CHAPTER 7. NEEDS AND POSSIBILITIES FOR ENHANCEMENT OF SERBIAN FINANCIAL MARKETS¹

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Abstract:

The chapter analyses Serbian financial markets: capital market, money market and foreign exchange market. Market fall of 26% was determined during 2011 compared to the record breaking 2008, despite a visible recovery after 2009 and 2010. Foreign exchange market has dominated with the average 62% of market share, money (repo) market is significantly less (35%), while the capital share is minor (3%). Government debt securities (2/3) are the dominant segment on the capital market in Serbia. Shares make the rest of this market (1/3), because there weren't any corporate debt securities. Turnover decreased for over 70 percent for both BELEX indices, while the whole capital market has notably recovered thanks to an extensive borrowing of the state. However, the turnover on this market was 10 percent less than the GDP. Stock market capitalization has fallen. Systematic risk and market risk significantly rise, measured by the CAPM model. Money market included only the central bank repo securities (repo market). This market dropped on less than 1/3 of the turnover shortly before the economic crisis. Forex market completely recovered after a stumbling fall in the period 2009 - 2010. The final part of this chapter shows a new regulatory framework (Law of Capital Market, 2011). Results of the analysis are summarized in the conclusion and it can be estimated that there are great needs for the enhancement of these markets, but the possibilities for such a development depend mostly on foreign investors.

Key words: capital market, money market, foreign exchange market, turnover, liquidity, frontier market.

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INTRODUCTION

This chapter has an aim to investigate the needs and possibilities for the enhancement of Serbian financial markets. Fundamental attitude is that financial markets undoubtedly have huge significance for the development of every market economy. This attitude is widely accepted and confirmed. Simply, there was not any case of some country, whether they were frontier or emerging markets, where there was any economic progress without financial markets. Numerous researches have shed some light on these feedback causal relationships, foremost on the mechanisms and channels of financial market influence on the economic growth and development (Prasad et al, 2007: 476). On the other hand, economic progress strengthens the financial markets. This pattern was empirically confirmed and theoretically explained (Mishkin, 2007). This interaction is one of the key accelerators of the global economy.

The recovery of financial markets from the main impact of the crisis in the second half of 2008 still continues. The uncertainty regarding a more lasting stability of these markets brings into consideration the long-expecting crisis recovery (IMF, 2012). The crisis has also negatively influenced on the financial markets in Serbia. Due to this fact, the analysis was done by dividing into two sub-periods: before the crisis (2006 – 2008) and during the crisis (2009 – 2011). At the first glance, it is confusing to categorize the epicentre 2008 into the period before the crisis, but this categorization becomes understandable if one bears in mind that the effects of the global crisis affected Serbia and the whole Southeast Europe (SEE) no sooner than in 2009 (Vuković et al, 2011).

The strengthening of the financial markets depends primarily on the investors' behaviour or their perception of risk, liquidity and market profitability. Therefore, this chapter deals with the factors of attracting the investors, especially foreign ones. There are also numerous papers on the lucrative financial markets in the European transition countries (Groh et al, 2007).

Financial markets are by definition banking markets, which dominate in all countries, except in the USA. Hence it is clear why banking markets are regarded as the part of financial markets (ECB, 2012), while bank assets are treated as one of the basic *indicators on the size of the capital markets* (IMF, 2012). However, special papers in this book are dedicated to the analysis of banking sector and credit market. Considering the structure of the content, this chapter is directed to the other financial markets – capital market, money market and foreign exchange market. The capital market in this analysis is segmented on bond market and equity market, as often done in the reports (ECB, 2012). Serbian capital market is by its characteristics

categorized into the group of frontier markets (Spiedell, 2011), which is specially investigated.

The analysis of the domestic market capital includes the measuring of the market risk using the beta coefficient from the *Capital asset pricing model* (CAPM). By doing this, the data about prices and turnover for both BELEX indices were taken over from the *Belgrade Stock Exchange* (BSE). Using beta coefficient, the systematic risk and its increase in the period of crisis have been measured.

The privatization in Serbia significantly influenced on the features and volatility of the financial markets in Serbia, especially capital markets. The same effects of the privatization were also noticed in other transition economies CESE (Megginson et al, 2000). Without the analysis of the privatization it would not be possible to explain the behaviour of investors and shareholders in these countries.

A special part of this chapter is dedicated to the institutional framework and regulations of financial markets, because Law on capital markets was brought in 2011. This law defines financial instruments, including money market instruments. This same law institutionalized the protection of investors. The exception is foreign exchange market, regulated by Law on foreign exchange operations.

At the end of the chapter, the conclusion is presented where all major findings are summarized. The most important is the evaluation of needs and possibilities for the enhancement of Serbian financial markets with the proposal for general measures and specific activities.

The structure of this chapter has been adjusted to the subject and aim of this research: 1. Introduction, 2. Serbian Financial Markets (2006 – 2011), 3. Capital Market, 4. Money Market, 5. Foreign Exchange Market, 6. Regulatory Framework, and 7. Conclusion.

SERBIAN FINANCIAL MARKETS: 2006-2011

This analysis of the Serbian financial markets comprises the capital market, money market and foreign exchange market, as emphasized n the introduction. The credit market was analysed in the rest of this book, but it is necessary to stress that it is the biggest segment of the domestic capital market. Banks in Serbia are traditionally dominant financial mediators, so it is understandable to say that Serbian financial sector is bank-centric. This is confirmed even by the data that banks indirectly

manage more than 90% of financial sector's assets. Except this, banks are majority owners of non-bank financial institutions (Vuković, 2009).

Banks are certainly major players on such a financially focused market from the demand and supply sides. The importance of banks for the Serbian financial markets is confirmed by the fact that the two biggest markets – foreign exchange market and money market – are organized as standard interbank markets. On the capital market, banks are also leading investors, as the largest government bonds buyers.

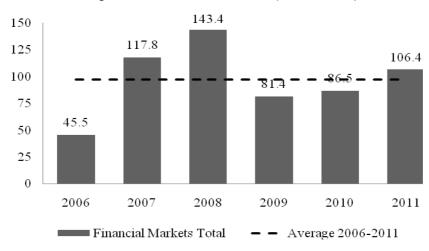


Figure 1: Financial markets total (in billion EUR)

Sources: NBS&SEC.

A total turnover on the Serbian financial markets is shown on Figure 1. At the first glance, one can see a fast growth in the sub-period 2006 – 2008 (average 78% annually). After that, there was a decline in 2009 (for over 43%) and then gradual recovery. Despite the recovery, the total turnover on the Serbian financial markets in 2011 was ¾ of the turnover in the record breaking 2008, or 90% compared to 2007. Compared to the average for the whole period (96.8 billion EUR) the last year's turnover was respectable.

It is necessary to remind oneself that the spreading of the negative effects from the financial crisis came to Serbia and other transition countries of SEE in 2009 (Vuković et al, 2011).

⁴ IMF puts bank assets in selected indicators on size of the capital markets using stock market capitalization and debt securities (IMF, 2012). The methodological problem is double counting, because bank assets include debt securities in the portfolios of banks.

Financial markets structure (Figure 2) was substantially change in the period 2006 – 2011. The dominant share of foreign exchange market was falling from 2006 to 2008. In the next three years, the share of this market achieves a fast growth to reach a record 76.1% in 2011. Therefore, it is clear that this market was crucial for the total recovery.

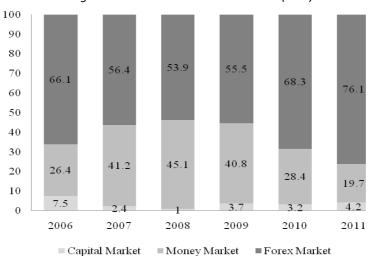


Figure 2: Financial markets structure (in %)

Sources: NBS&SEC.

Money market had completely opposite movement – its share was growing until 2008, and then hastily started dropping. The lowest share was recorded last year (under 1/5). In the same period, the share of the capital market first dropped (in 2008 the minimal 1%), while after it started to achieve some unbalanced growth.

The dominant foreign exchange market constituted 61.9% of financial markets in the period 2006 – 2011. The average money market was 35.1%, while the capital market had a marginal average share of only 3%.

The presented market structure is typical for a small, open and euroized transition economy from the group of frontier markets. Minimal capital market share (equity and bond) implies negligible influence on the economic growth and development of Serbia. The prolonged recession undoubtedly confirmed this.

This structure explains a relative resilience of Serbian financial markets on the impacts of global financial and economic crisis. The answer offers Country report in which it is said that the banking sector is highly capitalized and liquid, and displays considerable resilience in stress tests (IMF, 2010).

CAPITAL MARKET

Precisely, capital market is the Belgrade Stock Exchange (BSE), as the only organized market of this kind in the country. Serbian capital market, as under developed market, faces many problems: small capitalization, small number of shares on the liquid segments of the market, appearance of some unsynchronized trading, irregular frequency of transactions, lack of transparency in the reports, lack of government regulations and so-called the invisible signs of risk.

From its beginning, Serbian market was not a share market but corporate market. Also, this is a one-way market, considering the supply and demand. This means that the major share sellers are individual share owners who got the shares, usually free, in the process of mass privatization. Major share buyers come from the corporate sector. The basic aim of investing was not the share yield, but taking over the companies. The usual chain of events was as the following: turnover volume and share liquidity rise when the firm is in a threat of being taken over. When taking over happens, the liquidity and volume drop, while the share price becomes inert. Trading in these transactions is in a great measure based on informer information (Živković et al., 2005).

The next Figure 3 shows the movement of the turnover on this market. Alongside the total turnover, there is also the turnover on equity and bond markets. Looking at this, one can notice not only the dynamics in change, but also some structural changes.

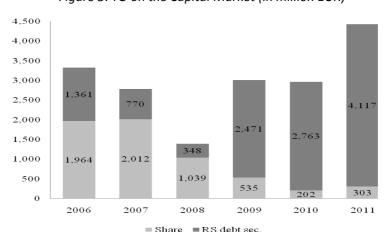


Figure 3: TO on the Capital Market (in million EUR)

Source: SEC

Turnover movement by years is very unusual: before the crisis it dropped very fast, then it was almost faster recovery during the crisis, so the record level was achieved last year (4.42 billion EUR).

However, the total turnover covers up a key structural change: market dynamics was determined by the equity market before the crisis, and after it by the bond market. Consequently, the share of debt securities market was increased from 1/5 in 2008 to predominant 93% in 2011. This dramatic fall of equity market is also illustrated by the data that the total turnover over the last three years was only 1.04 billion EUR!

Bond market was entirely consisted of government debt securities. State borrowing on the capital market explosively rose – the turnover of government bonds from 2008 to 2011 was increased for 12 times! Thanks to this, the capital market not only recovered, but also significantly rose (for 1/3 compared to 2006 and 3.2 times compared to 2008). By this, there was no squeezing of corporate bonds, because they were not issued, despite the projections (Jefferson Institute, 2005).

Equity market dropped for almost 10 times from 2006 to 2010. The primary cause of market fall was not the global financial crisis⁵, but the nature of the shares issued with the purpose of privatization. *Privatizations have dramatically increased the number of shareholders; large numbers of shareholder are not a stable ownership structure* (Megginson et al, 2000). It is not surprising why it came to the withdrawal of the attractive (liquid) shares from the turnover after the end of the taking over process⁶ of the privatized companies, i.e. concentration (Živković, 2008). At the end, it could be seen that the expected *rapid growth of equity markets* (Lieberman et al, 1998) was not sustainable for a long-term period after the privatization.

Underdevelopment of the domestic capital market is also shown by the information that the total turnover was below 10% GDP (NBS). A predominant share trading was done in the BSE, while the rest was in the OTC (SEC, 2012). A small equity market could not significantly encourage the economic growth in Serbia, which is still facing the transition problems. Namely, GDP has been noticeably lower during the previous years than in 1989 (EBRD, 2011).

It is interesting that despite a small volume turnover there was no significant reduce in market capitalization. By the BSE data, stock market capitalization was 8.67 billion EUR in 2008, and 7.43 billion EUR in 2011. Fall in capitalization for 14% can be

⁵ Most of other European frontier emerging stock markets showed a great resilience to the adverse effects of the financial crisis (Nikkenen et al, 2011).

⁶ Therefore, the turnover on equity market was the largest in the period 2002 – 2004 (Privatization Agency, 2005).

explained only by reserved shareholders, where many of them are waiting for the market recovery to issue the sale orders. One can also notice reducing of foreign investors' participation in trading with all the securities in the BSE (from 48% in 2006 to 33% in 2010.

In the Table 1 is the change of turnover for both BELEX indices that ensued by the world economic crisis. This table shows that the turnover of the both BELEX indices fell for more than 70% from the other half of 2008 to the end of 2009.

Table 1: The average value of the daily turnover expressed in dinars for BELEX indices, before and during the crisis and its relative change

Index	Avorago	3.10.2005-	15.9.2008-	Relative
muex	Average	12.9.2008	31.12.2009.	change
BELEXline	1,949,045	2,508,482	702,108	-72.0%
BELEX15	8,777,022	11,221,731	3,327,972	-70.3%

Source: BSE & authors' calculation

In the crisis conditions, it is obvious that the lack of trust in the mechanism of publishing the fair value of the financial assets caused a fall in the turnover and at the same time a fall in market liquidity and massive withdrawal of foreign investors (see Živković & Minović, 2010).

CALCULATING MARKET RISK AND CHANGES IN THE BSE

The problem of measuring market risk in the Serbian market comes from its underdevelopment. Namely, the presumptions of theoretical models mostly match the conditions that characterize developed markets. These presumptions also differ due to the conditions on some newly created markets (Bekaert & Harvey, 2002). The differences are greater in the cases of the frontier markets, which include the largest part of East and Southeast Europe (Šestović & Latković, 1998).

"Frontier market" is an economic term first used in 1992 by the International Finance Corporation to describe a subset of very small and illiquid emerging stock markets. Twenty years later there is no strict definition of frontier markets, though, by default, they are commonly viewed as those markets which are neither developed nor emerging. Highlighting both their opportunity and their challenge, frontier markets represent one-fifth of the world's population, yet less than 10% of global GDP, and only about 2% of global market capitalization. Serbia belongs to these countries too (Speidell, 2011).

Sometimes the progress from a frontier market status to a more developed status is agonizingly slow, if it occurs at all. The upside potential of frontier equity markets has motivated many investors to consider taking positions in them, but to date, relatively few have done so. The reason stated most often for this reluctance to invest is risk (Speidell, 2011).

During the analysis of the capital market, there was a measurement of market risk using beta coefficient from the standard *Capital Asset Pricing Model* (CAPM). The data for the prices and turnover of both BELX indices were taken from the website of the Belgrade Stock Market. Using this beta coefficient, systematic risk was measured and its increase in the crisis period was shown.

Speidell (2011: 10) showed that Serbia has a 20 percent weight in the MSCI Frontier Market Index, and 10 percent weight in the Russell Frontier Market Index.

Erić (2010) told that revenues from privatization, grants and foreign direct investments have declined, some even dried up with the increase of crisis. Therefore, there is a slowdown in Serbian economic growth. This author pointed out that the development of the Serbian capital market is an extremely important issue and involves a very serious and responsible approach.

Živković & Minović (2010) explored causes for illiquidity of the Serbian financial market. The results of their paper suggest that the level of market liquidity is low and persistent in Serbia. Additionally, results confirm that time-varying illiquidity and its volatility is highly unstable in this market. These authors identified different periods and showed that, in most cases, ups and downs in foreign investors' participation lead to dramatic falls and rises in market illiquidity and its volatility.

In the standard Capital Asset Pricing Model (CAPM), by Sharpe (1964), Lintner (1965) & Mossin (1966), risk of portfolio (assets) is determined by covariance between portfolio (assets) returns and the market portfolio. The systematic undiversifiable risk in CAPM is:

$$\beta_{iM} \equiv \beta_i = \frac{\text{cov}(R_i, R_M)}{\text{var}(R_M)}$$
(1)

In our case, $R_{\scriptscriptstyle M}$ and $R_{\scriptscriptstyle i}$, are the daily return series of a value-weighted market index (BELEX/line), and portfolio of the most liquid stocks (BELEX15), respectively.

Minović & Živković (2010a) have shown that the original version of the standard CAPM is not usable for illiquid Serbian frontier market, so there are other modified and extended versions of this model. One of the extensions of this model could be

done by adding factors that describe market liquidity. These would be models from the so-called group of models for the capital valuation extended for liquidity – Liquidity-augmented CAPM, LCAPM). Acharya & Pedersen (2005) extend CAPM with the factors of the liquidity level and liquidity risk. Acharya & Pedersen (2005) besides expected costs of liquidity and the traditional CAPM market beta, include three other possible forms of risk for asset liquidity in their model. These forms are: generality in illiquidity with market illiquidity, sensitiveness of portfolio yields to the market illiquidity and the sensitiveness of portfolio illiquidity to the market yield. Minović & Živković (2010a) have shown that LCAPM introduced by Acharya & Pedersen (2005) has better performances than the standard CAPM on the Serbian capital market.

The Belgrade Stock Exchange has calculated and published the index BELEX/line since April 2, 2007, as a benchmark for monitoring broad market movements (http://www.belex.rs). BELEX/line index is descriptive, in the statistical sense, and not investible. The index weighting is based on market capitalization. BELEX15 is a free-float market capitalization weighted price index, which follows the movements of the most liquid shares traded by the continuous method and fulfilling criteria for inclusion in the index basket (http://www.belex.rs).

We use data from the Belgrade Stock Exchange (BSE) for the period: October, 2005 – January, 2010. Daily returns are calculated as difference in log price at closing. The return of the market is a value-weighted index, BELEX*line*, comprised of all stocks available either in a given month or on a particular day in the sample. The second index of the Belgrade Stock Exchange is BELEX15, and it is the value-weighted portfolio consisting of the 15 most liquid stocks.

Using the equation (1) we calculated the beta coefficient before and during the crisis. The date September 15, 2008 was taken as the stopping point. The results are summarized in the Table 2. Notation is as follows: the daily return series of BELEX*line* is termed with *M*, and the daily return series of BELEX15 is termed as *i*.

Table 2: Covariance matrix between BELEX15 yield and BELEXline index and beta coefficient before and during the crisis

Pre crises			Crisis			
		R_{i}	$R_{\scriptscriptstyle M}$		R_{i}	$R_{\scriptscriptstyle M}$
	R_{i}	3.29E-05		R_{i}	8.52E-05	
	$R_{\scriptscriptstyle M}$	1.22E-05	8.56E-06	$R_{\scriptscriptstyle M}$	2.75E-05	1.38E-05
	Beta = 1.43			Beta = 1.99		

Source: authors' calculation

The results from the Table 2 show that the value beta coefficient or the value of market risk increased for about 40% in the period of crisis. This result may show some weaknesses of applying beta coefficient and the standard CAPM on frontier markets, because a real increase of market risk would be exceedingly higher above 60% (see Minović & Živković, 2010b). Therefore, calculating a market risk using beta coefficients introduced by Acharya & Pedersen (2005) would give more punctual results since the formula for the beta coefficient besides the portfolio yield and market includes the level of portfolio liquidity and the level of market liquidity (see Minović & Živković, 2010b).

MONEY MARKET

By definition, various short-term debt instruments⁷ are used for trading on a money market with the purpose of acquiring the liquidity for the securities issuers and investors' yield. However, money market in Serbia is derived only to the repo market.⁸ In this way, the liquidity market (Vuković, 2009) has been turned into the money sterilization market.

Corporate short-term debt securities were not also issued, the same way as there were no long-term securities on the capital market. By this, institutional conditions are not an obstacle, because domestic regulatory framework defines money-market instruments⁹ including the corporate ones (e.g. commercial papers).

Turnover movement on repo market is shown in Figure 4. The turnover explosively grew until 2008, when it reached a record 64.7 billion EUR! The turnover growth was encouraged by very high interest rates, backed-up by the Central Bank solvency as the issuer. These high and secure yields attracted not only the domestic commercial banks, but also a speculative capital from abroad. Despite everything, the primary goal of monetary policy – low inflation – was not achieved in 2007 and 2008 (Vuković et al, 2011). The recession that came after caused a disinflation and wherefore repo rates could be lowered.

⁷ The money market is a financial market in which only short-term debt instruments are traded (Mishkin, 2007).

⁸ Two-week repo operations at the NBS'key policy rate represent the main instrument for implementing open market operations. During the year, 52 repo sale auctions werw held. (NBS, 2011).

⁹ Treasury bills, commercial papers, certificates of deposit (Law on the capital market).

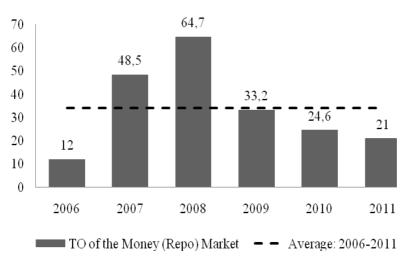


Figure 4: TO on the Money (Repo) market (in billion EUR)

Source: NBS&SEC.

Lower nominal (and real) repo rates destimulated many investors, so in the following 2009, the turnover was for a half less. Decreasing of the turnover continued so last year it was less than 1/3 of the turnover from 2008. The official explanation was that the sale of NBS securities contracted, mainly due to depreciation pressures and the sale of foreign exchange by the National Bank in the interbank FX market (NBS, 2011:15).

The expansion of the NBS' repo operations is clearly a consequence of the restrictive monetary policy. 10 Due to this kind of policy, Serbia had two or three times lower monetization level (broad money as a percentage of GDP) than other transition countries (Mehl et al, 2005: 37). Monetization level has not been significantly reduced even in the times of crisis (EBRD, 2011).

The principle problem is that repo market does not serve liquidity of real and financial sector, but contrary - makes it illiquid. The mechanism of money sterilization is clear – when the Central Bank sells its debt securities, broad money is reduced. This is the reason why Serbia needs authentic money market, which will contribute to general liquidity. The long-term problem of insufficient liquidity of domestic companies was emphasized by the foreign investors who conduct business in Serbia (FIC, 2011).

 $^{^{10}}$ In the period before 2007, other instruments of restrictive monetary policy were predominantly used, above all reserve requirements (dinar and foreign currency).

FOREIGN EXCHANGE MARKET

Foreign exchange market is the most important financial market in any country with euroized or dollarized economy (Vernengo, 2006). Serbian economy is by all indicators¹¹ the most euroized, not only in the SEE group, but among all other European transition economies (IMF, 2011:21). Therefore it is totally understandable that the foreign exchange market in Serbia is dominant market by turnover (Figure 2).

Turnover on this market by years is shown by Figure 5. The expanding market growth was evident until 2008. In the crisis 2009, there was a fall for 41%, and then a recovery in 2010. Apparently surprising, there was an increase in 2011 for 37%, which resulted with a record turnover of 81 billion EUR! Average yearly trading was also respectable – 62 billion EUR, approximately double than the average GDP in that period.

90 81.0 77,3 80 66,5 70 59,1 60 45.2 50 40 30,1 30 20 10 2006 2007 2008 2010 2011 ■ T○ on the Forex Market – Average 2006-2011

Figure 5: TO on the Foreign exchange market (in billion EUR)

Source: NBS.

The National Bank occasionally intervened in the foreign exchange market, mostly by selling euro and considerably less by buying it. The NBS intervened in the foreign exchange market in a bid to ease excessive daily volatility of the dinar and/or to

¹¹ Currency Substitution Index (euro cash / total currency in circulation), Deposit Substitution Index (foreign currency deposits / total deposits) and Overall Euroization Index (Beckmann et al, 2011: 91-98).

boost trading volumes so as to ensure smooth functioning of the market (NBS, 2011: 17). 12

The exchange rate of dinar was more volatile than the exchange rate of the national currencies from the SEE countries (Vuković et al, 2011). Constant changing of depreciation and appreciation periods was not the key problem, but great daily changes in EUR/RSD exchange rate (NBS, 2012: 23). Considerable fluctuations exposed all of the market actors to an exchange rate risk.

Despite the volatility in the exchange rate, foreign currency market successfully operated and satisfied all needs of the actors about supply and demand. A full convertibility of dinar since 2002 and the largest turnover have proven the greater efficiency of this market compared to other financial markets.

REGULATORY FRAMEWORK

A regulatory framework of domestic financial markets, focused on in this chapter, is consisted out of two basic laws: the Law on Capital Market (2011) and the Law on foreign exchange operations (2006). The second law is successfully applied with a few changes done in 2011.

The problem was a regulative of the capital market and money market, defined by the previous Law on the Market of Securities and other Financial Instruments (2006). The Securities Commission pointed out to the (pre) regulation of "the game rules" on the capital market and (sub) regulation of other segments (e.g. the closing of OTC), then a small number of securities, as well as the lack of complete transparency, especially about the liquidity (SEC, 2011: 109). Along the need to correct the flaws, it was necessary to harmonize the domestic legislation in this area with the EU regulatory framework. That is the reason why there was a completely new law whose objectives are: 1) The protection of investors 2) Ensuring that the capital market is fair, efficient and transparent 3) The reduction of systemic risk on the capital market (Article 1).

This Law shall regulate the following: 1) The public offering and secondary trading of financial instruments; 2) The regulated market, multilateral trading facility (MTF) and OTC markets; 3) The provision of investment services and activities; 4) The financial and non-financial disclosure and reporting obligations of issuers and public companies; 5) The prohibition of fraudulent, manipulative and deceptive acts and

¹² The NBS organized two-week foreign exchange swaps, introduced in 2009, also in 2010, but banks showed no interest in this type of foreign exchange purchase/sale (NBS, 2011: 18).

unlawful practices in connection with the purchase and sale of financial instruments; 6) Clearing, settlement and registration of transactions in financial instruments and the organization and competencies of the Central Securities Depository and Clearing House; 7) The organization and competencies of the Securities Commission (Article 1).

The new Law on Capital Market has been applied since the beginning of this year, so its effects cannot still be evaluated. By this, it is clear that any law by itself cannot solve the typical problems of frontier markets, such as a small market capitalization, insufficient liquidity and short trading history.

The new law proposes doing many enactments during the six months' period. In addition to adoption of this law, there were certain changes of some other already existing laws, which are important for the operation of financial markets. Full effects of this new regulatory framework can be expected only after the end of the crisis and the economic recession. It will then be possible to evaluate how much this improvement stimulated the issuing of new securities and contributed to attracting foreign and domestic investors to the financial markets in Serbia, especially the capital market.

CONCLUSION

The analysis of Serbian financial markets – capital market, money market and foreign exchange market - showed that despite the recovery the record level of the turnover from 2008 has not been achieved yet. Foreign exchange market, which is predominant with the average of 62% of the turnover, considerably contributed to the recovery. Money (repo) market was falling, but it still has a high an average participation of 35%, while the share of the capital market is minimal with 3%. Government debt securities dominate after the crisis on the capital market (93% in 2011) while other shares from privatization make a negligible part of the market (equity market dropped for over 10 times from 2006 to 2010). Market capitalization was not significantly reduced and it was approximately 1/3 of the GDP. Market risk on the capital market increased for 60% during the crisis, while systemic risk under the pressure of the recession regularly grows. It is characteristic that the Central Bank is the main issuer of securities on money (repo) market, and the government on the capital (bond) market. In that way, the potential borrowers were not squeezed, because there were no other issuers. Due to this, money market was transformed from a liquidity market into a money sterilization market. The most efficient was the foreign exchange market, which has confirmed full dinar convertibility since 2002, despite a high volatility in the exchange rate.

Regulatory framework was improved with the new Law on Capital Market (2011) instead of the previous Law on the Market of Securities and other Financial Instruments (2006). In this way, exposed problems were institutionally solved and there is a necessary harmonization with the EU regulatory framework. Of course, a law, by itself, cannot solve the problems in the emerging markets or frontier markets, such as a small market capitalization, insufficient liquidity and short trading history. It is expected that this new regulative will encourage domestic and especially foreign investors. The presumption is that the greater presence of foreign investors should, in principle, deepen local financial markets, enhance investor diversity and improve liquidity (BIS, 2009: 133). The practical effects are by rule concentrated on emerging/frontier markets, even when there is a high financial stability and attractive opportunities for the investors (Groh et al, 2007: 22).

At the end, previous conditions of development in the Serbian financial markets are ending the financial crisis and the exit from the economic recession. Only after the recovery, there can be expected some more apparent effects of the new regulative framework. Due to this, counter-cyclical measures have the utmost importance.

References

- [1] Acharya, V.V., Pedersen, L.H. (2005). Asset Pricing with Liquidity Risk. *Journal of Financial Economics*, 77(2): 375-410.
- [2] Amihud, Y., Mendelson, H., Pedersen, L.H. (2005). Liquidity and Asset Prices. *Foundations and Trends in Finance*, 1(4): 269-364.
- [3] Beckmann, E., Dvorsky, S., and Scheiber, T. (2011). OeNB Euro Survey: Growing Uncertainty but Overall Euroization Not Affected. *Focus on European Economic Integration*, Q4/11: 88-99.
- [4] Bekaert, G., Harvey C. R., (2002). Research in emerging markets finance: looking to the future. *Emerging Markets Review*. 3: 429–448.
- [5] BIS (2009). Capital flows and emerging market economies. CGFS Papers 33. Bank for international settlements.
- [6] Cvitanić, J., Zapatero, F. (2004). *Introduction to the Economics and Mathematics of Financial Markets*. Boston: The MIT Press.
- [7] EBRD (2011). Transition Report 2011 Crisis and Transition: The People's Perspective. European Bank for Reconstruction and Development.
- [8] ECB (2012). Financial integration in Europe, April 2012. European Central Bank.
- [9] ECB (2012a). Financial Stability Review, June 2012. European Central Bank.
- [10] Erić, D. (2010). "What is actually capital market in Serbia?" *Economic Growth and Development of Serbia New Model*, pp. 243-261.
- [11] FIC (2011). White Book. Belgrade: Foreign Investors Council.
- [12] Groh, P., Liechtenstein, H. (2007). How attractive is Central Eastern Europe for risk capital investors? WP-677, IESE, University of Navarra.

- [13] IMF (2010). Republic of Serbia: Financial Sector Assessment Program Update Financial System Stability Assessment. *IMF Country Report, 10/147,* May 2010. International Monetary Fund.
- [14] IMF (2011). Republic of Serbia: Request for Stand-By Arrangement. *IMF Country Report*, 11/311, October 2011. International Monetary Fund.
- [15] IMF (2012). Global Financial Stability Report: The Quest for Lasting Stability, April 2012. International Monetary Fund.
- [16] Jefferson Institute (2005). *Bond markets in Serbia: regulatory challenges for an efficient market.* Belgrade: Jefferson Institute.
- [17] Lieberman, I., Kirkness, C. (1998). *Privatization and Emerging Equity Markets*. The World Bank.
- [18] Lintner, J. (1965). The valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolio and Capital Budgets. *Review of Economics and Statistics*, 41(1): 13-37.
- [19] Mehl, A., Vespro, C., and Winkler, A. (2005). The finance-growth nexus and financial sector environment: new evidence from Southeast Europe. Conference *Financial Development, Integration and Stability in Central, Eastern and South-Easter Europe*. OeNB-ECB, November 2005, Vienna.
- [20] Megginson, W., Boutchova, M. (2000). *The impact of privatization on capital market development and individual share ownership.* Paris: OECD.
- [21] Middleton, C., Fifield, S. and Power, D. (2008). An investigation of the benefits of portfolio investment in Central and Eastern Europe stock market. *Research in International Business and Finance*, 22(2): 162-174.
- [22] Minović, J., Živković B. (2010a). Open Issues in Testing Liquidity in Frontier Financial Markets: The Case of Serbia. *Economic Annals*. 55(185): 33-62. (http://www.doiserbia.nb.rs/img/doi/0013-3264/2010/0013-32641085033M.pdf).
- [23] Minović, J., Živković B. (2010b). "Serbian Financial Market in the Pre-Crisis and Post-Crisis Period". *Influence of Global Economic Crisis on CEE Region: Possible Way Out*. Publisher: Košice: Technical University of Kosice, Faculty of Economics & Belgrade Banking Academy & Institute of Economic Sciences, Belgrade, Chapter 20, pp: 177-187. (http://www.ien.bg.ac.rs/IEN1/images/stories/Izdavastvo/IEN/Influence%20of%20global%20eco%20crisis10_contents.pdf).
- [24] Mishkin, F. (2007). *The Economics of Money, Banking, and Financial Markets* (8th ed.). Boston (US): Pearson & Addison-Wesley.
- [25] Mossin, J. (1966). Equilibrium in Capital Asset Market. *Econometrica*, 34(4): 768-783.
- [26] NBS (2011). Annual Report on activities and results: 2010. National Bank of Serbia.
- [27] NBS (2011a). Annual Monetary Policy Report: 2010. National Bank of Serbia.

- [28] NBS (2011b). Semi-Annual Monetary Policy Report: January June 2011. National Bank of Serbia.
- [29] NBS (2012). Inflation Report: May 2012. National Bank of Serbia.
- [30] NBS (2012a). Foreign Investor's Guide: How to invest in the Serbian financial market. National Bank of Serbia.
- [31] Nikkenen, J., Piljak, V. and Rothovius, T. (2011). Integration of the European frontier emerging stock markets: effects of the 2008/2009 financial crisis. *The* 15th International Conference on Macroeconomic Analysis and International Finance. Greece, May 2011.
- [32] Prasad, E., Rogoff, K., and Wei, S-J. (2007). Financial Globalization, Growth and Volatility in Developing Countries. In: Harrison, A. (ed.), *Globalization and Poverty*. University of Chicago Press.
- [33] Privatization Agency (2005). *Impact Assessment of Privatisation in Serbia*. Privatization Agency Republic of Serbia.
- [34] SEC (2007). Izveštaj o radu Komisije za hartije od vrednosti Republike Srbije i kretanjima na tržištu hartija od vrednosti u Republici Srbiji u 2006. godini. Securities Commission Republic of Serbia.
- [35] SEC (2011). Izveštaj o radu Komisije za hartije od vrednosti Republike Srbije i kretanjima na organizovanom tržištu hartija od vrednosti u Republici u periodu: januar decembar 2010. godine. Securities Commission Republic of Serbia.
- [36] SEC (2012). Izveštaj o radu Komisije za hartije od vrednosti Republike Srbije i kretanjima na tržištu kapitala u Republici Srbiji u period: januar decembar 2011. godine. Securities Commission Republic of Serbia.
- [37] Sharpe, W.F. (1964). Capital Asset Prices: A Theory of Market Equlibrium under Conditions of Risk. *Journal of Finance*, 19(3): 425-442.
- [38] Speidell, L.S. (2011). Frontier Market Equity Investing: Finding the Winners of the Future, Frontier Market Asset Management, Publisher: The Research Foundation of CFA Institute
- [39] Syropoulos, T., Roumpis, E. (2009). Dynamic correlations and volatility effects in the Balkan equity markets. *Journal of International Financial Markets, Institutions and* Money. 19(4): 565-587.
- [40] Šestović, D., Latković M., (1998), "Modeliranje volatilnosti vrijednosnica na Zagrebačkoj burzi", *Ekonomski pregled*, 49: 292-303.
- [41] Vernengo, M., (2006). *Monetary Integration and Dollarization: No Panacea*. Cheltenham, UK: Edward Elgar.
- [42] Vuković, V. (2009). *Strukturne promene i performanse bankarstva Srbije 2002-2008*. Institut ekonomskih nauka, Beograd.
- [43] Vuković, V. (2011). Dinarizacija: neizvodljiva strategija. *Finansije*, 1-6/2011: 26-46.
- [44] Vuković, V., Zdravković, A. (2011). The inflation and exchange rate in the five Balkan countries from Maastricht convergence criteria prospect.. Chapter 3 in:

- Contemporary issues in the integration processes of Western Balkan countries in the European Union. ICPE, Ljubljana, Slovenia. November 2011: 38-55.
- [45] Živković, B., Minović J. (2010). Illiquidity of Frontier Financial Market: Case of Serbia. *Panoeconomicus*. 57(3): 349-367. (http://www.panoeconomicus.rs/casopis/2010_3/07.pdf).
- [46] Živković, B. (2008). "Finansijski sektor", *Reforme u Srbiji: dostignuća i izazovi*, Beograd: CLDS.
- [47] Official the Belgrade stock exchange (BSE) web site, http://www.belex.rs
- [48] Official the National Bank of Serbia (NBS) web site, http://www.nbs.rs
- [49] Official the Securities Commission (SEC) Republic of Serbia web site, http://www.sec.gov.rs