insurer's terms etc). The following list summarizes possible approaches:

- European Countries with separate contracts law—Germany, Czech Republic, Austria, Latvia
- Major other countries with separate insurance contracts law—UK, Australia
- Major countries with Insurance Contracts section in Insurance Law —China, India, US, Brazil, Russia, Canada
- Civil Code/ Law of Obligations only—Italy, Turkey

## *GUIDELINES IN THE INTERNATIONAL LAWMAKING*

As for the formal disclosure, there are some common guidelines:

- Insurers should ensure their advertising and sales materials and procedures do not mislead customers. Regulatory limits should be placed on investment returns used in life insurance value projections.
- Insurers should be legally responsible for all statements made in marketing and sales materials they produce related to their products.
- All marketing and sales materials should be easily readable and understandable by the general public.

- A key-facts document should be attached to all sales and contractual documents, disclosing the key factors of the insurance product or services in large print.

Financial institutions' customers have a right to expect that their financial transactions are kept confidential. The law ought to require financial institutions to ensure that they protect the confidentiality and security of personal data, against any anticipated threats or hazards to the security or integrity of such information, and against unauthorized access. The confidentiality of personally identifiable information, that is any information about an identified or identifiable individual, is protected under several international statutes, such as the Guidelines governing the protection of privacy and trans-border flows of personal data (Art. 2 'Scope of Guidelines'); the UN Guidelines concerning computerized personal data files adopted by the General Assembly on 14 December 1990 (Sect. A, minimum guarantees that should be provided in national legislations);

Further, important statutes are the Directive on the Protection of Individuals with regard to the Processing of Personal Data, 1995/46/EC (Chapter 1, Art. 1-3) as well as the Convention for the protection of individuals with regard to automatic processing of personal data (ETS No.108, the 28 January 1981, Chapter. 1 'General Provisions') and in the APEC Privacy Framework (Part ii, 'Scope').

Technical security is also demanded under the above guidelines and directives, a more detailed guideline on such security has been provided by the OECD Guidelines for the Security of Information Systems and Networks: Towards a Culture of Security.

The use of medical and genetic (biometric) information for the acceptance/ decline and rating of life related risks is now a major area of debate, but is not within the scope of this best practice note.

In further text we will pay attention to the situation in Serbia, which does not have such an elaborated law network as other countries, nor the experience in the area, since it was a part of the Eastern World for many decades and the State regulated pretty much everything.

## *SITUATION IN SERBIA*

## *INSURANCE IN SERBIA*

The main legal source regulating the matter of insurance in Serbia is the Insurance Act. This law in a comprehensive manner regulates the issues of importance of the establishment, management, operation and termination of the insurance company. This is the result of the need to prevent the insurance carried out in the interests of the insurer as stronger contracting party but also to preserve the basic principles of the business.

The growth of the insurance market in Serbia continues as a result of action taken by the National Bank of Serbia. In accordance with the prescribed authority, the National Bank of Serbia has its direct monitoring function focused on insurance business control, intermediates and dealer network. The objective is to establish order and discipline in the financial entities engaged in brokerage and insurance. The most common irregularities observed in the controls are accounting and financial statements problems, unauthorized transfer of agency operations to other persons, record-keeping and conclusions of the insurance contract, but there are others, commonly present in other more developed countries with more sophisticated insurance markets.

The National Bank of Serbia in 2007, in order to develop the insurance market, compiled two laws that control the insurance market in Serbia. As part of the stabilization of the insurance plans is a continuation of the new control cycle with necessary measures of controlling the elimination of illegalities and irregularities, as well as monitoring the implementation of these measures by the controlled entities. One of the problems is that the customers in Serbia are not fully aware of the situation in this area of law and do not know what to expect, do not know what to perceive as unjust or so

## *COMMON ISSUES*

Since the experience in this area of insurance and the law protection is rather small and not particularly extended, it is fair to say that the most common issues have "financial" background or even "managerial" background. We identified following "financial" transgressions of local insurance companies:

- Accounting and financial statements problems – since many people do not possess knowledge of financial background of the insurance, it is obvious that this area would be the most vulnerable in the whole process. The lame citizens are not required to know the financial background and it is often misused.
- Unauthorized transfer of agency operations to other persons – the network of agents and subagents is frequently not clearly visible, and it might have contributed to the bad perception of the insurance policy sellers in Serbia and the high number of refused offers.
- record-keeping and conclusions of the insurance contract – insufficient knowledge in this area leads to "underground" operations of insurance companies

However, there are other problems that have to be addressed and the insured showed, during the last seven years, lots of improved knowledge about the things they can expect. They perception shows an increasing correspondence with the perception of the insured in the more sophisticated countries, with more sophisticated insurance industry.

- A policy would be interpreted in favor of the consumer, in the event of ambiguity allowing for more than one reasonable interpretation.
- Any exclusion within the insurance contract would be measured against whether a reasonable person in the position of the consumer would have expected such exclusion, taking into account the contract's contents, the manner in which it was presented and the circumstances around concluding it. Policy exclusions may have to be drawn to the consumer's attention.
- Insurers should not be allowed to take advantage of the fact that the consumer is unable to understand the terms of the contract being concluded with it as a result of either physical or mental disability, illiteracy, ignorance or inability to understand the language of the contract. This is a very commonplace situation in Serbia.
- Terms of the policy may be ruled as unfair, unjust or unreasonable if they are excessively one sided, contain terms as adverse to the insured as to be inequitable, or if the consumer was misled by the insurance company.
- The terms of the contract must be in writing and in plain language – many insurance companies do not do that, especially in Serbia, but they hide behind the bookie language and phrases
- Exclusions may still be utilized but the exclusions need to be in writing and in plain language, conspicuously presented to the insured allowing the latter a full opportunity to understand their terms – again the same tool with the same effect.

## *DELIBERATE OR RECKLESS MISINTERPRETATIONS*

Where the consumer has made a “deliberate or reckless” misrepresentation the insurer would be entitled to avoid the policy. This means that the insurer may treat the policy as if it did not exist, and refuse all claims under it. This may go further than is necessary to compensate the insurer for the loss it has suffered. It has a penal element to show society’s disapproval of the behavior and to deter wrongdoing. On the same principle, we recommend that the insurer should normally be entitled to retain any premiums paid. By other words, we have the increasing problem of “skilled” customers who lie or lie by omission the same way their Western counterparts do for ages.

## *UNPREDICTABLE DIAGNOSES AND OLD AGE*

There is a problem with the age concern. Many older people have concerns about their old age and fears that they would be rejected in insurance claims or policies, although it is well known that the old people are a motor and travel insurance. Many older consumers are confused about what they need to tell their insurer, particularly in relation to health problems. The effects can be severe for the

individual and also weaken trust in the insurance industry. Several cases reported in discussions where claims had been refused for non-disclosure, even though the consumer had not realized the need to disclose.

Also, there is a problem with unpredictable diseases like the Multiple Sclerosis (MS). The current law in all countries causes particular problems for those diagnosed with multiple sclerosis. Many times the critical illness claims had been refused, usually because early but undiagnosed symptoms had not been reported. But, the unpredictability and complexity of MS, with its wide ranging symptoms, means that insurers are often able to refuse a critical illness payout on the grounds of non-disclosure of incidents which occurred many years before the consumer was aware of any potential that they might have the condition.

When someone is diagnosed with multiple sclerosis it is often clear in retrospect that previous vague symptoms such as pins and needles or numbness were early indications of the disease. However, everyone experiences pins and needles at some stage. Before a diagnosis, few would think that it was an important or relevant issue to tell an insurer.

All of these issues are increasingly commonplace in a country like Serbia and they will increase in volume as time goes by, since the common trend is in every country with the newly established insurance market to follow the same pattern through the years.

## *DAMAGE CLAIMS AND ABUSE OF LIFE INSURANCE CONTRACTS*

Disrespect for the deadlines and time frames, the damage payment and misunderstanding of the conditions of insurance contract are the most frequent reasons of claims of clients towards the insurance companies, in Serbia as well as in the neighbouring countries. In the first 6 months of 2014 there were 4 complaints for the breach of the life insurance contracts, which is 33% more than in the same period last year. The recipient of the claims was the Centre for Users of Financial Services of National Bank of Serbia. They say the majority of the claims referred to the level of offered amount of money as a compensation, for the untimely payment of the compensation and the refusal of payment of the undisputed portion of the compensation.

The situation in Bosnia-Herzegovina and Croatia is almost identical when we consider the percents, about 4% of all breaches of contracts were inside the scope of life insurance contracts. The majority of complaints and claims in Republic of Srpska were about the delay in processing requests and non-submission of papers explain, and in Croatia about the level of offered amount of money as a compensation, for the untimely payment of the compensation and the refusal of payment of the undisputed portion of the compensation and the deliberate delay of making decisions on the level of the compensation.

## *CONCLUSION*

Each year the global economy adds an estimated 150 million new consumers of financial services. Most are in developing countries, where consumer protection and financial literacy are still in their infancy. Protecting the interests of consumers has become an important component of sound and competitive financial markets, particularly in those countries that have moved from state planning to market economies. The public in many emerging markets lacks a history of using sophisticated financial products. Even in well-developed markets, weak consumer protection and a lack of financial literacy can render households vulnerable to unfair and abusive practices by financial institutions—as well as financial frauds and scams operated by intermediaries. At its heart, the need for consumer protection arises from an imbalance of power, information and resources between consumers and their financial service providers, most often placing consumers at a disadvantage (although information asymmetries can run in the opposite direction as well). Consumer protection aims to address this market failure. Financial institutions know their products well but individual retail consumers may find it difficult or costly to obtain sufficient information on their financial purchases. In addition, complex financial products can be difficult to assess, even when all relevant information is disclosed.

It is extremely important to enable and establish mutual trust in the area of insurance. Insurance industry, of course, tends to make more profit, and the insured are interested basically to get the best service and the best insurance (coverage) possibly. But, there is a backlash if the sides try to step over the line and do something that would deliberately break the law in order to increase their profits. They can do it either intentionally or unintentionally, so that they can be treated as persons doing business against the law or otherwise. In case when the insured try to hide or distort the information, it is a job for the insurance company more than to the state or the lawmakers. Otherwise we can say that the state and the lawmakers must make a lost of efforts to prevent mutual distrust and the consumers' dissatisfaction. Dissatisfied consumers talk to their friends. Many customers would not recommend the company to friends and family. Some will talk to the press. And the resulting bad publicity can quickly translate into a lack of sales. In some cases insurers do need to give unwelcome news, and tell consumers that their claims will not be paid. But we think it would be easier to tell the consumer that the law entitles the insurer to refuse the claim (and to justify the decision in the press), than to say that the insurer may refuse the claim under industry guidelines.

A lack of confidence may also encourage consumers "to get their retaliation in first" by acting less than honestly in their dealings with insurers. Many insured would be willing to make an exaggerated or completely made up insurance claim at some point in the future as a measure of retaliation. This is a worrying finding and one which merits further investigation. However misguided such thinking may be, it becomes easier for people to justify breaking the rules to themselves and to their friends if they feel that the rules themselves are opaque and unfair. With no such

protection, mutual trust would be shaken, and it usually leads, in every time and in every country, not only to growing mistrust but to increasing number of frauds, fraudulent trials, and global slowing of the economical activities.

In Serbia, snice the experience in this area of insurance and the law protection is rather small and not particularly extended, it is fair to say that the most common issues have "financial" background or even "managerial" background, such as accounting and financial statements problems, unauthorized transfer of agency operations to other persons or record-keeping and conclusions of the insurance contract. Nevertheless, there are other problems that have to be addressed and the insured showed, during the last seven years, a lot of improved knowledge about the things they can expect. They perception shows an increasing correspondence with the perception of the insured in the more sophisticated countries, with more sophisticated insurance industry. The situation in Serbia will certainly look more like the situation in the West, and the law and acts will probably look more like the solutions accepted in the economies with more sophisticated market and more extended insurance industry.

The majority of claims are therefore rendered justifiable. The insurance companies usually break the period of payment (legally 15 days) demanding from the client some additional papers or data, which is legal but unfair, since the period of payment of the compensation amount is measured from the day when the damage claim is filed.

The main reason for misunderstanding and claims are usually miscomprehension of products or services in the inusrance business, the minor quantity of information that the clients possess and the poor intelligibitily of life insurance contracts. The experts therefore think they should be simpler and re-written. Also, the conditions of life insurance contract should be at the reverse side of the policy, since in the most cases the insured person had not received it at all until the moment of signing the contract, and maybe even after that. In the EU the conditions are written in such a manner that any client could understand them, and it diminishes the number of damage claims. The insurance companies in Serbia will have to do exactly the same if they want to maintain the level of trust they have barely acquired again.

The forecast is therefore positive, since with the clarifying of the conditions, and the stricter conditions, the insurance companies will have less space for evasion of their duties, and the informed clients will be more prone to conclude the contracts that are more favourable for them.

## *REFERENCES*

[1] Convention for the protection of individuals with regard to automatic processing of personal data (1981)ETS No.108
[2] Directive on the Protection of Individuals with regard to the Processing of Personal Data, 1995/46/EC Herring, R. Santomero, M. (1999) What is Optimal Financial Regulation? The Wharton School
[3] NAIC,(2006) Personal Lines Regulatory Framework, September
[4] Tarr, A. (1989) Insurance Law and the Consumer, Bond University Law Review, Vol 1., 1989
[5] The Law Commission and the Scottish Law Commission, Insurance Contract Law (http://lawcommission.justice.gov.uk/areas/insurance-contract-law.htm).
[6] Treasury, Unfair terms in insurance contracts (http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2011/Unfair-Terms-in-Insurance-Contracts)
[7] Submissions by the Australian Law Reform Commission to the Department of Treasury Review of the Insurance Contracts Act 1984 (Cth)

# *THE SIGNIFICANCE OF INFORMATION AND COMMUNICATION TECHNOLOGIES FOR INSURANCE COMPANIES' BUSINESS DEVELOPMENT*

*Ivan Piljan, PhD*[29]

*Dusan Cogoljevic, PhD*[30]

## *ABSTRACT*

*This paper attempts to show the importance of information and communication technologies for insurance companies business development, with special reference to the former development and potentials for further marketing development, and especially to the distribution of insurance products, which relies on information and communication technologies, primarily on the Internet. Internet marketing as the most common form of nternet usage between insurance companies takes a special place in this paper.*

*The coordinating of business processes with the principles of e-banking will be the usual practice even with small companies, and when classical financial institutions, which insurance companies have always been, turn more and more to e-insurance from which, in the near future, regardless of the initial problems and large costs for its introduction, much is expected, and in many countries is becoming more accepted.*

*Mobile communication brings the biggest changes in the area of e-banking. Today its prevalence among users offers various possibilities for the providers. For now, insurance companies do not offer their services through such a special communication channel, but in the near future a change is expected in this area, as there are conditions for such a change today in Serbia. There is information that insurance companies from surrounding countries have already activated their first smart phone applications, while similar applications in the banking area already function in Serbia.*

***Keywords:*** *Insurance, Marketing, Distribution, E-banking, Internet Marketing, Mobile Communications.*

***JEL Classification:*** *I13*

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[29]Ivan Piljan, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, piljanivan@gmail.com

[30]Dusan Cogoljevic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, dusan.cogoljevic@vspep.edu.rs

## *INTRODUCTION*

This paper is involved with the process of insurance service sales as the most important business area of each insurance company. The process is viewed from the perspective of marketing and distribution, and there is an emphasis on the importance of e-Banking, especially the possibilities of Internet appliance both in marketing and in insurance service distribution.

Emphasis is placed on e-Banking in the insurance business and on potential in electronic distribution, as well as the appliance of software solutions in marketing and distribution management, and primarily on the appliance of CRM applications.

In the end, presented is the current range of domestic insurance companies in the area of Internet insurance services distribution through the "web shop" solutions of three Serbian insurance companies.

## *E-INSURANCE*

Electronic insurance or e-Insurance can be defined more comprehensively as the appliance of the Internet and information and communication technologies in the service of distribution as well as production, or in short, in generating insurance services (Živadinović et al., 2011).

In a more narrow sense, e-Insurance can be defined as obtaining insurance coverage in such a way that an insurance policy is requested, offered, considered and, finally, concluded online.

Today, even the delivery of insurance policies, payment or, for example, the processing of compensation claims can be done online, although most countries, at this moment, have no reliable legislation or a developed information and communication infrastructure which could enable a faster development of e-Insurance. There, however, are improvements in this area in some countries, and thus we have a constant upgrading of regulations pertaining to insurance, one part of this legislation pertaining to the regulating of paying and delivery of insurance online.

The expected solutions and changes will enable the development of e-Insurance, as follows:

- They will ensure conditions for more profitable business dealings of insurance companies by reducing administrative and management costs in such a way to speed up certain business processes, improve information management and enable a better connection between services within a company;
- They will ensure conditions for reducing the costs of insurance policy conclusion, as companies will be able to retain the commissions which were disbursed to agents and brokers, considering that e-Insurance will permit the concluding of insurance policies directly with the clients.

Part of the income derived from the commissions should be invested into marketing and attracting clients online.

It must be stated that e-Insurance is significantly less developed in comparison with other forms and types of e-Business, such are e-Commerce, e-Banking or e-Marketing. The reasons for such a state should be sought in the following:

- The nature and complexity of most insurance services, except certain exceptions, is that they are not particularly suitable for mass impersonal distribution, such as online selling.
- The method of estimating the premiums with most of these services is not completely standardized and has its specifics.
- For online conclusion of insurance, it is necessary to exchange confidential information and online payment, which is viewed with distrust by a large segment of the population.
- The legislation is unclear, especially the bylaws which aim to protect the consumers which buy goods and services online, although there are improvements in this area which, however, are not occurring quickly enough.
- Most Internet users are the younger population, which are not the largest group of insurance service users.

A small number of insurance types are suitable for online distribution, those being primarily of an impersonal type or having a simpler or highly standardized way of calculating the premium, which is the case of compulsory car liability insurance, household insurance or travel health insurance (Marović et al., 2009).

On the other hand, we have insurance policies where the assessment of the premium is based on the individual's circumsatnces, which requests an individual approach to each contract as in the case of life insurance, or those insurance types where we need to assess numerous factors which impact the premium, as in the case of industrial property insurance.

Both cases involve insurance types which are unsuitable for online distribution, at least at this level of insurance service development and Internet usage culture known to us today. The solution for such a situation should be sought in forming a precise data base, standardizing premium calculations and simplifying insurance programs.

## *E-BUSINESS MODELS IN INSURANCE*

A larger competition leads to the necessity of seeking new channels for selling insurance services, as well as the need to improve the services offered to all the parties on the insurance market. Thus, applying electronic business as a contemporary way of business organization which involves IT use and especially Internet technology is a prerequisite for better quality management of the insurance company's business practices.

A narrower concept than electronic business is electronic commerce which is related to an exchange of goods and services between customers, agents and salesmen (Živadinović et al., 2011). Despite the specific nature of the insurance business whose basic function is quality risk assessment prior to the conclusion of the insurance contract, as well as an even-handed and appropriate damage compensation if it should occur, the marketing and sales aspects of the insurance business occasionally impact the selection of the electronic business model, which thus is reduced to e-commerce.

An analysis of the impact of e-business on insurance business practices has shown that IT can help increase the number of people insured as well as significantly reduce insurance buying costs, improve offered services and therefore, increase customer satisfaction. However, e-commerce in the insurance sector separated from e-business as a whole cannot meet the mentioned demands all by itself. Therefore, insurers must have a quality information system which will, by supporting everyday business, guarantee services which will improve relations with their customers and business partners. Thereby, especially important is the organizational aspect of introducing the Internet into business. With the increase of internet users, the number of the potential users of insurance e-business is also increased, which in turn demands a new internal organizing of business. By selling insurance online, an increase of the premium is expected, although it also opens the possibility of being extended across the borders of Serbia.

Although the most common insurance company on the market is the classical type of company characterized by a complex organization, a large number of employees and geographically dispersed organizational units, an expansion of insurance companies which use the Internet as the dominant channel of insurance services sales is evident. There are insurance companies which completely carry out their business online, although their offer is limited and in fact, they are specialized to provide certain services by finding reliable market niches. They, however, are not serious competition for classical insurance companies (Piljan et al.,2013, pp. 266-285).

However, certain so-called hybrid insurance companies have appeared, which, with the physical infrastructure and human potential, carry out a particular segment of business online. These companies are mostly formed by a classical insurance company purchasing an online insurance company, or when a classical company develops their business online (Kotler, 2001, p. 5).

The models of electronic businesses applicable in the area of insurance are the following:

- Web pages of insurance companies,
- insurance services windows and
- electronic supermarkets.

Today, there is probably no insurance company in the world without a web page. The content of the web page is related to basic information about the insurance company and the services which make up the offer, as well as contact data. Most insurance companies use the Internet in its simplest form – for displaying the mentioned information and for receiving e-mails, while insurance conclusion in this way is still fairly under-developed (Stojanov, 2010, pp. 25-26).

To create an optimal web site for an insurance company, it is necessary to establish certain strategic goals (e.g. improvement of communication with the existing and potential clients, attracting new clients, etc.), in order to enable an easy approach and loading, determine the accuracy of the written content, create a quality content supported by a high level of graphic design, establish a reliable form of marketing stimulus for the purpose of achieving interaction, as well as constant web site innovation and a quantification of results.

One of the weak points of online selling is the electronic chaos which rules on e-markets, as numerous web pages and information are offered, and potential costumers could become frustrated or perplexed.

This produces the situation where many web sites remain unnoticed or are given insufficient attention. To remove the mentioned weaknesses, there is a possibility of establishing a recognized site where visitors can find all the necessary information related to the insurance business. This is a way of attracting the attention of potential customers which are acquainted with certain forms of insurance services as well as increasing the possibility of insurance conclusion.

Electronic supermarkets are the web sites where independent brokers offer potential customers an insight into the insurance premiums according to certain types of insurance company services, in order to enable a price comparison. Along with information regarding quantity, there is also information which describes in more detail the offered insurance services (Stojanov, 2010, pp. 146-145).

## *CRM IN INSURANCE COMPANIES*

According to the business philosophy of a consumer society, a competitive advantage of a manufacturing or/and service company is acquired by offering diversity where Customer Relationship Management (hereinafter: CRM) plays a key role. CRM becomes a strategic entry into insurance due to the fact that it involves the system to which strategy, organization and business culture adapt in order that every contact with the clients may lead to satisfying their requests and needs, and thereby also to a long-term increase of profit. Among the factors which have led to the development and appliance of CRM in insurance companies are growing competition, a change of sales strategy and changes in customer behaviour (Živadinović,Medić,2011).

CRM ensures for the employees working in insurance customer data from the entire business area as well as creating a virtual space in which agents, insurers and insuring companies work together. Therefore, an interaction with the clent by way of any business channel is enabled, and at the same time giving the tools and data necessary for a value assessment of every contract.

The market functions as a common platform for all virtual business communities. Services adapted to client and business partner needs can be created, thus improving relations with the client and partner. Furthermore, productivity is improved, and losses in data flow between the partners are eliminated, the need for planning and predicting is simplified, and with complete privacy and security through the online stock market, purchasing, selling or participating in the mutual business project is enabled.

It could happen that the same customer may use different channels, depending on the situation. A solution for CRM in the case of insurance organizations may be that all functions which are required by potential clients can be carried out by using some of the existing communication channels (call centers, the Internet, agents, branches).

A Customer Interaction Center gives insurance companies equally adequate technical support for e-mail communications, fax machines and letters, and the traditional way of telephony communication. This means that clients can be offered the services of a contact center which has all the needed current information enabling an optimal provision of services. CRM facilitates a complete managing of the premium and insurer applications, designed in such a way that there is a possibility of using all channels for customer contact. In other words, it is possible not only to make contact between the call center agents or field representatives and the customers, but there is also a possibility of online contact between customers. The application created in such a way could be applied directly in the work process, or set aside for further processing.

If certain settings are put into place and sufficient information input is provided, then it is possible to directly send a request to the policy generator, and in such a way, the complete procedure is completed at the sales point (Martinović, 2010, p. 56).

## *THE INTERNET AS A COMMUNICATION CHANNEL IN CRM*

Except for insurance service sales, the Internet can also be used for an exchange of information related to tort claims. An efficient and proactive dealing with tort claims minimizes costs and improves service delivery to customers, and provides the security officer a direct access to a variety of services (e.g. machine and car repair and maintenance), with which insurance companies and their partners gain the possibility of offering assistance to their clients (Martinović, 2010, pp. 160-167).

The Internet is not just a new medium of product distribution. It is also considered that the Internet will affect the service sector as much as production lines had industry. The claim that the Internet represents a final solution for the distribution of insurance products is far from the truth. In fact, the Internet represents a solution for expanding insurance product distribution channels, but only the simplest product types which need no further explanation from the insurance agents or financial advisors. Furthermore, the role of these professions must not be neglected. The fact is that customers will always choose distribution channels dependent on personal affinities and needs. In the world of the Internet, no one can own the customer, as today customers possess a high level of awareness and consciousness about what they want. The positive side of the Internet is that it is a driving force for building complex business models which integrate in themselves all distribution methods, which in turn facilitate a direct processing of insurance policy administration and tort claim management and in such a way also enable a big reduction of business costs. The leading global insurance organizations have invested billions of dollars in electronic business strategies. The most successful organizations are the ones which exploit and direct investments in the most effective way. Until now it has been the case that the Internet should be used for a re-engineering of business processes, to increase and incite the existing distributing channels, as well as create new distribution models (Sally, 1995).

## *SPECIFIC CRM APPLICATIONS IN INSURANCE*

Today, when there is a domination of the development of IT and the Internet in all areas, the focusing of insurance companies on the client is more important than ever. Approaching clients and an efficient response to their needs is the best way to gain their loyalty and encourage inherent business relations and extend cooperation, and thereby it is a better path to success than price reduction and productivity increase. Customers have various possibilities to purchase policies and communicate with their customers, which they can do through direct communication with their insurance company or broker, or communicate online via web page. Regardless of the possible methods used, it is obvious that clients request multiple channels through which they can communicate with their

insurance providers – including face to face contact, phone communication, web pages, e-mail, cell phone, etc.

A new business climate has elevated the role of CRM technology to a high strategic position in the insurance industry. CRM technologies are focused on the management of all interaction between insurance organization and their clients, as well as managing the information and data of clients which are used in different business applications. CRM applications vendors are in a singular position to make money with various customer service possibilities. The insurance companies are aware that if they fail to invest in adequate customer service, they will lose their clients to the competition. There is a whole range of CRM applications to choose from. The problem is that the CRM market – just as in the definition of the CRM term – is so wide that all kinds of different software products are under that domain. For example, sales and emphasized automation, marketing analysis, e-mail response, personalization and customer service are valid fields of application, which are the diversities of CRM applications on the market, which is operated by one or more of these functions. Customer services, however, is a priority for numerous insurance companies. Until numerous CRM technologies can manage the range of applications, including sale automatization and marketing analysis, those managing applications of customer service deserve special attention as the focus of communications with the client is connected with the insurance businesses (Živadinović, 2011, pp. 132-138).

Customer service is considered a challenging field of action, especially when the communication channels with clients have been expanded to face-to-face communication or communication via the phone to automatic telephone lines, the Internet, fax machines, e-mails and even wireless devices and IP communication.

Numerous insurance companies have significantly developed customer services – from the call centers to a "virtual contact center" which manage numerous contact channels in an integrated form. The goal is for the client to have reliable access to multiple channels, and for the insurance company to have an insight into all communication with clients and data history. Call centers are business environments which provide access to their users to all needed information, and at the same time process all new requests, and not only policy applications or claim requests. The client may need to access stored files, policy information, invoices and other information which can be stored into different "back-end" systems and data bases, which enable clients to help themselves in obtaining needed information.

CRM applications can help insurance companies to better meet their client needs, allowing them or their representatives access to needed information, whenever they need it and in way they choose. Customer service is more a comprehensive process applied in multiple e-business applications than an isolated process. The success of this process depends on how well CRM application allows the insurance company to change process activity according to new market trends, new client requests and the needed changes. From the CRM, perspective this

customer service should be carried over into a wide variety of functional requests, including the following:

- Support for multiple contact channels with the possibility of creating an integrated awareness of client needs through all channels – From the service user perspective, it is important to have awareness of client needs. This means searching for various channels over which the client can interact with the service, understanding every point of the needed information, searching for the current status of unsolved requests and reporting on realized contacts. With an integrated observation of the client, the insurance company can provide an adequate service and meet client needs, no matter which combination of interactive channels the client has chosen.
- Client self-service support – Many clients prefer to find the needed information by themselves, rather than communicate over customer services. These clients seek access to numerous contents so they can find information on their own. Some of the most visited contents for such purposes are the following: internet forums which are involved with the most common questions in insurance (FAQs), checking client liabilities in regards to the insurance company, as well as their claims, data overview of policies and other supporting documents. Providing abundant qualitative contents available to clients by way of direct data exchange or self-service, insurance companies can via customer services better access client needs. Numerous CRM systems provide a central online database as a support to client self-service, while others are based on integrating different "back-end" systems which exist inside insurance organizations.
- The integrating of "back–end" systems with content and data bearers – The contents which clients can seek are occasionally stored into different systems or content and data bearers. A good CRM solution should provide the integration of all information in order to enhance client access.
- The ability to automate the requested customer service business processes – While many call centers already use technology to manage incoming calls and routing in order to efficiently manage incoming calls, these possibilities must also be provided for multiple electronic contact channels which clients may choose to use. A good CRM system should provide a unique mechanism for the automation of customer service processes and functioning through all channels.
- Personalization - CRM applications provide all clients with the contents connected with their current activities or navigation. For example, a client who has recently moved and is seeking a new household insurance policy should be presented with the offer of a life insurance policy. Accordingly, personalization provides for the insurance companies multiple access to clients, which creates new income by increasing sales through service cross-selling.
- Detailed reporting and analysis – These options enable insurance companies to have an impact on the information contained in their "back-end" systems as well as in the CRM system, and identify key data such as client wishes, demography, tendencies, averages – all data which may be important in personalization and marketing.

## *IMPLEMENTATION OF CRM SOLUTIONS*

In the manifold existing CRM applications, sorting is a long-term process, but it is even harder to determine the best applicable solutions. The CRM environment changes on a daily basis, due to the fact that different activities on joining and acquisition of the organizations from the mentioned area occur every day. However, a consolidation of this market is expected in such a way that CRM applications manufacturers are to expand the functionality of those products in the sense of personalization and management of client available content.

At the same time, CRM appliance does not mean obtaining benefits only for usage of advanced technology, but also for the developed strategic infrastructure needed for successful e-business. Thus, CRM software will continue to develop from specialist solutions for e-business support.

As a result, software manufacturers for e-commerce have already extended their programming platforms, implementing CRM abilities. These opportunities are still modest and require knowledge of numerous different systems.

Paying attention to CRM tools needed for customer service appliance in insurance organizations becomes crucial, as they endeavor to completely comprehend client needs (Živadinović,Medić,2011). Do you simply wish to save client contact information and find out the sphere of their interest while using some of the multiple communication channels? If the used communication channel is preferred for the mentioned reason, most CRM products can be managed. This kind of approach limits the ability of a company to pay more attention to its clients during their access to the contents and self-service.

Occasionally, insurance organizations are required to possess advanced abilities such as content publishing, personalized presentations and the ability to provide customers with self-service access to the archive where they can find a chronological list of all the needed documents. Today, most CRM applications do not offer a sophisticated way of offering leading products for content management. It is understandable when CRM vendors are more focused at supporting new communication channels, such are wireless communication, than at content management (Vujicic et al.,2013, pp. 108-125).

Just like insurance companies are focused on rendering a better service to clients, they should also create their e-business strategy in the same direction. The realization of such a CRM application provides only another of the many applications in which the same content and data can be crucial for meeting client needs. This is the reason why numerous insurance organizations still do not position their customer service in the same context with their total e-business strategy, although they should.

If the insurance company is serious in the intent to integrate customer service in their e-business strategy, they should also be ready to integrate different technologies with their CRM solution. For example, e-business systems contain management systems and the enterprise application integration (EAI), which

represents an important part of e-business architecture, though CRM packages do not provide the same range of possibilities. In the following period, there will be an increase of supply on the e-business technology market, and thereby the offer on the CRM product market will be improved also (Sally, 1995).

## *INTERNET INSURANCE DISTRIBUTION IN PRACTICE*

The Internet, as a distribution channel of insurance services, has a bright future and a great potential for further development, although it is under-developed in most countries today, and especially in Serbia.

There are numerous reasons for that, the most important being the following:

- A monopoly on the e-banking market and a privileged contract of the only e-banking service in Serbia and one insurance company, as well as the high price of this service,
- An insufficient development of a quality (broadband and mobile) internet approach,
- A reduced solvency of the younger population, who tend to use e-services,
- Technical limitations in tariffs and contracting of most insurance services,
- An insufficient investment of insurance companies in this distribution channel.

The result is the following: only three insurance companies have, until today (March 2013), offered to Serbian citizens online purchasing of insurance services.

The hitherto results in online distribution of insurance services in Serbia are modest, though they are improving constantly. With the economic recovery of Serbia, an increased interest for this distribution channel is expected by the customers and the insurance companies, supported by the development and introducing of numerous Internet services which have no direct links with insurance, such are e-Government and various services being introduced, such as the following:

- Online tax returns,
- Ordering of personal documents,
- Meetings scheduling in various state administration bodies, and
- Scheduling of medical examinations, etc.

The popularizing of a range of Internet services in various areas of life will necessarily lead to the requests of potential customers to purchase insurance services via the Internet, and it is certain that insurance companies will compete between themselves to satisfy these needs.

In Serbia, we are just now starting to introduce these services, and their demand is very modest. The fact that three insurance companies offer this service

is more a matter of prestige and a marketing approach than a real market need and an economically appropriate investment.

At the moment, the following services can be purchased online:

- Travel health insurance (the most massive insurance service arranged online),
- Household insurance,
- Roadside assistance, and
- Mandatory boat insurance.

It should be mentioned that only one insurance company offers all the mentioned insurance services (Delta Generali Osiguranje), another insurance company offers the first two services (Uniqa Osiguranje), and the third company offers only travel health insurance (Dunav Osiguranje).

It should be considered that not all insurance services are suitable for online policy purchasing, such as classical property and life insurance, but there is no reason not to offer to the Serbian market accident insurance and auto liability insurance services, something which is already common on some other regional markets, such as the Slovenian or Croatian markets.

Due to the changes in auto liability insurance and the introducing of a central database by the Association of Serbian Insurers, in the near future we can also expect the online distribution of these policies. This would be a very significant step for the popularizing of the Internet as a distribution insurance channel in Serbia.

## *WEB SHOP INSURANCE SALES IN SERBIA*

Web Shop is an online shop and it is basically an Internet application which provides every person with Internet access to order and then purchase goods or services online which will be delivered to the required address.

Because of its nature (intangibility), selling services through the Web Shop is more optimal than selling goods. Insurance services have an advantage as well, although not all of them, only those which meet the requested criteria - for example, those which are not too individualized. These criteria are met by the following insurance types:

- Travel health insurance,
- Household insurance,
- Roadside assistance,
- Boat insurance,
- Insurance against accidents, and
- Auto liability insurance.

## *CONCLUSION*

Considering the current level of the development of insurance in Serbia, it is realistic to expect a drastic increase of business in the future. This, however, will demand certain changes in the insurance company business in almost all areas, and the biggest change will be regarding the relationship with clients. This will proceed into two different directions: the individualization of insurance services and adapting to their individual needs on one side, and a mass distribution of highly standardized insurance services through the channels of electronic distribution, on the other. In both cases, insurance distribution has a key role in the development of overall activity.

For that reason, the channel of direct insurance sales, among which the most important are bank insurance, agents and brokers, remains an unmatched channel of distribution and can never completely be replaced by electronic channels for individualized insurance services. On the other hand, we have electronic distribution channels and the Internet as the most important and most promising among them, of which much is expected as they offer good coverage and low distribution costs, though the introduction and initial exploitation period costs are quite significant.

The meeting point of these two entirely divergent ways of insurance distribution is CRM (Customer Relationship Management), which should provide good insurance coverage by direct sales, and add to electronic channels a dimension of individualization in the interaction with customers. Good quality and comprehensive CRM systems are not over-represented in insurance companies in Serbia, primarily due to high prices and lengthy implementation, but the advantage of their usage is obvious, and thus their implementation is a necessity.

We have already said that the Internet as an insurance distribution channel has great potential, but it is very rarely used by domestic insurers, first of all due to economic reasons (the number of clients with purchasing power which belong to the specific segment) and technical reasons (the expansion of broadband Internet access), but there are visible changes. For that reason, three domestic insurance companies (Delta Generali, Dunav and Uniqa) provide online insurance purchasing to their clients. The sales results have been modest and have not yet justified the investment, but their introduction is without doubt a matter of prestige and we can also partly view them as investments in marketing and promotion.

Introducing electronic distribution channels into insurance sales, and especially the Internet, reduces the difference between “small” and “big” insurers, and also between “small” and “big” clients, so it can be expected that online competition between insurance competitions may lead to a commercial war, which may be good for customers though it is very probable that the Serbian insurance market will have to wait a while for such a development.

## *REFERENCES*

[1] Kotler P.(2001): Marketing management, Analysis, Planning, Implementation, and Control(Upravljanje marketingom, analiza, planiranje,primena i kontrola), Zagreb
[2] Martinović M.(2010): Nadzor zasnovan na proceni rizika, Ekonomika, vol.56. no.1,160-167
[3] Marović B., Kuzmanović B., Njegomir V. (2009) *Osnovi osiguranja i reosiguranja*, Princip Pres, Beograd
[4] Piljan I., Milosevic B., Vujadin N.(2013) ,,Possibilites for development of life insurance market in Serbia,,The Second International Confrerence,EMPLOYMENT, EDUCATION AND ENTREPRENEURSHIP, Belgrade, Serbia
[5] Stojanov A., Ugrinov D., Vaić E.(2010), Finansijska revizija javnog sektora - osnova za aktivni poslovni ambijent, Tranzicija, vol. 25-26, 146-155
[6] Sally D.et al.(1995) Marketing, Zagreb
[7] Vujicic S., Baranenko E., Prljic S.(2013) ,,Innovations in the function of developing competitiveness and efficiency in the Republic of Serbia,,The Second International Confrerence,Empoyment,education and entrepreneurship, Belgrade, Serbia
[8] Živadinović J.,Radovanović S., Medić Z.(2011) *Elektronsko poslovanje*, VŠPEP, Beograd
[9] Živadinović J., (2010) *Poslovna informatika*, VŠPEP, Beograd
[10]Živadinović J., Medić Z. (2011) *Menadžment informacioni sistemi*, VŠPEP, Beograd

# *CREATION OF THE POLICY FOR DISTRIBUTION OF THE INSURANCE SERVICES*

*Katerina Angelevska Najdeska, PhD*[31]

*Snezana Dicevska, PhD*[32]

## *ABSTRACT*

*The policy of services distribution in the area of property insurance and personal insurance, or their organization within the marketing instruments wider, occupies a special place. Business decisions for distribution of insurance services basically are strategic decisions that determine the placing holders. They are in general long-term variables, but with extremely high costs, which means a large engagement of capital and human labour. The great importance of the distribution policy for insurance services (in property insurance and personal insurance too) arises from the specifics of the insurance "products" (services) and also from the different characteristics of the insurance subject/object.*

*The placement of insurance services is always correlated with the creation of the services (or usually the distribution of the services precedes theirs creation), which is one of the characteristics of insurance services. Considering that insurance operates on the principles of reciprocity and solidarity and by using the law of large numbers, it gives special impetus for intensifying the placing of the insurance services.*

*One of the important aspects of the distribution of insurance services is to equalize the calculative risk, so the policy of services distribution in insurance companies takes a very important place. At the center of attention of the policy of services distribution in insurance and reinsurance of property and persons are the following key questions: which structure of the placing is best to be operationalized? and By which organizational units for insurance and reinsurance services (for property and persons) the placement would be most efficient available for the insured?*

*This paper elaborates the basic concepts and practical aspects of the policy creation for the distribution of the insurance services.*

***Key words:*** *Policy of Distribution, Insurance, Insurance Services, Insurance Services*

***JEL Classification:*** *G22*

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[31]Katerina Angelevska Najdeska, Faculty of tourism and hospitality, Ohrid, Republic of Macedonia, k_angel_naj@yahoo.co.uk

[32]Snezana Dicevska, Faculty of tourism and hospitality, Ohrid, Republic of Maceedonia, sdicevska@yahoo.com

## *INTRODUCTION*

The insurance is specific financial activity that is important for both the insured and the insurer, also for the economy as a whole, and for the entire social community. The insurance market, as is the case with other financial markets, has long been influenced by financial deregulation and liberalization. As a result of this trend, insurance companies face increasing competition not only from other insurance companies, but also from other financial institutions, primarily banks that offer substitutes of life insurance (bank accounts, term deposits and investments in securities) are becoming increasingly oriented towards its customers and their needs. In such a dynamic financial structure one can recognize the direction of financial institutions competing for extra profits in the international market, which led to the transformation of financial institutions in developed and some transition economies. Bank-oriented financial companies dominated by bank function of collecting savings deposits are transformed into market-oriented companies with emphasis on offers from other financial intermediaries such as insurance companies or pension and investment funds.

In these emerging circumstances, insurance companies should not be passive observers of these processes. Their role as financial intermediaries forces competition with other investors, such as pension and investment funds, and the banks that collect deposits from households. Therefore, insurance companies are not only faced with demands for modernization of their products by applying technical innovations, but more importantly, the need for optimization of distribution channels, as would come out ahead of the competition in narrow terms (sector insurance) and a broader sense (financial system). Therefore, the need for re-examining the factors of efficiency and competitiveness of insurance occurs, primarily of reviewing corporate strategy or product strategy and distribution.

## *DISTRIBUTION WITHIN THE INSURANCE MARKET*

Insurance is highly responsible economic and social activity. It shares the fate of the overall social development and standards of the population. The core is in its high degree of correlative dependence on social product and demand or the purchasing power of the population. Its dynamic growth or decline is measured by moving the premium up or down. The increase in gross domestic product increases demand for life and non-life insurance, but in case of its failure, companies and people will give up insurance because it is not urgently needed, and may be delayed for another time, neglecting the effects that may arise on this basis.

Changes in the market structure today are moving faster and deeper than before. New foreign competitors are penetrating national and internationally integrated markets. Current regional and national borders gradually yield to the blows of the competition which is to win the insurers. These eloquently tell us

about the evolutionary changes coming from the inner expansion of the European Union. National insurance company representatives, agents and agencies offering services related to insurance must continually assess their initial position and in line with future changes in the insurance market and its surrounding modify their courses in business. Insurers with their expectations in the future will increasingly be a measure of economic performance and business performance of insurance companies than before. We will not be satisfied with the conclusion that the insured is offered something which insurance company believes could easily serve, but what the insured wants and possibly at the lowest cost (Farny, 1994).

The following key strategic issues are those that insurance companies are continually faced with:

- Should they limit their activities to a national market or should they commit to present themselves as an international provider of life and non-life insurance?
- How to implement current competitive advantage by properly positioning the group of contributors, users of insurance services, and their distribution policy?
- How is the current size of the companies setin terms of changes in the national economic system and market of the European Union?
- How trough collaboration in services, insurance and / or distribution can win greater market potential and improve business revenue per insured?

How an insurance company wants to be profiled in future market of life or non-life insurance and reinsurance?

It matters that questions are quickly asked than is possible for them to give accurate answers and arguments.

With the new market conditions a great challenge stands before insurance companies. It provides opportunities and risks with long consequences. The market concept of insurance companies in the first place will find satisfying current and future desires and interests of the insured, but in accordance with the terms governing the insurance market and its surroundings. This for the insurance company would be a real roadmap for building an effective and efficient market competence to resolve the problems of insured and sensitively, but also to respond quickly to extreme changes. Business insurance practice shows that future markets will play a greater role on the needs of the insured and the other in the creation of important competitive advantages. In a very concise form said, this means that there is a question of understanding the insurance market and its surroundings, and even less thinking on the basis of strategic management-marketing of insurance.

## *IMPORTANCE OF DISTRIBUTION*

In the past few years become increasingly apparent that the financial services industry is shaped under the influence of a smaller number of well-defined external initiatives of change, primarily due to increasing consolidation and globalization, social and political changes, changes in the attitudes of customers and rapid development of technology and development in distribution models.

The method of placement of insurance services also changed so that insurance companies today are no longer classical insurance companies with great organizational chart, a large number of employees and physical locations that are situated broadly.

Successful insurance companies respond quickly to adapt its distribution network to modern requirements. Above all, you must take into account the purchase of insurance services by customers that are more and more informed and increasingly expect when it comes to benefits and revenue yielded by the insurance. In addition, legislation going along with the insurance is becoming more flexible and encourages innovation, in particular the possibility for integration of insurance companies with financial and non-financial institutions. Competition in the market for insurance is becoming increasingly more severe and more numerous. Insurance services are offered not only by insurance companies. Insurance of interested customers becomes more accessible with the help of: banks, investment funds, e-brokers chain of hyper and super markets or car manufacturers.

In insurance services, distribution channels exist to complete or facilitate the exchange between the insurer and the customer. In this role, the channels of distribution provide information on service and processes for existing and potential users of services and mutual service options, for example, collection and maintenance of contacts and information of damages for potential customers.

Two generally accepted channels of distribution are possible: direct channel of distribution and indirect distribution channel. It makes sense that the segment of customers that the company wants to conquer is influenced by the design of service system of the company, but in order to find optimally designed system of services we need to find answers to the following questions, (Gilonietal., 2003).

- What services will be offered;
- Which services should be available to different segments of customers;
- Which channel should perform the necessary service for each of the different segments of buyers;
- How to optimally allocate resources to different channels;
- How to gain operational efficiency and effectiveness;
- How to use information technology to carry out service operations in a most efficient way.

Theory and practice in the insurance know many types of distribution channels through which insurance services are placed.

# *POLICY FOR DISTRIBUTION OF SERVICES IN THE INSURANCE AND SELECTION OF SYSTEM FOR SALE*

Policy for distribution of services within the property insurance and personal insurance, or its organization within the marketing instruments in a broader view occupies a special place. First, the distribution policy decisions represent a choice of certain carriers, strategic decision. They are, in general, long-term variables, but with extremely high costs, which means a significant commitment of capital and human labour. Second, the great importance of the policy for distribution of insurance services to personal and property insurance is resulting from the specific insurance "products".

In making its own ranking system of insurance services for personal and property insurance, the first question arises, whether its ranking should be accompanied centralized or directly (strategic level management and leadership) in the insurance and reinsurance companies or through network point of sale (branch, office, representatives, etc.) to be as close as possible to the insured. The empirical results of the business practices of the market in developed countries shows, that most companies for this very important activity are choosing decentralized system of distribution. Mostly less fulfilled are "activities of procurement, many insurers that allows emphasizing the importance of decentralization of distribution alternative provider of this kind.

Regional distribution and proximity of the insured, primarily in personal insurance, is of great importance. Many insurance and reinsurance companies, based on this tendency persist to cover insurance market with spatially dispersed network stimulated distribution. It includes the main Office, Directorate of branch offices, dealers, subsidiaries, representatives and others (Delisel, 1981, pp. 155).

Strict definition or how to set up hierarchical levels between the insured and the central office, the decision can be individually made only from insurance and reinsurance companies.

These issues in organizational structure and bonding of organizational network can be found in a wider step toward realizing the organization of placements for insurance services to individuals and properties. It defines and establishes which things are shifting place and what responsibilities they have. How the insurance and reinsurance of property and persons is higher, so is important to an organization to establish separate hierarchical levels of management or placements. Insured or insurance groups become more and more measures for the organization. The future of insurance and reinsurance of property and individuals will increasingly be filled by demands of technology and management objectives in the formation of the organization, so that they will increasingly dominate the space.

Insurers give special value of communicating with individual agents, but at the facilities of insurance and reinsurance companies. They showed a great interest and not expect to go from employee to employee but have a responsible interlocutor with whom they will interact in insurance companies. These views were supported by the fact that the insurer should have all relevant information about the insured and contracts, and to be able to provide specific information and good suggestions.

Modern technologies of data processing and communications allow companies for insurance and reinsurance of property and individuals, for an acceptable cost to provide business advice to the insured, and on that basis they would acquire a special trust, as well as the internal and the external services. A number of representatives offer cooperation with companies for insurance and reinsurance of property and individuals. However, the expert system is emerging as a tool to ensure high level of quality to provide advice to the insured, but also as a unique tool to efficiently accomplish the tasks of strategic and operational management of the companies for insurance and reinsurance of property and individuals, such as processing and calculation of damages, so that in the future that will play a major role.

## *TYPES OF DISTRIBUTION CHANNELS*

When choosing distribution channels particular impacts have the costs and the satisfaction of the insured by the method of providing insurance service. Channels are divided into traditional and new forms of selling insurance services, whereby the first incur higher expenses (cost), and the second are challenged by the quality of information on insurance (Jeynes, 2002)**.**

## *TRADITIONAL CHANNELS OF DISTRIBUTION*

Insurance companies under the direct channels sell insurance through their own organizational forms directly within the insurance company through insurance agents (representatives), as well as through insurance brokers. Agents (representatives) can be dependent and independent specialists selling certain kind of insurance for the targeted market. Their advantage is that they have good knowledge of the targeted market, and their aggressiveness positively affects the promotion of certain types of insurance. Independent agents in recent years are the most appropriate channel for distribution of life insurance. Brokers are independent from insurance companies and engage occasionally. The direct way of selling has long been the only option for the largest insurance companies, primarily because each company bears the costs, because capital provided for the development of this channel must be drawn directly from the funds of the company, and problems also can occur in the recruitment and retention of quality sales staff.

Direct channel of distribution - means that insurance company in a direct contact with customers is selling their services. By this channel of distribution the insurance companies concentrate on building a direct relationship with its consumers, as opposed to building relationships with insurance agents and insurance brokers. Therefore, this distribution channel is known as a direct marketing relationship (Kotler, 1999, pp. 778).

In order to be successful, a direct distribution channel must first attract the attention of buyers, to describe the service that is being offered, with the ultimate aim to arouse interest or purchase service.

The media used for direct distribution are also used as promotional tools from the company and agents. In that case, direct marketing relationship serves as a support to theother distribution channels. Insurance companies that use this type of distribution are using various types of media that would affect potential buyers. These are:

- Direct mail, printed media;
- Telemarketing (sales over phone or fax);
- Internet and other on-line services;
- Interactive television.

Regardless of whether insurance companies use direct distribution channel as a single channel of distribution or in combination with other types of distribution channels always this kind of distribution offers a multitude of advantages of which the most important are (Kotler, 1999, pp. 778):

- Allows you to distribute services that are not appropriate to be sold through other distribution channels;
- Provides an efficient way to conquer your target market;
- Enables you to be price competitive;
- Allows direct control of the company;
- Improves quality of service and customer relations.

The main disadvantage is the large cost of sales that exist in this way of selling insurance. The reason why insurance companies use this method of distribution primarily derives from the characteristics of the insurance service and target market to which the company is oriented.

Distribution channel trough agents - Insurance agents specialize in certain types of insurance for the specific market that is not always covered by company organizational forms. From the volume of work carried out by the insurance agent depends the amount of commission received. Their advantage is that they know all the good features of established markets and its positive influence of aggressive promotion of a particular type of insurance. Most agents are independent contractors, but they can be employed in any ordinary agency or insurance company.

Distribution channel trough brokers - Although the broker serves as the agent of the insured, he usually receives compensation in the form of a commission by the company. The fact that the broker is the agent of the insurer means that he has no power to bind the company. Broker generally represents business from customers, and then conducts business with the insurer (insurance company). Brokers represent a significant segment of the insurance marketing mechanism, especially in large cities where they control large segments of the market. In some cases, agents act as brokers, providing coverage through agents for the companies they don’t represent.

## *NEW DISTRIBUTION CHANNELS*

The insurance market is experiencing transformation the last ten years, which is caused by the emergence of new distribution channels that made a significant change in the way customers buy their insurance services. The term new distributor to market insurance is used for new, successful distributors who have set out to win new customers thanks to the sale of insurance contracts. As dominant new channels we can mention (Chartier-Kastler, 2001):

- Car manufacturers who no longer want to just sell cars, but services as well;
- Chains of wholesale and retail super and hyper markets which extend its offer of insurance services;
- Integrated financial companies with a large portfolio of clients and a large sales capacity;
- The Internet.

In order to sell to its customer's insurance products, new distributors are using some advantages compared to the traditional insurers: the strength of the brand, the frequency of contacts with customers, marketing knowledge, and commercial knowledge, knowledge to develop and deploy service packs that include insurance. New distributors are often on the market in a different way which means insurance and new services. No price war, but competing in other ways, particularly in the quality of service. These new distributors have the capacity to enter into many agreements on all continents. Of course the insurance activity was not developed by all, but only those who find a way to fully integrate insurance service with the new product or service. New distributors use different models that are integrated to varying degrees.

New channels of distribution can provide greater coverage of the market at lower costs related to insurance, but should also take into account that these distribution channels, which are not an integral part of the insurance companies, cannot be controlled, that can lead to, despite the low prices of distribution, take the risk of its founders. One possible solution for those who want to stay on the market is keeping the traditional channels and the introduction of new channels of distribution, regardless of the initial cost and uncertainty.

Banc insurance - Traditional barriers between banking and insurance are increasingly lost in the last few decades. This phenomenon is a result of deregulation and liberalization of the financial services market, and the emergence of giant financial companies able to provide a wide range of services ranging from conventional banking, investment by working with securities and asset management, all the way up to offering insurance services.

At the same time, there are significant changes in the preferences of customers in banks and reduced participation of classical and savings deposits, which was the traditional core of the potential and profitability of banks that manage their clients' money.

The benefits of Banc insurance for banks can be seen in the increased revenue in the form of commissions or profits (depending on the type of engagement), reducing the high fixed costs of operating branches and the ability to increase employee productivity. Banks through Banc insurance provide additional and stable source of income, as well as perform diversification that reduces reliance only ondifference between lending and deposit interest rates as the main source of income for the bank. Through sales of full range financial services increases the degree of retention of customers, and it is possible to place special services that are "made" by the customer lifecycle.

The benefit of banc insurance for insurance companies is seen by the fact that it allows them to expand their grasp of new clients or customers of the bank, in areas where the insurance company had its presence, and the bank has its business units. Thus the insurance company does not have to build its own network of insurance agents that require a lot of money and time. We should not neglect the specific reasons, such as demographic as customers of banks are completely different population segment (by age, gender, and buying habits) in relation to that insurance company had. Banc insurance enables insurance companies to expand their range of services to offer insurance through bank distribution channels or place their services that are not suitable for traditional distribution channels of the insurance companies. Relationship with the bank provides the insurance company with relatively favorable conditions to reach additional capital, and the development of new insurance services for the insurance company is very efficient if it makes it with the bank as a partner.

Internet distribution- The Internet allows companies to deliver high quality information to a large audience in a way that was previously unimaginable, at relatively low cost. These features make the Internet a powerful channel of distribution. In the financial sector, Internet marketing is facing some difficulties, primarily due to differing national regulations and legislations. A very important aspect is to provide security in Internet transactions, especially in Internet financial transactions because these transactions contain many important and sensitive data. The effect of e-business is subject to intense debate in the insurance sector. New Internet insurers are in the process of implementation of new features for a new way of work provided by the new technology and business models. Many already existing insurance companies are in the process of restructuring their business model towork by establishing new online services that allow the sale of insurance services through the Internet.

## *DISTRIBUTION CHANNELS IN REPUBLIC OF MACEDONIA*

The distribution of the insurance services in Macedonia went through the traditional network of channels, meaning through agents and brokers who continued to be today's largest suppliers of insurance (44%), as in most European countries.

The direct sale in Macedonia takes up 45.69% of the gross insurance policy premium, which is more common in the non-life insurance, because for these products it is the second largest distribution channel by the intermediaries.

*Table 1:Distribution channels in Macedonia*

| Distribution channels | **%** of gross policy premium |
|---|---|
| direct sales | 45,69% |
| brokerage companies | 20,71% |
| tourist agencies | 0,52% |
| banks | 1,00% |
| insurance companies | 4,55% |
| Car Dealers | 0,44% |
| Insurance agents | 23,12% |
| Other distribution channels | 3,97% |
| Total | 100,00% |

But unlike the European insurance, in Macedonia the Banking insurance is not represented enough which is most often a channel for life insurance in the EU. The impact of customers demographic features as well as the purchasing power, dictates weak sale of life insurance. However the insurance in Macedonia is unsatisfactory even for the countries of the region, because the growth of the economy is small and therefore the insurance industry itself, despite the steady growth of the life insurance.

## *DISTRIBUTION CHANNELS IN THE EUROPEAN UNION*

The European market for non-life insurance is dominated by intermediaries (agents and brokers). The Banking insurance channel remained at low level in the non-life insurance, but dominates in the life insurance at the markets in Europe. Europe seems to be the most developed in terms of banking insurance in life insurance, but this channel has begun to spread to other areas of the world (Asia, Latin America).

The development of new distribution channels, along with the retention of traditional networks as agents and brokers, imposed the insurance companies with a need for implementing multichannel strategies to attract more customers. These strategies are necessary due to the increasing instability of the purchase by the customer.

In the last years the banking insurance, along with the growth in life insurance is more dominant. However, the UK market, where the purchase instability is generally higher shows that new channels can prevail in many sectors of the insurance market.

## *INFORMING THE CUSTOMERS AND DISTRIBUTION*

Insurance products are sold in different ways and different markets in Europe. From this diversity of the distribution channels customers have benefit that encourage competition to better access the price, quality of products, services and adjusted distribution to contemporary cultures, needs and preferences of the customers in different markets.

Insurance in Europe supports a high level of protection for all customers of insurance products - regardless through which of the channels of distribution they are sold. The best way to protect the customers is the legislation that should be flexible enough to accommodate to the diversity of the EU markets.

Over the last year, the insurance in Europe included a number of initiatives related to customer information and the way insurance products are sold. In the EU there is an insurance intermediary directive (IMD) that was revised in 2012 which stressed the importance of diversity in the insurance distribution and set up high level of principles. It established principles of sale practices for all insurance contracts, which is believed to provide an appropriate level of customer protection, regardless of the distribution channel. These principles cover issues such as fair treatment of clients, tips and analysis of the client's needs. The insurance intermediaries and direct sale are two very different sales models that require different customer protection, especially in relation to conflicts of interest and transparency in compensation risks. The insurance in Europe supports transparency that allows customers to be informed when making decisions by comparing products and distribution channels. Insurance in EU proposes a set of six sale principles to all insurance products and all distribution channels:

- The sale must be focused on the fair treatment of the clients;
- The distributor should offer advice, on request or on its own initiative when circumstances indicate that there is a need, in order the client to be informed;
- The client should always be informed of the type of services (counseling for sale, advice, fair analysis);
- Where advice is given, which should be based on analysis of the client needs, are based on information provided by the client;
- Each distributor provides information or advice for theinsurance product that must be clear and explained for the key features of the product;
- Before an agreement is concluded, the client should be given information about the insurance product that allows the client to make the right decision.

These principles are embedded in Solvency II at EU level, in order to protect the customer through its information regarding the insurance product and insurance distribution channel in which it is submitted.

In Macedonia, for the legal and efficient functioning at the insurance market, in order to protect the rights of insured holders and beneficiaries of insurance services and increasing financial stability of the country, in 2009 the Agency for Insurance Supervision was established, which is an independent regulatory body with its authorities and powers. The basic principles of the Agency for Insurance Supervision include:

- Responsibility - The agency will respond in a quick and comprehensive manner, and will consistently realize the mission and strategic goals in the area of supervision;
- Expertise - All activities related to the responsibilities of the Agency will be undertaken in a manner that will ensure effective achievement of the strategic objectives, in accordance with the highest standards in the area and reasonably incurred costs;
- Conscientiousness - In conducting its activities the Agency shall be guided by the highest ethical standards in communication and collaboration with all participants in the process of supervision;
- Transparency - Placing quality information for the insurance market as well as providing timely information for the needs of the participants and beneficiaries of the insurance services. (www.aso.mk)

## *MANAGING DISTRIBUTION CHANNELS*

Insurance companies have identified the distribution and the choice of distribution channel for marketing their services as one of their preferred strategies of the early 21st century. Selecting the appropriate distribution channel and its successful management is essential to increase marketing share of the insurance market.

Insurance companies need to decide, through which distribution channel to sell their services, most often when developing a new service or identify new target market to ensure existing services. The main decisions that have to be made by every company are decisions about which channel to use and to determine the number of channels they will use.

There is no best channel through which can be distributed one service. Some channels are appropriate for each service, unlike others, some are appropriate for certain target markets; some better achieve the objectives of the company. Therefore, when choosing distribution channels, the company has to take into account the following factors (Sharon et al., 2003, pp. 381):

- Characteristics of the target customer markets. Since the basic purpose of the distribution is to transfer service from the insurance company to the insured, the main aim is the selection of the channel to meet the needs of the insured. The characteristics of the insured as affecting the choice of channel: the number and types of customer target market; location of purchase of selected target market; complexity of the purchasing needs etc...
- Characteristics of the service. Each service that the company offers also affects the decision on distribution channels. Some services are more suited for a distribution channel than another. If the new service can effectively be distributed through existing distribution channels, the Company may impose additional channel.
- Marketing environment. The environment is also an important determinant in the choice of distribution channel.
- Characteristics of the company. Many of the features of the company affect the choice of distribution channels. These factors include:
    - Financial, technological and human resources;
    - Mission, goals, plans, the company's culture and marketing philosophy;
    - Experience with various types of channels;
    - Channels that are currently used.
- Characteristics of the distribution channel. - Expenses necessary to maintain the channel and control channel on the insurance company wants to have influence on the choice of distribution channel.

## *CONCLUSION*

Growing problems in distribution and higher insurance costs are the challenge that may affect the profitability of insurance companies in the future. Insurance companies are adamant in its distribution strategy, and stick to a few favorite channels, but for a greater competition in the future they have to adopt multi-channel distribution strategy and flexibility in the adoption of modern tools of technology and the Internet, for the expansion of distribution channels. Companies need to adjust their business strategies in line with changing consumer tastes and preferences. Insurance services should be easily accessible to customers when they decide to buy, and with affordable price.

Changing lifestyles and purchasing power among customers, will detect future models of distribution, based on the balance between traditional distribution models, and models that include internet sales. In the future, the agent can still expect a "warm" smile and internet networking as traditional and modern models while successfully work together. In Macedonia, despite low economic growth and thus reduced purchasing power of consumers, the insurance sector in the future should pay attention to the customer in terms of supply through distribution

channels, in order to reduce their costs and increase profits and thus assisting in the growth of the economy.

Measures taken to improve the sales are on track but not enough, there is a great need of new distribution models. Servicing customers has big role by constantly informing the client, because the customer expectations is high, they are very specific and they have many choices. Demographics of customers' are changing. Many economic factors such as increased revenue, market performance, interest rates, inflation, savings rate, etc. also contribute to the rapidly changing needs of customers.

Another factor which affects the insurer is the competition which contributes pressure from other insurance competitors. New product contributes to innovation and traction in the market of a competitor, but there is pressure from copying each product. To prevent grabbing a larger share of the market, insurers develop products that are completely unique and have protective features. Insurance in Macedonia should follow global trends in order to promote sales of lower operating costs and greater profits, and insurance companies that would help the development of state economy and improve living standards.

## *REFERENCES*

[1] Chartier-Kastler, C. (2001), The European experience of New Distribution Channels and Banc assurance, Distribution in Insurance and New Business Models. PartnerRe.
[2] Giloni, Avi, Seshardi, Sridhar; Kamesam, Pasumarti V. (2003), Product and Operation Management.
[3] Jeynes J. (2002), Risk Management 10 Principles. Elsevier Science.
[4] Kotler P. (1999), Marketing management, Zagreb.
[5] Sharon B, A., Goodwin D.W., Herrod J.W., Bickley M.C., Leeuwenburg P. (2003), Life and Health Insurance Marketing. 3rd edition
[6]www.aso.mk