Faculty of Economics, University of Niš, 16 October 2015

International Scientific Conference

CHALLENGES IN BUSINESS AND ECONOMICS: GROWTH, COMPETITIVENESS AND INNOVATIONS

ELEMENTS OF MORAL HAZARD IN A BAILOUT SCHEME OF SERBIAN BANKS

Marija Knežević *

Vladimir Mirković*

Abstract: *As a consequence of poor management in certain banks, National bank of Serbia took of operational license in 4 banks, such as: Nova Agrobanka, Razvojna banka Vojvodine, Privredna banka Beograd and Univerzal banka, while Srpska banka was restructured in order to avoid its bankruptcy. Collapse of mentioned banks raises several questions which refer to existence of moral hazard problem within banks and afterwards in the process of bailout of state-owned banks. Credibility of Serbian banking system was primarily ensured by existence of deposit insurance scheme with crucial question: whether equal insurance premiums for all banks are appropriate? Experience from developed banking systems together with effects of "too big to fail theory, could be used for explanation of inherent and increased moral hazard. This paper considers effect of moral hazard on banking industry, emphasizing examples of Serbian state-owned banks and their collapse mainly due to the poor risk management.*

Keywords*: moral hazard, information asymmetry, state-owned banks, risk management, too big to fail theory.*

1. Introduction

Banking systems worldwide were seriously hit by global financial crisis effects from 2007-2010. Additionally, crisis in euro zone together with deficiencies in risk management processes seriously affected Serbian banking industry. As a consequence of bad management in certain banks, National bank of Serbia took off operating licenses in 4 Serbian banks: 3 of them were in majority ownership of Republic of Serbia (Nova Agrobanka, Razvojna banka Vojvodine and Privredna banka Beograd), while Univerzal banka was the first private bank which lost its license. Assets of those banks were transferred to also state-owned Banka Postanska Stedionica Beograd. At the end of 2014, one more state owned and controlled bank - Srpska banka - was restructured in order to

* Economists Association of Belgrade, Serbia;

✉ marijaknezevic@yahoo.com, vladamirkovic@orion.rs

UDC 347.734(497.11)

avoid its bankruptcy. Collapse of mentioned banks is closely related to existence of moral hazard problem within banks, especially in the process of bailout of state-owned banks.

2. Overview of the Literature

The concept of moral hazard is closely connected to the banking industry, although it contains elements of psychology and philosophy. It was firstly described in insurance industry in 17^{th} century when it became of crucial importance prevention of fraud in fire insurance. Still, it took almost two centuries, until 1865, when this idiom was firstly recorded and defined as “the danger proceeding from motives to destroy property by fire, or permit its destruction” (Rowell, Luke, 2012). Insurance companies and thus insurance literature through centuries were concerned about incentives of insured to neglect insured property due to the fact that damage would be paid by other party i.e. insurance.

In economic literature, moral hazard is often related to information asymmetry. In contrast to insurance where it has sometimes pejorative connotation, economics science emphasizes the role of incentives in broad ranges of principle-agent problems (Rowell, Luke, 2012). It is regarded as risk that exists due to information asymmetry on the financial markets. However, there is no unique definition of this term, so we will mention only few of them that support main purpose of this paper.

According to Mishkin, asymmetric information between borrowers and lenders results in moral hazard problem. It “occurs after a loan is extended when the lender is subjected to the hazard in which the borrower has an incentive to engage in activities that are undesirable (immoral) from the lender's point of view, that is, activities that make it less likely that the loan will be repaid” (Mishkin, 1992). Moreover, “moral hazard occurs because the borrower have incentives to invest in projects with high risk in which the borrower does well if project succeeds but the lender bears most of the loss if the project fails. Also the borrower have incentives to misallocate funds for his personal use, to shirk just not work very hard or to undertake investments in unprofitable projects that increase his power or stature” (Mishkin, 1992).

Moral hazard occurs after the transaction has been made in contrast to adverse selection that occurs before the transaction has been made and which is also consequence of existing information asymmetry. Both consequences of information asymmetry, could lead to inefficient distribution of resources on the financial market and thus lead to financial crisis if we understand it as “a disruption to financial markets in which adverse selection and moral hazard problems become much worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investments opportunities”. Main factors from economic environment: interest rates increase, stock market decline and increases in uncertainty, bank panics and unanticipated declines in the aggregate price level can lead to worsening of moral hazard and adverse selection.

Other authors have also examined the influence of moral hazard on financial crisis. Paul Krugman is one them and after several financial crisis, that were originated by moral hazard, he states that moral hazard is “any situation in which one person makes the decision about how much risk to take, while someone else bears the cost if things go badly” (Krugman, 2009, 37). The key words in Krugman’s definition are “how much risk to take” meaning that taking excessive risk without any consequences definitely causes moral hazard. Avoiding of moral aspects in investment decision making led to problems which could effects whole economy. Moral hazard could be visible in banking industry, especially in period of Great Depression 1930s and most recent global financial crisis 2008, when behavior of most of financial intermediaries could not be described as “moral”.

In banking industry, moral hazard is usually related to credit risk decisions. There are tools that lenders (usually banks) could implement in order to mitigate moral hazard problem like loan collaterals, introduction of restrictive covenants and information exchange with other financial intermediaries about clients. On the other hand, it is supported especially with deposit insurance schemes and lender of last resort function of central banks that are considered to be instruments that strengthen the resilience and stability of financial system. Deposit insurance scheme has a very important role in process of stability maintenance and avoidance of negative repercussions for the whole economy. However, deposit insurance scheme has disadvantages, such as:

1. Leading to moral hazard;
2. Promoting “Too big to fail” theory – meaning that bankers percept government behavior in case of failure: namely, bankers took excessive risk consciously in order to make large profit due to their considerations that in case of failure they will be bailout by government. Those perceptions were correct, mainly due to fact that government was forced to implement bailout as those financial institutions are vital for whole economy. Prevention of “too big to fail” theory presence could be made by sound and strict bank supervision and harder regulation. (Thismatter.com, 2015)

Due to the fact that deposits are insured to some amount by government or its agencies, banks’ management could have incentives to take higher risks than they are able to cover as the potential loss of depositors if things go bad will be paid by someone else, which is typical moral hazard. During the last financial crisis, in a number of countries insured amount of deposits was increased in order to avoid large losses that could harm the whole financial system. The aim of increasing insured amount to even full amount temporarily or permanently was to prevent primarily systemic deposit run. Both good and bad banks could experience deposit run in the period of financial crisis or raised uncertainty on the market. Because small depositors usually are not informed about banks performances but they just react under pressure of bad news. In case of only individual bank deposit run, deposits are redistributed on the market.

Each central bank usually has function of the lender of last resort for the purpose of maintaining stability in financial system. Lender of last resort function of central banks supports moral hazard in the similar way as deposit insurance. Due to the fact that bank could be provided with central banks funds in case of liquidity problems, management of the bank could have incentives to expose bank to higher liquidity risk, knowing that central bank would help, even at higher costs. (Cordella, Yeyati, 2003) Abovementioned function put troubled banks in privileged position as they are entering into riskier investments.

One more factor that worsen moral hazard is the problem of “too big to fail” theory. The most quoted definition of “too big to fail” was given by ex-chairman of FED (Federal Reserve) Ben Bernanke, who stressed that “A too-big-to-fail firm is one whose size, complexity, interconnectedness, and critical functions are such that, should the firm go unexpectedly into liquidation, the rest of the financial system and the economy would face severe adverse consequences." (Bernanke, 2010)

Management of those banks that are considered to be of crucial importance for the functioning of the whole national or even international market could expose banks to higher risk, knowing that if their expectations were good they would earn high profit, if they were wrong, the cost of their bad and riskier decisions would be paid by government in order to prevent systemic losses on the market. That was the case in recent years in many countries where taxpayers paid the cost of excessive risk.

There are lot of examples of investment decisions that worsen moral hazard and rely on “too big to fail” theory although excessive risk taking is hidden. One of them is the example of the case of well-known insurance company AIG (American International Group). AIG had the highest credit rating as it was assessed by credit rating agencies, but this company was involved in derivative trading i.e. trading with complicated products which bear higher returns but also higher inevitable risk. AIG sold credit default swaps (hereinafter: CDS) on mortgage-backed securities, while traders who sold CDS didn’t bear the risk but they were motivated with enormous bonuses. The risk was on AIG side, but AIG also was in status of “too big to fail” so in the worst case scenario, the government would bailout them, due to interconnections and transaction made with a most of banks in USA. At the end government bailout AIG, while traders with CDS expressed moral hazard behavior. If government would not save AIG, the whole American banking system would be jeopardized. (Thismatter.com, 2015)

As presented in the example, some financial institutions are from the greatest importance for the stability of financial system that from governmental/central bank’s point of view they should be bailout and receive beneficiaries in order to avoid bankruptcy. Bailout would be appropriate if there was not part which includes taking excessive risk without any consequence. As it is inherent for their behavior, we could confirm the presence of moral hazard which bears instability into financial system. Consequently, credibility of the financial system is deteriorated when described behavior becomes pattern for other financial institutions. Final and non-desired result could be collapse of whole banking system and due to interconnections with other segments, in collapse of whole economy.

Experience from developed banking systems together with effects of “too big to fail” theory could be used for explanation of inherent and increased moral hazard in Serbian banking system, with regards to specifics impersonated in obvious political pressures.

3. Moral Hazard in Serbian Banking System

In Serbian financial market, moral hazard is one of the most important risks. The transition period of Serbian banks, which started during the last decade of 20th century, resulted in several banks bankruptcies. The main reason was moral hazard problem and its consequences accompanied with inefficient regulation and bank supervision. Majority of state owned banks were formally privatized and transferred into so-called social ownership without clear distinction between real owners – shareholders’ interests and management structure.

Moreover, main ownerships of banks were enterprises that in the same time were the most important credit clients. That led to the situation in which owners were interested not in dividends and capital gains but rather in achieving gains through negative interest rate margins. Rational capital allocation was disabled and increase in non-performing loans was even higher than the rise of total assets, because loans were disbursed to the clients for which managers knew that they will not be repaid (moral hazard). In order to maintain business, banks increased capital through shares issues, but high losses resulted in shares prices decline and at the end of the day, banking system collapsed (Savić, 2012). Crash of several big banks resulted in private individuals saving devastation and lost confidence in banking system.

Deposit insurance scheme in Serbia was introduced in 2005 and it was one of the important factors of private individuals deposit volume increase and confidence recovery in banking system. Following experiences of some developed countries, after financial turmoil in 2008, maximum insured amount for individual account in the bank was increased from EUR 15.000 to EUR 50.000 in order to prevent systematic deposit outflow, which was of crucial importance for depositors' confidence. In small and narrow financial markets as is the case of Serbian banking market, deposit run from one individual bank due to its bad performances or disturbing news about it, more likely would transfer on other banks. On the other hand, insurance premium for all banks is the same. After four years, insurance premium that banks are paying was also increased (from 0.1% to 0.3% p.q.) as the result of used all funds for covering depositors from liquidated banks and partially due to bad management of agency funds. That means that even banks with sound risk management practices paid the cost of liquidation and bad management of state property.

After period of transition and credit expansion which was strongly supported by investments of foreign banks, it seemed that Serbian banking market has recovered. Majority of performance indicators were better than in other countries of the region like capital adequacy ratio, liquidity, profitability. However, rising trend of NPLs especially after 2009 was concerning and finally in 2011 resulted in a bankruptcy of four banks.

Moral hazard is one of the sources of high NPLs level on the market. On the other hand, high level of NPLs is the main factor that determines profitability of individual banks. High moral hazard incentives in last three years produced bailout cost of almost EUR 1 billion for taxpayers which are almost 3% of annual Serbian GDP. The overview of banks' bankruptcies from 2012 to 2014 is given in Table 1:

Table 1: Overview of Bankruptcy proceedings in Serbia from 2012 to 2014

Name of the bank:	Legal status of bank (State-owned/Private bank)	Bankruptcy Proceeding initiation	Bankruptcy Proceeding publication in Official Gazette
Nova Agrobanka (ex Poljoprivredna banka Agrobanka)	State-owned	29 October 2012	16 November 2012
Razvojna banka Vojvodine	State-owned	8 April 2013	
Privredna banka Beograd	State-owned	28 October 2013	
Univerzal banka	Private bank	3 February 2014	7 February 2014

Source: Deposit Insurance Agency

As it is stated in Table 1, three state-owned banks (Agrobanka, Razvojna banka Vojvodine and Privredna banka Beograd) and one private bank (Univerzal banka) went to bankruptcy starting from 2012 till nowadays. This paper encompasses all cases of bankruptcy in Serbian banking industry in previous 3 years, by its chronology.

Total assets of banks that are not operating any more at the end of 2010 was EUR 1.7 billion and capital stood at EUR 332 million which is around 7% of market share. (National bank of Serbia, 2015) At the same time, they held almost 9% of total deposits in the market or EUR 1.2 billion. Most of them, except Privredna banka, in 2010 achieved positive result in total amount of EUR 15 million. (National bank of Serbia, 2012)

The scenario was almost the same: majority of bank loans were disbursed to large companies, which usually had shadow ownership structure, thus producing high concentration risk; loans were collateralized mainly by mortgages that turned out to be nonexistent or were overpriced; loan installments were paid for some time by new loan disbursements which temporary dissembled NPLs. Owners of these companies were closely connected with banks management or with political structures that pressured management to approve the loans even if they knew that most probably they will not be repaid. On the other hand, banks were achieving and presenting adequate results measured by assets growth, loan portfolio quality and profitability for which management was awarded. This vicious circle lasted for few years when finally it was discovered or just disclosed by central bank supervision.

3.1. Agrobanka

Shares of state-owned Agrobanka were one of the most attractive on the Belgrade Stock Exchange since they were listed. Also, shares of Agrobanka were incorporated into “blue-chip” index – BELEX15, as a constitutive element. During 2006 and 2007, there were 3 recapitalizations which increased capital from EUR 84 million to EUR 164 million. (B92, 2015) However, Republic of Serbia activated its claim toward Agrobanka regarding loan IBRD YU 237 at amount of EUR 43.5 million, initially approved by EBRD, Washington. Since state activated its claim toward Agrobanka, situation was dramatically changed. Agrobanka’s debt toward Republic of Serbia was deleted from official financial statements earlier, meaning that debt did not exist at all from the point of view of shareholders. Also, other relevant bodies which monitored and controlled financial statements (auditors, Security and Exchange Commission, National bank of Serbia) did not have any remarks on submitted reports in previous period. Debt toward government was the unexpected burden which Agrobanka should deal with!

As it was presented publicly that Agrobanka has not any encumbrances, it was very attractive for trading on Belgrade Stock Exchange and shares of Agrobanka reached new historical high levels day in day out. Greed and desire for easy profit making influenced on high demand for Agrobanka’s shares. The possibility of achieving higher profits was strengthened by speculations that foreign investors are interested in majority stake in Agrobanka. Investors and shareholder were allured with P/B (price to book) ratio of Agrobanka’s shares at 1.43 (October 2007), while for a lot of banks in Serbia in a moment of sale market value exceeded book value approximately 3-4 times. (B92, 2015)

After Republic of Serbia announced its EUR 43.5 million worth claim for the loan, it was necessary to make arrangement between Agrobanka and state. It was realized through debt to equity transaction while it was expected that decreasing price of shares will be stopped after the arrangement. On the contrary, it was not stopped, already shares continue to decline. Among a lot of speculations, that should serve to explain falling in share prices, magazine "Ekonomist" cited that Agrobanka uses its capital (which is significantly increased by 3 consecutive recapitalizations between third quarter of 2006 and second quarter 2007) in order to make riskier investments on Belgrade Stock Exchange. Total value of Agrobanka's portfolio was EUR 13 million, while the most of investments were distributed into shares of Novi Sad based Metals banka (EUR 3.6 million or 28% of total portfolio) and Nis based AIK banka (EUR 3 million or 23% of total portfolio). (B92, 2015)

Clearly, Agrobanka operated with a lot of problems in the past, but idyll picture on Belgrade Stock Exchange was just one segment which showed that Agrobanka was in discrepancy between real business environment and management ambitions for business diversification on international markets. Agrobanka was majority state-owned bank with total asset share of 2.3% at the end of 2010, the last successful year. Total bank's capital was EUR 167.3 million and occupied 10th rang among other banks. The volume of customer deposits amounted EUR 514 million. Accumulated problems and inadequate risk management system in bank resulted in bankruptcy proceeding in 2012. After that, Nova Agrobanka was founded and it kept part of the assets of Agrobanka. However, after few months it was also closed. The total amount of deposits was transferred to another state-owned bank Banka Postanska Stedionica. In this case there was double loss for taxpayers. Firstly, bank experienced loss of RSD 29.5 billion (approximately EUR 290 million), then there was the cost for Nova Agrobanka and finaly the cost of its bankruptcy. Bankruptcy proceeding for Nova Agrobanka (ex Poljoprivredna banka Agrobanka) was initiated at the end of October 2012, due to liquidity worseness, worseness of financial results and deterioration of capital adequacy ratio.

National bank of Serbia reacted with introduction of enforcement management, but measures did not effect in desirable manner on bank's financial position, so National bank of Serbia took of operational license for business in Agrobanka case. Behind this negative financial result is hidden inadequate system of risk management which meant that political and family connections were more respected than financial ratios and indicators of financial health of companies in the process of loan disbursement. Introduced and applied criteria in risk management of Agrobanka are perfect example of Serbian banking nonsense! (Mirković, Knežević, 2013, 195)

Analyzing bank's portfolio and collateral management, inconsistencies are obvious. Elements of moral hazard could be clearly found in loan disbursement procedure. Bank management were exposing the bank to the higher risk than they could bear mainly through approving loans to related parties with shadow ownership structure. This could be seen on one illustrative example. Agrobanka disbursed loan at amount of RSD 2 billion to the company Asprom, while Asprom reached net operating income in 2010 at amount of RSD 420 million, but collateral upon this loan was insignificant! In 2012 Asprom made loss over RSD 220 million, went to bankruptcy, while loan was not repaid to Agrobanka! (Javna preduzeća, 2015)

Described case is a pattern of "guidelines" which were used in Agrobanka in the process of loan approval. Finally, top 20 debtors of Agrobanka owe in total RSD 16 billion, 14 of them are in bankruptcy or restructuring process, while other 6 continuously generate losses. Those loans are in status of non-performing loans (NPLs). Applied model of loan disbursement in Agrobanka resulted in EUR 430 million losses, while the part of them was reprogrammed through Nova Agrobanka. Certainly, almost EUR 300 million of loans remained non-performing. (Javna preduzeća, 2015) In court proceedings against bank's management and owners of some companies (which are major debtors) which is ongoing is expected to be proved claims regarding obvious manipulations in Agrobanka.

3.2. Razvojna banka Vojvodne and Privredna banka Beograd

In 2013, there were two bankruptcies in Serbia – both were state-owned banks: Razvojna banka Vojvodine and Privredna banka Beograd. Collapse of those two banks is similar to Agrobanka if we observe ownership type (state-owned banks), but apart from Agrobanka case in those two banks, government was aware of problems and several times tried to save this banks through introduction of temporary measures. Razvojna banka Vojvodine (ex-Metals banka) was recapitalized by AP Vojvodina at amount RSD 3.7 billion in 2009, with majority stake of 60%. (Javna preduzeća, 2015) Nevertheless, poor risk management in this case also resulted in undercapitalization below proscribed regulatory minimum (i.e. capital adequacy ratio at 12%). At the beginning of 2012, almost EUR 350 million risk weighted assets were recorded in bank's books.

Some illogical criteria in loan disbursement were inherent in Razvojna banka Vojvodine. For example, bank approved EUR 8 million loans to the companies that went to liquidation and bankruptcy soon, while those loans were collateralized only with EUR 3.5 million. Furthermore, those collaterals were already mortgaged with prior rank for other lenders exposure! Also, in 2008 Razvojna banka Vojvodine approved to the one client EUR 5.5 million loans in total, without bills of exchange as a collateral. (Javna preduzeća, 2015) In 2010, that company went to bankruptcy and after one year it was liquidated. Presented examples illustrated that most of loans were approved either without any collateral or with insufficient collateral to cover risk exposure.

Case of Privredna banka Beograd was quite similar to Razvojna banka Vojvodine. In 2010, capital adequacy ratio of the bank was well below regulatory proscribed level and amounted 8%. National bank of Serbia reacted with introduction of special measures in order to improve current status of the bank. Unfortunately, taken measures were not successful mainly due to a lot of deficiencies in management in period 2006 – 2010. At that time, bank was extended its branch network, disregarding the fact that those network expansion did not rely on real (business-based) premises. Crisis emergence in 2009 did not help to bank's management to react adequately and decrease costs of network expansion, which additionally contributed to bank's collapse.

Presence of moral hazard in both exposed cases (Razvojna banka Vojvodine and Privredna banka Beograd) is evident. Inadequate risk management system, accompanied with management focus on bonuses and awards instead on rising level of non-performing loans and other segments vital for banks prospective, dominantly influenced on their collapse. Afterwards, government reacts with bailout of those banks while "healthy" parts of the banks were transferred to also state-owned Banka Postanska Stedionica (as it was in Agrobanka case).

3.3. Univerzal banka and Srpska banka

In 2014, bankruptcy proceeding was initiated over Univerzal banka, the bank in the majority ownership of private entities. Reasons for bankruptcy proceeding are similar to already presented – critical undercapitalization which deteriorated liquidity and continuity of business. As a result, National bank of Serbia made reasonable decision regarding taking off operational license to Univerzal banka in order to protect their depositors and maintain stability of financial system. At the end of 2012, Univerzal banka experienced loss at amount of RSD 701.4 million, while at the end of first half of 2013 financial loss stood at RSD 553.8 million. There was some speculations regarding potential recapitalization of the bank by other private entities, but it was not realized. Moral hazard in Univerzal banka exists because decision making regarding loans disbursement was not separated from general corporate governance simultaneously jeopardizing deposits. It was evaluated that lost deposits which should be returned to depositors and goes on Republic of Serbia encumbrance amounts EUR 70 million. (Koreni, 2015)

According to official financial statements, in 2014 Srpska banka made RSD 16 billion loss (EUR 136.6 million), with the significant increased loss in fourth quarter of 2014. National bank of Serbia did not take off operational license to Srpska banka, but it was decided to conduct restructuring in terms of suspension of retail business and transferring it to the bank for special purposes, as it was in past. Republic of Serbia took over all losses of Srpska banka. Very similar circle of clients (companies) and model of loan approval, as it was previously described, was present in Srpska banka. The only difference here is National bank of Serbia's decision which was not resulted in initiation of bankruptcy proceeding as in other similar cases, already in restructuring and continuing business until final resolution of the problem.

4. Main Remarks on Moral Hazard in Serbian Banks

In all these cases, it could be seen obvious principle-agent problem. Banks, with the exception of Univerzal banka, were majority state-owned. Owners of the banks produced loss for themselves and compromised the state as the owner. That raises the question of their ability to manage the state (taxpayers) property in all other institutions. Managers of these banks acted in order to achieve personal gains through bonuses (that is typical moral hazard) and were not adequately supervised by Board of Directors. Elements of moral hazard could also be found in the bank risk management. Loans were approved to the clients for whom they knew that the probability for loan repayment was low. Borrowers obviously misused funds and invested them into riskier projects or projects that increased their personal wealth. That is another dimension of principle-agent problem. Even though banks used standardized instruments for mitigating moral hazard problem such as collaterals, they were useless because in some cases they were overpriced or non-existing.

Other successful banks on the market indirectly paid the cost of inefficient and corrupted bank management through deposit insurance scheme. That raises the question regarding adequacy of current deposit insurance scheme in Serbia, among which the most important is whether equal insurance premiums for all banks are appropriate. That question is not new issue as it was elaborated briefly in document "General Guidance for

Developing Differential Premium Systems" issued by International Association of Deposit Insurers (IADI).

The objective of differential premium systems for banks is avoiding excessive risk taking as well as introduction of effective early warning systems and prompt corrective supervisory actions to deal with problematic banks. (IADI, 2011, 2) Also, there is a need to conduct "situation analysis to self-assess the state of the economy, current monetary and fiscal policies, the state and structure of the banking system, public attitudes and expectations, the strength of prudential regulation and supervision, the legal framework, and the soundness of accounting and disclosure regimes". (IADI, 2011, 2) For the purpose of bank's differentiation there should be made classification between banks into several risk categories. Appropriate premium rates should be assigned to each risk category.

According to Law on Deposit Insurance, in Serbia banks are obliged to pay the flat premium rate up to 0.3% maximum. Instead of this linear approach for all banks, Đukić (2013) proposed differential premium rates for Serbian banks based on achieved capital adequacy ratio in previous reporting period (i.e. usually, quarter). General idea is to make distinction between safer and less risky banks, which would pay smaller premium and more risky banks on the other hand which took excessive risk, which generates problems to the whole banking sector. Summary of Đukić's proposals could be presented as in Table 2:

Table 2: Premium insurance rate proposal

Capital adequacy ratio (CAR) in relation with average capital adequacy ratio in Serbian banking industry	Haircut on flat premium insurance rate
CAR larger than average CAR up to 15%	50%
CAR larger than average CAR up to 30%	60%
CAR larger than average CAR above 30%	70%

Source: Đukić (2013, 168)

Applying haircuts, depending on reached level of capital adequacy ratio, would be a kind of award for bank's management which was successful in previous period (higher haircut on premium insurance rates will be implemented for successful banks), while those banks with bad management will be sanctioned and obliged to pay more due to expressed inefficiency in the past. Introducing differential premiums brings more justice in the process of bearing results in banking industry. Bad management of banks and their shareholders will bear consequence of inappropriate behavior without respecting basic principles of efficient risk management. Undoubtedly, differentiation in premium insurance rates encourages banks with low risk profile.

Moral hazard problem could not be avoided as it is inherent to any relationship between lenders and borrowers. But, negative effects that it produces could be mitigated especially in state owned institutions. Better controls from supervisory board and central banks accompanied with strict sanctions could be one of instruments. Risk management process improvement within banks is a mandatory. New Law on Banks, that will be put into force allow National bank of Serbia more competences which should be used to prevent excessive risk taking.

5. Conclusion

Greed within managerial structure and desire for making higher profits not just for the benefit of bank, yet for obtaining personal benefits through bonuses and award system, led banks to be risk exposed more than it is acceptable in normal circumstances. In final instance, as it can be seen, in Serbian banking industry it led to bankruptcy of 3 state-owned and one private bank, while one state-owned bank is restructured with high likelihood to be liquidated in near future. Moral hazard was a main driver in the process of collapse of Serbian banks (mostly state-owned), while the bailout scheme introduced by the state transferred the burden of bank's bad management to tax payers. Till now, bad management in banks cost Republic of Serbia approximately EUR 800 million. Actions that prevent moral hazard worsening should be taken. Apart from spending taxpayers' money on banks bailout and their losses, it lead to inefficient distribution of resources which slow down economic activity.

Inappropriate risk management process (primarily, credit risk management) in all segments caused serious deterioration in Serbian banking industry that resulted in bankruptcy and liquidation of several banks. For this negative scenario responsible are all market participants in financial sector, including auditing companies, which gave positive auditor's opinion on financial statements just few months before collapse of certain banks (e.g. Agrobanka). In a way, Agrobanka was the Serbian version of "too big to fail", with the most unpredictable development of events. Similar case is valid for other collapsed banks – Razvojna banka Vojvodine, Privredna banka Beograd, Univerzal banka and Srpska banka – where moral hazard as a driver instead of efficient risk management bring a lot of problems to the whole financial system. Currently, the main issue is avoiding the worst case scenario for other domestic state-owned banks. For example, there is a justified fear that Banka Poštanska Štedionica (to whom are transferred all assets from collapsed banks) could become "too big to fail" institution due to its robustness and interconnections with other problematic banks in majority stake of government.

There are still open questions on prospective development of other Serbian state-owned banks after unsuccessful governance of several banks elaborated in this paper. One of state-owned banks, Čačanska banka was successfully acquired by Turkish Halkbank at the end of May 2015, but it is still unresolved and uncertain outcome of consolidation process in Serbian banking sector. All participants are obliged to prevent further deterioration and collapse of banks, with the final consequences for Serbian economy. It is necessary to set up clear and sound system of responsibilities between relevant participants as well as to monitor and control operations of banks closely in order to have a time to react preventively and correct some minor irregularities prior contagion emerge in banking industry.

References

1. Bernanke, B. S. (2010) *Causes of the Recent Financial and Economic Crisis*. http://www.federalreserve.gov/newsevents/testimony/bernanke20100902a.htm (07.07.2015)
2. B92, www.b92.net/biz/fokus/analiza.php?yyyy=2007&mm=10&nav_id=269128 (07.07.2015)
3. Cordella, T, Yeyati, E. L. (2003) Bank bailouts: moral hazard vs. value effect, *Journal of Financial Intermediation*. 12: 300–330.

4. Deposit Insurance Agency, http://www.aod.rs/en-index.html (07.07.2015)
5. Đukić, Đ. (2013) Preventive impact of deposit insurance premium differentiation on moral hazard in banking sector, *Proceedings of the Scientific Conference "Post Crisis Recovery"*: 164-187. Belgrade: Belgrade banking Academy
6. International Association of Deposit Insurers - IADI (2011), *General Guidance for Developing Differential Premium Systems.* Basel: Bank for International Settlements, first issue 2005, revised 2011.
7. Javna preduzeća, http://javnapreduzeca.rs/14_krah_srpskog_drzavnog_bankarstva.php (07.07.2015)
8. Koreni, www.koreni.rs/kako-je-opljackana-univerzal-banka/ (07.07.2015)
9. Krugman, P. (2009) *The Return of Depression Economics and the Crisis of 2008*. New York: W.W. Norton Company Limited.
10. Mirković, V., Knežević, M. (2013) Regulatorni izazovi bankarskog sektora u procesu harmonizacije sa Evropskom Unijom, *Proceedings of the Scientific Conference "Institucionalne reforme, ekonomski razvoj i proces pridruživanja Evropskoj Uniji"*: 185-198. Belgrade: Faculty of Economics, Belgrade.
11. Mishkin, F. S. (1992) Anatomy of a Financial Crisis, *Journal of Evolutionary Economics*, 2: 115-130.
12. National bank of Serbia, www.nbs.rs/export/sites/default/internet/latinica/55/55_4 /kvartalni_izvestaj_IV_10.pdf (01.07.2015)
13. National bank of Serbia, www.nbs.rs/internet/cirilica/50/50_5.html (05.04.2012)
14. Rowell, D., Luke, C. B. (2012) A History of Term Moral Hazard. *Journal of Risk and Insurance*, 79(4): 1051-1075.
15. Savić, A. (2012). *Operativni rizici u bankama*. Beograd: Zadužbina Andrejević.
16. Thismatter.com, http://thismatter.com/money/banking/information-asymmetry.htm (07.07.2015)

ELEMENTI MORALNOG HAZARDA U SHEMI SPAŠAVANJA SRPSKIH BANAKA

Rezime: Kao posledica lošeg upravljanja u određenim bankama, Narodna banka Srbije je oduzela operativnu dozvolu u 4 banke, a to su: Nova Agrobanka, Razvojna banka Vojvodine, Privredna banka Beograd i Univerzal banka, dok je Srpska banka restrukturirana sa ciljem da se izbegne stečaj. Kolaps pomenutih banaka pokreće nekoliko pitanja koja se odnose na postojanje problema moralnog hazarda u bankama i naposletku u procesu spašavanja državnih banaka. Poverenje u srpski bankarski sistem je uglavnom obezbeđeno postojanjem sheme osiguranja depozita, uz ključno pitanje: da li je jednaka premija osiguranja koja se primenjuje za sve banke odgovarajuće rešenje? Iskustvo razvijenih bankarskih sistema zajedno sa efektima teorije "suviše veliki da bi propali", se može iskoristiti za objašnjenje prisutnosti i porasta moralnog hazarda. Ovaj rad razmatra efekte moralnog hazarda bankarskog sektora, stavljajući naglasak na srpske državne banke i njihovu propast usled lošeg upravljanja rizicima u njima.

Ključne reči: moralni hazard, asimetrična informisanost, državne banke, upravljanje rizicima, teorija "suviše veliki da bi propali".