

# The Comparative Review of the Impact of Central Banks on the Dynamics of Fluctuations in the Financial Markets

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*Abstract:* In this paper the authors analyze comparative review of the impact of central banks on dynamics of fluctuations in the financial markets and point out the significance of the heretofore accomplished harmonization of the domestic banking legislation with the current world standards set up in the field of banking, pointing out that we, by rendering a modern law, such as the Law on Banks, created prerequisites not only for the development of the banking system but for the development of mortgage and financial markets which are characteristic for the countries in transition at the very beginning of development. The qualities of the Law on banks are both the direct implementations of the world corporative solutions and harmonization with the regulations of the European Union ( Directive 2000/12/EC) and principles and definitions established by the Basel Committee for banking supervision (Basel I, Basel II). Authors concluded that it is necessary to continue with the harmonization of the domestic banking legislation and the development of the domestic mortgage and financial market, especially instructed by the experiences of the countries which have developed economies, taking into consideration the fact that current global recession is actually a circumstance of the shortcomings in the organization of the corporative management in the banks, firstly investment ones, crisis of the developed mortgage and financial markets, but also a liberal politics of the central banks. Conclusions have been verified with results of empirical research of various scientists in the field of economy.

*Key-words:* financial markets, central banks, financial systems, credit capacity of banks, corporate management, regulatory framework, mortgage market.

## 1 Introduction

### 1.1 The position of the central banks in the banking systems

Central banks are one of the most important financial institutions within the framework of the financial system and financial markets of each country. They perform several numbers of functions which contribute to the accomplishment of both macro and micro economic targets of the country. On the macro level, central banks are responsible for instituting monetary, credit and foreign currency politics. On the micro level, they perform control and give support regarding the functioning of several numbers of financial institutions which constitute the financial systems. The first central banks were established in some countries even in the XVIII century and in the second half of XIX century.

In the beginning, some of them were in the private ownership, however later on; they became transformed into the state institutions. They originate from different emitting institutions, which associate on one of their first and basic functions – issuing of money. Besides that, they performed activities in relation to financing of the state expenditure. As the time passed, number of functions of the central banks expended in the direction of the high level of regulation and supervision regarding the business activities of the banks. They are becoming the central organizations and institutions of the financial systems and the most important authority in accomplishment of the aims of the monetary- credit policy. In that manner, they had an opportunity to prevent different problems which might occur in the functioning of the real and financial sector. The central banks have an exceptional role. They regulate the monetary policy, influences the level of the interest rate, the level of credits, relation between the supply and

demand of money, the level of the foreign currency exchange rate, etc.

For example, in empirical research of comparative review of impact of central banks on the dynamics of fluctuations in the financial markets some scientists identify circumstances in which central bank interventions influence exchange rates. „Microstructure theory suggests that trader heterogeneity can lead to short-run price and volatility effects in reaction to both fundamental and non-fundamental information revelation. Interventions have the potential to provide price-relevant information to market participants, or information that allows them to distinguish more accurately between fundamental and nonfundamental information. In the short run, however, the information content of interventions may not be common knowledge, and so operations may initially add to the rational confusion in the market.

This suggests that the influence of interventions on exchange rates may well differ over the very short and longer runs. The empirical tests examine the influence of G3 interventions on DEM-USD and YEN-USD intra-daily (5 min) indicative quote volatility as well as a measure of realized daily volatility. Results suggest that intervention operations, especially those that were coordinated, were consistently associated with increases in intra-day and daily volatility, while there is little evidence that interventions influenced longer-term volatility. The short-run results are supportive of both the portfolio balance and signaling channels, and suggest that interventions, like other macroeconomic news variables, influence exchange rates at least within the day. The results also indicate that interventions do not lead to declines in volatility, suggesting that the information conveyed by intervention did not serve to resolve market uncertainty. At the same time, the fact that interventions did not lead to long-term increases in volatility may help explain why some governments, who presumably prefer not to increase market volatility, continue to rely on interventions to influence currency values.“ [1,2,3,4]

In that manner, central banks directly or indirectly influence the most important events on the financial markets, in the financial system; however it also has much wider influence – on the overall economy of one country. Central banks must be completely independent and autonomous in their work. Independency and autonomy of the central banks can be seen in its capability to undertake all the necessary measures in order to accomplish desirable aims.

Sometimes, some of the measures might be unpopular and against the interests of certain political structures. Only if they are independent and autonomous in their work, central banks may assist in accomplishment of the macro and micro economic aims, such as low inflation, cheap credits, low level of unemployment, efficient banking and financial system, etc. Commitment in relation to the high level of independency of the Central bank is relatively new. It is assumed that the execution of the Maastricht agreement and creation of the European Central bank established a very high level of independency of this financial institution. The importance of the independency of the banking system can be illustrated in the best possible manner if we take an example of FR Yugoslavia during the nineties, especially in the period between 1991 and 1994 when the highest possible hyperinflation occurred in the history of mankind. The main reason for that was in its immense dependency in relation to the political structures.

## **1.2 The role of central banks in the banking system**

One of the important tendencies in the work of the central banks was connected with the acceptance of the certain international standards of control. Especially important issues were related to the increase of the significance of regulating the level and structure of the capital, the so-called capital adequacy. In June 1988, certain standards were being adopted in Basel by the world leading countries – USA, Canada, Japan, countries of the Western Europe. They have been known under the name the Basel standards and they in fact represent the acknowledgment of certain proportions which the banks should adhere to in performing its activities. It is important to stress out that banks in our country must also respect these standards. Central banks have a very important role in many segments of the financial markets. They are especially active in the money market, where it directly determines the amount of money in circulation and the level of the short term interest rates. Moreover, their roles at the market of capital and foreign currency market are also important. Central banks appear not only as ordinary participants in the businesses on financial markets, but very often it appears in the role of the regulatory body. Their immense role is in affirmation of the trust and protection of the other participants.

Central banks may play a very important role in the development of the financial market in two

ways: issuing high quality securities and by operations at the open market, where it can appear in the role of the buyer or seller of already issued financial instruments.

### **1.3 Central bank and corporative practice**

In comparative law, the role of the central banks is very diverse. Reserve bank of New Zealand (equivalent of National bank of Serbia) is a current example and in legal theory and practice of the extremely liberalized system of control of the central banks over the banking system, which is being very similar, regarding the ownership structure, to our banking system. Two minor state banks operate on New Zealand, and other banks are in foreign ownership. In our banking system, one can spot similar tendencies after a great inflow of the foreign banking capital. The difference exists in organizational structure, since on New Zealand; foreign banks are organized as subsidiaries and branches, which make the control of the corporative management from the side of the Central bank difficult [5].

## **2 The basic control functions of the central banks**

### **2.1 Control function of the central banks in the area of the legality of business**

Regulating and supervision of the work of banks is the function within which the central banks regulate and perform the control of the work of banks and other financial institutions. Central banks may significantly bring in the security in business activities of the banks via the policy of securing the deposits. In that very manner, the confidence in banking and overall financial system is additionally affirmed. The practice of securing deposits began in the USA after the big crisis in the thirties of XX century. Then, the Federal corporation for securing of deposits was created which began to secure deposits and in that manner to increase the confidence in the overall banking system.

The main purpose of security of this corporation was to provide withdrawal of deposits even in the case of the bankruptcy of the banks. Similar systems of securing the deposits exist in other countries. In Europe, Germany was the first to introduce such system in 1966, and a little later the same thing was done by France, Great Britain, Italy, however Serbia

introduced the very thing only after the political changes in 2001.

The control of solvency and legality of the business activity of the bank is done by the National bank of Serbia by the direct insight into the business books and other documentation of the bank and indirectly by controlling the reports and other documentation which the bank submits to the central bank, as well as other data relating to the business activity of the bank that the central bank has on its disposal.

National bank of Serbia may perform control over any other member of the banking group where the bank is positioned.

### **2.2 Control of the banking group on the consolidated basis**

Contrary to the liberal model of control, which is instituted by the central bank, the control of the banking group on the consolidated basis, which is regulated by our legislator provide more quality corporative management and greater coordination in the corporative organizational structure, which is necessary if we take into consideration the fact that the ownership structure in the banking system of Serbia is significantly changed by the inflow of the foreign banking capital. The foreign regulatory body, and not our central bank, performs the control of the banking group <sup>1</sup> if the bank holding <sup>2</sup> has a seat outside the territory of the Republic of Serbia, if the control on the consolidated basis satisfied the envisaged rules of the central bank and at the same time there is a suitable cooperation between a foreign regulatory body and the central bank.

## **3 Review of the Serbian banking system and the position of domestic central bank**

### **3.1 Specific characteristics of the Serbian banking law**

The Law on Banks, which became effective on December 10, 2005, and which is being applicable from October 1, 2006, beside the provisions of the

<sup>1</sup> Banking group represents a group of associations which is comprised exclusively of the entities in the financial sector and where at least one bank has a characteristic of the highest holding corporation or a characteristic of a dependent association.

<sup>2</sup> Banking holding represents the highest possible holding association of the banking group which is not a bank.

Article 10 to 20 and Article 94 to 101, which became applicable from July 1, 2006, is *lex specialis*, regarding the regulation of the corporative management in banking. The Law on banking drew us closer to the international integrations, regarding the fact that the legislator accomplished harmonization in the sphere of banking legal regulations with the regulations of European Union (Directive 2000/ 12 EC), principles and definitions established by supervision [6,7,8]. The Basel Committee for banking supervision<sup>3</sup> (Basel I, Basel II) [9,10,11,12]: *Ratio legis* of the Law on Banks[13,14,15] is directed to the enabling of the breakthrough of the domestic banks on the foreign banking market, and to the inflow of the foreign capital with the provision of the high degree of the legal security which is necessary for the foreign investors, which comes out from the legal solutions, postulated on the system of the corporate management of the banks and instrumental zing of the principles and standards based not only on the Basel documents, but on the Principles of the corporative management of OECD[16].

Via transitional provisions of the Law on Banks harmonization is envisaged of the other financial organizations with the provisions of the Law, by which there disappearance from the economic reality is caused. Other financial organizations which were founded in concordance with the Law on banks and other financial organizations in conformity with the current legislation were obliged to harmonize their business activities, organization and acts with the positive provisions of the Law, whereas affiliations and representative offices of the foreign banks had an obligation to harmonize their activities until December 10, 2006 at the latest, regarding the fact that the possibility of the existence of the subsidiary of the foreign bank ( affiliation) is no longer envisaged by the Law[17].

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<sup>3</sup> Basel committee for banking supervision was established in 1975 by the governors of the central banks of the developed countries of the G-10 group and it is comprised of financial leaders of twelve countries ( eight from the countries of EU and one representative from the USA, Canada, Japan and Switzerland) who meet every three months in the Bank for International settlement in Basel, and initiate and render regulations which become obligatory only when adopted by the Parliaments of those countries. However, these regulations are important mainly because they are the results of the consultations with financial experts of the world greatest banks.

### **3.2 Subsidiary application of the company law and the Codex of corporate management**

The Law on Commercial Associations of the Republic of Serbia [18] represents the basic regulatory framework with us, regarding the company law. The structure of the corporative management conditions the positions within the Company and authorizations regarding the rendering of different business decisions. Management board of the listed joint stock company may render its own written behavior codex or to adopt some other codex, which would be applied to the associations of the capital management [19], so the Serbian Chamber of Commerce rendered the Codex of Corporative Management, for the purpose of creating good business customs, filling in of the legal gaps and interpreting of the ambiguous legal provisions.

By means of the Codex of corporative management only the management rights of the shareholders in the Association have been regulated, for the purpose of abetment of performing the personal rights of the shareholders, so the issues that are being in focus are convocation of the meeting of the Assembly of the shareholders, voting, the manner of work of the Assembly of shareholders and obligation of the institutional shareholders. The focus of the corporative management is creating of rules by which the shareholders are being protected from management if the very same is not acting in their favor, so we may grade in the positive manner the world tendencies in the regulation of the corporative management [20], which we notice in the Codex of the corporative management.

### **3.3 The position of the domestic central bank in the banking system of the Republic of Serbia**

In our banking system, The National bank of Serbia has, as one of the segments of the corporative management, a significant impact. Our Central bank leads conservative – restrictive politics, which synergic alongside the legal refinement of the corporative system in single business banks creates business climate which is more resistant to impacts of global recession.

Contrary to the liberalized approach regarding the control of banks, which has a characteristic of introducing quarterly reports, instead of regular control and control on the spot, locating the focus in coordination of the corporative management as for

the directors, insisting on self - discipline of the banks (minimum usage of prudential regulation both by prescribing an obligatory minimum capital and limiting of the credits as for the connecting entities), absence of the deposit insurance for the purpose of strengthening the market discipline, as well as strengthening the business activities transparency which is being achieved by publishing the reports that are certified by the Directors, our Law on banks prescribes that not a single entity may acquire, without a prior consent given by the National bank of Serbia, direct or indirect ownership in the bank which provides him from 5% to 20%, more than 20% up to 33%, more than 33% up to 50% and more than 50% voting rights, by which the limit in relation to the demand of the consent given by the Central bank for the acquirement of the ownership in the bank is lowered from 15% onto 5%, and it has been expanded from a direct onto indirect ownership in relation to the previously valid law.

Beside the conditions that are envisaged by the Law for all the acquirers in case when the acquirer is a foreign entity from financial sector additional conditions are required which refer to the possibility that the control on the consolidated base may be conducted towards the very same entity.

If a certain entity acquires participation in the bank above the allowed percentage without the prior consent, National bank of Serbia has an authorization to order the very entity to alienate the ownership, i.e. it will forbid him, directly or indirectly, to render his voting rights in the bank and to have influence on management of the bank or on business politics of the bank, and if that entity does not alienate his ownership within the envisaged term, the legal act on the basis of which the ownership is acquired is void. In that manner, a number of weaknesses has been prevented, which are being visible in the liberalized system of control where any possible bankruptcy of the bank and activating of the obligations of the parent control, legislator tries to mitigate by the existence of two independent directors in the management structure of the bank [21].

## **4 Banking system in the function of development of the financial market**

### **4.1 Fluctuations on the market of money and capital and the response of the banking system**

Liquidity of the domestic banking system is the consequence of the conservative politics of our

central bank and the responsibility of a legislator, which is being manifested even with issuing a working permit to the active control over any member of the of the banking group where the very bank is, and an insight into the business books and other documentation of the legal entities who are with the bank where the control is performed connected by means of property, managing and business relations, adequate control of the bank on the consolidate basis, existence of internal auditing, but and external auditor.<sup>4</sup>

As a difference from world experience, especially of the countries with developed markets of money and capital, our legislator placed in the background insisting of the self discipline of the banks, stressed an obligation of insurance, deposits for the purpose of strengthening the market discipline, and it especially stipulated the frameworks in detail, which will ensure the strengthening of the transparency of the business, by which the fluctuations at the market of money are reduced. Effects of the global recession are up to now insignificant in comparison to the world experiences, mainly due to the fact that the market of money and capital are still not developed with us, which is spotted in the period of the culmination of the global recession.<sup>5</sup>

<sup>4</sup> Results of the so called stress tests conducted within the framework of Financial Sector Support Program (FSSP), and published at the beginning of October last year, showed that as for banks in Serbia, in case of the presupposed pessimistic macroeconomic scenario for 2009 and 2010, there is no need for extraordinary, preventive do capitalization. Within the scope of regular follow-up of the financial condition of the banks and the stability of the banking sector, National bank of Serbia updated macroeconomic assumptions and stress tests of the banking sector regarding the credit risk for 2010 and 2011, on the sample of 16 banks which constitute over 80% of the balance sum of the banking sector. The accomplished results also show that the banking sector is highly capitalized and resistant to macroeconomic shocks, i.e. that it can, with the existing capital and reserves, absorb all the projected losses, and that it can, upon that, remain above the regulatory minimum. Even in the case of the realization of the assumed pessimistic scenario, the indicator of the capital adequacy would still remain above the prescribed minimum in the amount of 12%, i.e. with the initial 22, 36% in 2010, would be lowered to 16, 04%, and in 2011 it would be lowered on 15, 16%." Details are taken from the Report of the National bank of Serbia " Banking system highly capitalized and resistant to the macroeconomic shocks", which was published on January 13, 2010 on the web site [www.nbs.rs](http://www.nbs.rs).

<sup>5</sup> "Despite the increase of GDP from 5,4 % in 2008., rapid spreading of the effects of global turbulences has caused, even in the fourth quarter of the same year, the fall in the economy of Serbia in the amount of 6, 55 ( on the annual level). The scope and the duration of such a contraction in Serbia will be determined by several factors. Firstly, the fall

For example, in empirical research of comparative review of impact of central banks on the dynamics of fluctuations in the financial markets some scientists asked how quickly central banks' intervention operations impact the foreign exchange market. They use high-frequency intra-daily data to examine the relationship between the efficacy of intervention operations and the "state of the market" at the moment that the operation is made public. „The tests explore whether aspects of market microstructure influence the effectiveness of central bank intervention.

In particular, this study examines the importance of the "state of the foreign exchange market" at the moment that central bank intervention operations (and macro announcements) are made public to traders. The empirical evidence indicates that Fed intervention operations significantly influenced both USD–DEM and USD–JPY intra-day returns and volatility. The evidence also suggests that some traders know at least 1 h prior to the Reuters' report that a central bank is intervening, and the effects of interventions generally persist, at least to the end of the day. There is evidence of mean reversion in returns subsequent to Fed interventions particularly in the USD–DEM market, suggesting some initial over-reaction by the market. Fed interventions that occurred when the US and European markets are open (a proxy for relatively heavy trading volume periods), and in the aftermath of macro announcements had relatively larger effects than those that occurred at other times in the day. Coordinated interventions were also found to have large effects on exchange rates. There is little evidence in the FFX data that specific large banks

in the USD–DEM and USD–JPY markets systematically act as price leaders in reaction to news of Fed intervention.

Overall, the tests in the paper support the hypothesis that central bank interventions influence intra-daily foreign exchange returns and volatility. The results also support the hypothesis that the efficacy of central bank intervention depends on the characteristics of the foreign exchange market at the time the operations become known to traders. The evidence suggests that policy makers that hope to have the largest intra-daily influence on exchange rate returns using intervention operations should time interventions to take place when trading volume is high (when both London and New York are trading) in the aftermath of the release of other macroeconomic news, and when other central banks are also in the market (intervening in the same direction).“ [22,23,24]

A positive picture, which is visible in the review of the development of our banking system, as a catalyst of the development of the market of money and capital is the result alongside the conservative politics of the central bank,[25] which stipulates the standards in conformity with which the business banks are obliged to identify, measure and estimate the risks to which they are being exposed in their business activities and to manage the very risks: risk of liquidity<sup>6</sup>, credit risk<sup>7</sup>, interest and foreign currency risk<sup>8</sup> and other market risks, risks of the bank exposure towards one entity or a group of related entities, risks of investing of the bank in other legal entities and basic assets<sup>9</sup>, risks that relate to the country of origin of the entity towards whom

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of world ( and afterwards, the domestic) demand, especially regarding metal, as a key element of Serbian export, has strongly affected industrial production, which, even in the fourth quarter, due to the decrease in sale, had a fall of 5,1 % in relation to the same quarter of the previous year. The fall, with increased intensity, continued in the first quarter of this year, so the industrial production at the end of March, view interannually, is decreased for the amount of even 17, 0%Heavy negative impact also comes from interannual fall in retail and wholesale operations in the amount of 145, especially if one has on mind that this sector, alongside the financial intermediation, telecommunications and transportation, was the main catalyst of the economic growth in Serbia in the last few years. Secondly, capital inflow has been visibly slow from October 2008. In the last quarter a scope of direct foreign investments has been significantly lowered, and the debt level of the companies abroad fell on the lowest possible level<sup>9</sup> due to inconvenient conditions regarding the scope, term and price of foreign credits). These trends mainly were the ones that did harm to the liquidity”- Data taken from the “ Report on the situation in the financial system “ of the National bank of Serbia as of August 7, 2009, page 14., published on the web site [www.nbs.rs](http://www.nbs.rs).

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<sup>6</sup> Central bank stimulated and supported liquidity by approving the credits in dinars with a maturity of up to one year and foreign currency swap transactions on inter banking foreign currency market among the banks, whereas the short term liquidity credits are connected for the pledge of securities that were issued by the Central bank and The Republic of Serbia, free foreign currency assets that the bank pledges on a separate account with the Central bank, as well as demands of the bank on the basis of approved mortgage credits, and demands towards the Republic of Serbia and budgetary beneficiaries. Central bank stimulates the liquidity also via the swap trading of foreign currencies.

<sup>7</sup> Reasons for the fall of the credit expansion as of the last quarter of 2008, are various starting from the decreased demand for credits, negative macroeconomic situation and its reflecting on the sources of liquidity, and quality management of risks from the side of the banks.

<sup>8</sup> Having in mind a high currency indexing of the balance of banking sector, depreciation of the domestic currency would not be desirable, and the positive accomplishment in that direction will surely have the program with IMF approved in May 2009.

<sup>9</sup> Diminished liquidity designates the real sector, which is turned to credits.

the bank is exposed, operative risk, including the legal risk as well, as well as the risk of unsuitable management of information and other technologies that are important for business operations of the bank and multiple security of the placement of business banks via security assets.

For example, in empirical research of comparative review of impact of central banks on the dynamics of fluctuations in the financial markets some scientists found that more independent central banks are associated with lower levels of inflation. This note investigates whether one can find a correlation between central bank independence and the level and variability of real economic variables such as growth, unemployment, and real interest rates. Their conclusions are that while central bank independence promotes price stability, it has no measurable impact on real economic performance. „These results suggest that the monetary discipline associated with central bank independence reduces the level and variability of inflation but does not have either large benefits or costs in terms of real macroeconomic performance.

This observation represents at least a fragment of evidence in support of theories emphasizing the neutrality of money. Those findings also have implications for the ongoing debate over the optimal rules governing monetary policy. Most obviously they suggest the economic performance merits of central bank independence. More subtly, they raise questions about the benefits of rule-based monetary policies. Advocates of rule-based policies typically stress that they avoid dynamic consistency inflation. The findings here suggest that it is possible for nations to achieve these benefits without setting a monetary rule by insulating the central bank from political control.

While it is possible that rule based performance would be superior to discretionary performance on stabilization grounds, Summers (1988) notes a number of reasons why this is unlikely including unforeseen events and the possibility of an economy getting trapped in the neighborhood of a suboptimal equilibrium around which stabilization would be undesirable. The results here are not conclusive in the sense that we have looked at the data only in a very straightforward way; more detailed analysis of the relation between central bank independence and real performance is warranted.

For example, it might be useful to use central bank independence as an instrument in studying the effects of intercountry differences in monetary policy, or to include additional control variables of the type considered in Summers and Wadwhani (1989) in assessing the impact of central bank

independence on economic performance. Furthermore, the degree of central bank independence is only one of several institutional factors, exchange rate arrangements, and exogenous shocks that influence economic performance in different countries. These results here do, however, create some presumption that the inflation benefits of central bank independence are likely to outweigh any output costs. Finally, the degree of central bank independence may be an endogenous variable. For instance, the historical experience of a hyperinflation in Germany may have raised the German public aversion to inflation and its propensity to have an independent central bank committed to price stability.

Within the sample period considered in this study, it is a reasonable assumption to hold central bank laws as constant and exogenous. A more "historical" analysis concerned with the long-term evolution of institutional arrangements should tackle issues related to the joint endogeneity between economic outcomes and institutions“[26,27,28,29].

Prevention of the depreciation of the exchange rate of a dinar is certainly very important for balancing the financial stability on macro level, which is very much contributed by the program with IMF as of May 2009, and agreement with the business banks within the scope of the so called Vienna initiative, and the resultants give a consequence and that is remaining on the level of exposure dating the end of 2008., and decrease in the risk of the country<sup>10</sup>.

Inversely, crisis would spill over onto the market of money and capital [30], since due to the difficult payment of the due annuities, dislocation of the

<sup>10</sup> Reserves in foreign currencies of the National bank of Serbia are lowered for the amount of 130, 6 million Euros in March and on March 31; they amounted to 10.444, 3 million Euros. Acc. to the preliminary data, net reserves in foreign currencies on the very same day amounted to 6.181, 0 million Euros. Net reserves in foreign currencies present reserves in foreign currencies reduced for the foreign currency assets which the banks keep with the National bank of Serbia and also the assets drawn as for the credit from IMF. Expressed in dollars, reserves in foreign currencies at the end of March amounted to 14.007, 9 million, and such level provides the coverage of the money mass M1 in the amount of 462 percent. At the same time, reserves in foreign currencies cover a nine-month need in relation to the import of goods and services. As the reserves in foreign currencies of the banks, on the last day of March amounted to 1.530, 7 million Euros, overall reserves in foreign currencies of the country were 11.975, 0 million Euros, i.e. 16.060, 9 million dollars.” – Data taken from the Article “Balance of the reserves in foreign currencies and movements in inter banking foreign currency market in March 2010”, published on April 15, 2010 on the web site [www.nbs.rs](http://www.nbs.rs).

focus of payment regarding the immovable properties, whose price may fall, may cause the losses with the business banks, however having in mind a corporative structure of our business banks, and the control by the domestic central bank, all that is coordinated by measures which mainly regulate the scope of credit activity of the banks and the level of debt [31].

In interactive action between the banking system and economy, unfavorable occurrences may happen in the banking system, however in the economy as well, and especially at the market of money and capital, since the effects of the global recession are manifested by spilling over of the effects of the financial crisis on the real sector of economy.<sup>11</sup> Viewed from the legal aspect, politics of our central bank has already given, by means of its preventative attitude, results, regarding the fact that the modern banking law created corporative structure, and the Central bank supervised overall operations of all business banks [32]. In the economic sense, different measures gave the results.<sup>12</sup>

Slower growth of the banking system has inevitably caused stag native fluctuations at the market of money and capital, which means that the progress may be expected only when the banking

system is stabilized, with weakening of the effects of global recession, which might be expected even during the current year [33].

## 4.2 Specificity of the domestic mortgage and financial market

Banking system of a country and its efficiency and functioning represent one of the basic indicators, how successful the economy of that country is, due to the fact that the basic role of the banking system is mobilizing of assets and their directing into different investments [34]. Banking system of the Republic of Serbia, especially in the last ten years, endured numerous positive changes, which we see in the appearance and development of new financial instruments, methodology of the risk protection and abatement of the development of the corporative management. These are the results of the global influences of the developed financial markets [35].

Mortgage market is a segment of the market of capital established on the mutual action of the markets of the credit and financial instruments directly or indirectly provided by the mortgage on the immovable properties or movables that are equal to the immovable properties, such as ships and aircrafts. With the development of the banking system, creation of the stable legal framework, and inflow of foreign investments, conditions are also met for the development of both mortgage and financial market in Serbia.

Preconditions for the development of the primary mortgage market are relatively fulfilled by bringing the Law on fundamentals of ownership-legal relations [36], Law on sea and domestic navigation [37], Law on contractual obligations [38] and the Law on contractual obligations and basic material-legal relations in aircraft navigation [39], and new Law on mortgage [40]. Development of the secondary mortgage market is connected with the Law on market of securities and other financial instruments [41] and the Law on National Corporation for insurance of household credits [42].

Development of the primary mortgage market contributed also the Law on executive procedure [43], but more quality solutions will certainly occur by rendering the new Law on executive procedure, which is presented to the professionals in the form of draft.

The draft of the Law on executive procedure has numerous solutions such as those which occur in modern world executive laws. The law is especially harmonized with the organization of professional executants and accelerated procedure of the sale of

<sup>11</sup> So the predictions for the current year are related to the "continuation of the process of disinflation (target for December 2010. is  $6 \pm 2\%$ ), preservation of the financial stability, growth of economic activity (1,5%), on the basis of the recovery of the export demand (with the most significant export partners), and growth of investments, strengthening of the macroeconomic and financial stability thanks to the prolongation of the arrangement with IMF, and high foreign currency reserves of NBS, provision of the assets for keeping of the macroeconomic stability and project support from other IFO (World bank, EIB, EBRD...), correction of the outlook in the view of the credit rating of a country and the fall of a premium of risk – more convenient financing of economy and state." – Data taken from the Article "Current monetary and macroeconomic movements", published on December 29, 2009, on the web site [www.nbs.rs](http://www.nbs.rs).

<sup>12</sup> As a support to the Program of measures of the Government of RS, decision was brought by the Central bank that credits should be excluded from the base for the calculation of the obligatory reserve that the banks, in conformity with that program, approved to the companies (for investments) and to the citizens (for purchase of consumer durables produced in Serbia). Further, banks were given a possibility that the term for the payment of the cash credits which were approved prior to September 30, 2008., is prolonged up to the 12 months from the initially stipulated maturity date, under the condition that it is converted in dinars, and that is without additional expenses for the debtor. Finally, banks do not anymore have a need to demand from physical entities to place a deposit in the amount of 30% of the credit value (for the demands released from the beginning of 2009) regarding the fact that NBS freed them from the obligation to classify these demands as worse ones.

immovable properties, where as a difference from the current law, the debtor does not have a possibility of stating a legal remedy up to the sale, which are being excellent solutions view from the aspect of the development of the primary mortgage market. The gist of the secondary mortgage market is in creating of a mechanism for renewal of the credit potential and lowering of the risks of the banks or other institutions which issue mortgage credits. Apart from the legislative regulation for the development of the mortgage market, other measures are necessary as well, such as updating of land registry books, denationalization of the city constructional land, but also establishment of the system of evaluation of immovable properties on the basis of universal methodology, by means of which certain risks are lowered or completely extracted regarding the procedure of approving of mortgage credits, and thus interest rates are lowered and the scope of mortgage crediting is increased.

Today, in the world, there are two basic models of such a market.<sup>13</sup> Countries in transition declared, within their own legislation and in a larger scope, for the system of mortgage bonds, mainly due to the lack of regulation for the process of mortgage transfer which is necessary for mortgage-backed securities. Thus, conditions are created for the extraction of risks of keeping a significant part of means in the assets of business banks in the form of mortgage credits and standards of credit evaluation and pledging procedures are established that would directly influence the increase of efficiency of the primary mortgage market. That would create more durable banking system with better risk diversification and more efficient system of approving of mortgage credits. Our banking system is also exposed to the world global influences on the principle of "joint vessels", both regarding the issue of positive and negative influences, which is especially visible when the world financial crisis occurred, which got on the proportions of global recession<sup>14</sup> and thus refuted such tendencies in

contemporary banking.<sup>15</sup> Therefore, it is necessary in further development of mortgage and financial markets to bear in mind the experiences of the developed countries, in order to prevent possible problems in their functioning [31]. Current financial crisis, which is the biggest from the thirties of the previous century, which started by American collapse in mortgage credits in August 2007 as a consequence of discrepancy of supply and demand [44], since the banks, in their rush for gaining profit, identified new target group, users of credit, who do not have adequate credit capability, but possess an immovable property, so they calculated that higher interest rates of the credits approved to these users will cover higher risk [45]. That was a trigger for the set in of the global recession<sup>16</sup>, view from economic

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of unemployed, fall in the development of industrial production and purchasing power of citizens. In case when the global growth falls below 3% acc. to the interpretations of the International monetary fund, there is a global recession, which usually occurs in the cycle of 8 to 10 years and it has a characteristic of a negative economic growth. The fall of prices at the market of shares can be one of the indicators of the forthcoming recession, but also a sign of weakness at the market of immovable properties, which is known in economy as The Halfway rule, in conformity with which, the investors begin with economic recovery upon the expiry of the half of the period of the recession.

<sup>15</sup> A very picturesque example is a bank, which has, within its assets a long term credit, and it performs business operations in the country with the developed mortgage market. The bank will, for the purpose of risk reduction, that is a characteristic of the long term credit, sell such credits, as a rule, to the state agency, which is a typical American model, which forms pulls of the standardized mortgage credits and on the base of such pulls securitization of mortgage securities is performed. The owner of the pull of the mortgage credit has assets which is insured in a triple manner and that is by the user of the credit, by mortgage on the immovable property and by the guarantee of the state agency, so due to the low risk, an issuer of the mortgage securities will pay low interest to the buyers of the mortgage securities. In the financial chain, which is being formed, everybody earns. The owner of the pull and the issuer of the mortgage securities earn even at the purchase of the credit from the bank with a discount, and afterwards when by securitization of these securities and by paying a low interest rate mobilized the assets from the market, and then by higher interest it directed them to the banks, which already earned by selling of credits, by which they acquired means for new investments. Buyers of the securities earned by purchasing of these low risk securities, whereas the citizens may experience the positive effect of these transactions through lowering of the interest rates with mortgage credits, and the state interest is of course the development of the financial markets the Republic of Serbia.

<sup>16</sup> Let's review the chronology of the recessions in the economy of the USA so far, regarding their significant participation in the amount of 21% in the world economy, by which it significantly influences the global recession. In 16 recessions in the USA from 1919, average duration of the recession was 13 months, so if we view from this angle the current

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<sup>13</sup> Anglo/ Saxon model presupposes the sale of the mortgage credits in such a manner that the credit is dislocated from the bank balance into the balance of a specialized state and (para) state agencies or specialized legal entities, so by securitization we get mortgage-backed securities. European model is mainly based on German experience, where specialized mortgage banks issue securities, which are in fact mortgage bonds, and mortgage credits remain in the balance of the bank as an on-balance sheet securitization.

<sup>14</sup> In economy, under the recession it is presupposed the period of the reduced economic activity and reduction of the overall GDP viewed in the time interval of the last six months. Recession is manifested by the stoppage in the growth of GDP, salaries of the employees, the increase in the number

aspect, regarding the fact that the period occurred when higher number of the credit users did not pay due annuities. Views from the legal aspect, actuators of recession are also the drawbacks in the organization of the corporative system of management, both in single banks, and in coordination of central banks [46]. The fact is that the global recession in Serbia, in comparison to the world experiences was not manifested in enormous proportions, only because the banking system just started to exist, where both mortgage and financial markets are on the low level of development.

## 5 Conclusions

Efficiency of the banking system of the state is an adequate parameter for evaluating the dynamics in the development of economy of that country. Since the banks, in accordance with company's laws are organized as joint stock companies, it is clear that all mentioned imperfections in corporate management of commercial associations are reflected at bank's business activity. Taking into account that the essence of corporate management in banking is finding the best way for the executive board and management to establish corporate goals, well regulated corporative system, by the law, surely contributes to the stability of banking system in which the control by the central bank is performed also by the reports, but primarily at the spot, where as the brunt in coordination of corporate management is located at bank authorities and not only at the directors.

The role of central banks is very important in macro and micro influences on the development of economy of every country. In empirical research of comparative review of impact of central banks on the dynamics of fluctuations in the financial markets some scientists found that more independent central banks are associated with lower levels of inflation. Conclusions are these: while central bank independence promotes price stability, it has no

measurable impact on real economic performance. These results suggest that the monetary discipline associated with central bank independence reduces the level and variability of inflation but does not have either large benefits or costs in terms of real macroeconomic performance. Furthermore, the degree of central bank independence is only one of several institutional factors, exchange rate arrangements, and exogenous shocks that influence economic performance in different countries. These results here do, however, create some presumption that the inflation benefits of central bank independence are likely to outweigh any output costs.

Finally, the degree of central bank independence may be an endogenous variable. The domestic legislator has put in the background the need to insist on the self-discipline of the banks, putting the accent on the obligation of ensuring deposits in order to strengthen market discipline, and envisaged the frames in extreme details, which will enable the strengthening business transparency.

Positive image in the form of stagnation, which is visible in retrospect of the dynamics of development of our banking system and mortgage and financial market is a product alongside the conservative policy of the central bank and multiple placement security of business banks with the means of security., but with the specific domestic business climate, since the financial and mortgage markets are still in the beginning. However the dynamics of the development of mortgage and financial market completely depends on stability and development of banking sector.

In empirical research of comparative review of impact of central banks on the dynamics of fluctuations in the financial markets some scientists asked how quickly do central bank's intervention operations impact the foreign exchange market. They use high-frequency intra-daily data to examine the relationship between the efficacy of intervention operations and the "state of the market" at the moment that the operation is made public. The tests explore whether aspects of market microstructure influence the effectiveness of central bank intervention. The results also support the hypothesis that the efficacy of central bank intervention depends on the characteristics of the foreign exchange market at the time the operations become known to traders. The evidence suggests that policy makers that hope to have the largest intra-daily influence on exchange rate returns using intervention operations should time interventions to take place when trading volume is high (when both London and New York are trading) in the aftermath

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recession, we will see that in November 2008 the market of shares experienced the most significant fall, which is the indicator that the recession will last much longer. From 1854, in the economy of the USA, economists spotted 32 cycles of economic oscillations, and from 1980, they spotted an overall number eight periods of negative economic growth and that is from January until July 1980, and from July 1981 until November 1982., continuously for two years, then from July 1990 until March 1991, from March 2001 until November 2001 and the current recession, which started in December 2007, culminated at the market of shares in November 2008 and it is still going on.

of the release of other macroeconomic news, and when other central banks are also in the market (intervening in the same direction). In their empirical research some scientists identify circumstances in which central bank interventions influence exchange rates.

So, we can conclude these: by passing the modern law, as is the case with the Law on Banks, and the laws which regulate mortgage and financial market, our complete financial system has been stabilized by the harmonization of regulations and guided into the direction of progressive development, which inevitably influences the business trends in a positive way, although the global recession imposes specific business rules. Domestic central bank has positive influence on the dynamics of fluctuations in domestic financial market. By all means it is necessary to carry on with the processes that have already been started which are modeled by the standards of corporative management set up by the Basel Committee on Banking Supervision and OECD. It is necessary to keep also some unique features of our banking and financial system adjusted to our economic reality.

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