

## THE SAFETY NETWORK SYSTEM AND PROSPECTS FOR THE APPEARANCE OF A FINANCIAL CRISIS IN BOSNIA AND HERZEGOVINA

**ABSTRACT:** *The article is on the system of the safety network of the financial sector in Bosnia and Herzegovina (BH) and potential causes of possible financial instability. The network of protection of financial institutions in BH is to a certain extent incomplete but a high level of regulatory and supervisory activities has been present so far, which effects the expressed stability of financial institutions. Potential risks and the vulnerability of the financial system arise from a range of features which are characteristic of the local financial institutions, their activities, the condition of the BH economy, and macroeconomic stability and flows of goods and capital between the country and foreign countries. The sector of financial institutions has been privatized and it is in foreign ownership. Foreign exposure of domestic economy and*

*financial markets is limited to only a small number of countries (Austria, Germany). There are pressures in respect of the increased rates of return on bank capital and there is a very high dynamic of credit growth. Possible unfavourable scenarios could bring about problems in the banking sector, which is shown by stress tests. The deterioration of the macroeconomic imbalance could also be a significant cause of serious problems in the local financial sector. There are no certain indicators that this could happen in the near future and influence the appearance of a financial crisis; however, such a situation cannot be ruled out.*

**KEY WORDS:** *BH financial sector, financial crises, safety network system, regulation and supervision of banks*

**JEL CLASSIFICATION:** G20, G28, E61

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## **Introduction**

The banking system in BH, as in other countries in the region, has been privatized and restructured. Foreign banks, to a greater or lesser degree, are the dominant bank owners in the countries of former Yugoslavia and Central and Eastern Europe, as in Bosnia and Herzegovina. The financial sector in these countries has been expanding intensively. This particularly applies to the sector of lending to citizens and companies. In BH, banking is the most propulsive sector. The confidence of the public is returning. Savings and credits are growing. However, the dynamic of economic growth is not unproblematic. There is the question of banking safety, and whether there is a danger of destabilization in the banking system in BH's weak and unstable economy. Therefore the questions we will consider are whether there is a crisis threatening, and how big the risk of the crisis appearing is? Will there be a crisis of bank liquidity and/or solvency? What could prevent a potential crisis? What guarantees the safety of the banking system and depositors? Will the foreign exchange rate remain stable in the future and will the local currency remain convertible? These are the questions that those responsible for the country's economic policy, any local holder of savings (or financial capital) and foreign investors inevitably face. This is of equal concern to the investor with minimal savings whose foremost care is the safety of his deposit and to large local or foreign investors. Unfortunately, no one can provide a precise and clear answer to this question which would relieve investors of their concerns. All we can do is consider the current situation in the banking system and the degree of efficiency of complex mechanisms of protection that make for financial discipline and the undisturbed functioning of the financial system. Such mechanisms should prevent the financial system from being "surprised" by a strong shock, either internal or external, which could undermine it or ultimately bring about its complete collapse, with serious consequences for the economy and people's living standards.

### **1. Safety network**

Highly industrialized and developed countries usually succeed in safeguarding their financial systems. Of course financial crises take place, as they are integral to the market economy. Minor shocks arising from the poor operation of big banks are solved by the state, i.e. its agencies, which through routine or innovative mechanisms save the bank or financial institution that is in trouble. Saving a bank by bringing about its financial recovery through restructuring should provide for the safety of investors and thereby also ensure the trust of the public in the

financial system. Before the bank finds itself in difficulties that demand financial rehabilitation it is the subject of multiple supervision by appropriate agencies and state bodies, which should signal the appearance of potential difficulties in the bank's operations. This leads to the implementation of appropriate measures aimed at treating and removing operational difficulties.

The safety network is a concept denoting different systems for the protection of the financial sector from the appearance and expansion of various disturbances and possible panic caused by them, which can undermine the complete system, with possible disastrous consequences. The financial system of developed market economies is covered by the safety network system at three levels. The first level of the safety network is the primary role of the central bank, which, through its participation in the payment system, carries out its supervision and control and ensures its undisturbed functioning. The central bank supervises banks' operations, perceives difficulties and problems and, generally, effects their removal.. The second level of protection is related to the function of the central bank as "lender of last resort". When a bank exhausts all the possibilities for providing the missing liquid funds (borrowing from other banks or obtaining the funds in the money market), the central bank remains the last resort, extending credit to the commercial bank in order to maintain liquidity. In this way although the bank is not liquid it is solvent. The third level of protection is outside the central bank. It is the deposit insurance system which is activated when the bank becomes permanently illiquid, i.e. insolvent. Deposit insurance only protects small depositors, whose deposits are returned to them if the bank is closed down. As deposit insurance has shown weaknesses in practice, the safety network mainly relies on the first two levels of protection.

Everywhere in the world banking is regulated. One of the reasons is the need to protect depositors from bad or unconscientious bank operations, thus ensuring the trust of the public in the banking sector. The other reason is the fact that a high degree of risk is inherent to banking. Why do banks undertake risky investments? The essential answer to this question, according to Stiglitz and Greenwald (2003, p. 209) is the fact that the costs of banks in case of a failure are lower than the costs of society reflected through the macroeconomic costs and the costs of saving banks. Regulators and banks appear in the typical roles of principals and agents where the regulators in the role of the principal try to control and affect the behaviour of banks as agents, with the intention of making banks act more in accordance with social objectives.

The task of regulation and supervision is to reduce the system risk and other risks arising from asymmetric information. Such asymmetry is present not only in the relation bank – the credit user, but also in the regulator – bank relation. Regulation and supervision are useful for institutions because of system features in the financial sector where the interest of each individual institution is that other institutions should be financially healthy. The institutions themselves benefit from supervision even though higher operative costs are imposed on them and the possibility of their own selection of portfolio is decreased. For example one restriction is the attempt of regulation to discourage lending in some cases, such as lending to insiders (related parties), even if good credits are in question. In this way, good credits are actually eliminated, which, due to the asymmetry of information, cannot be taken over by other banks.

Supervision should be independent, yet there is a lot of evidence that due to the interests of controlled institutions there can be a strong pressure to influence supervision and regulation, through strengthening or loosening of standards. More rigid standards might better suit some institutions which do not want to be jeopardized by “more relaxed” institutions, while weaker standards might better suit others. Research has shown that supervision and regulation systems differ according to the country and they are closely related to the strength or weaknesses of the financial system. The findings of some studies stress that problems arise mainly from the weaknesses of the financial system, rather than from supervision (Hardy C.D. 2006 p.21).

At the bank level, the concerns and decisions in respect of taking a certain degree of risk and undertaking measures for protection against risk fall primarily within the responsibility of the bank management. The owners are interested in the safe operation of the bank as losses are a burden on the bank’s profitability, and eventually, they are at the expense of the share holders who own the bank. On the one hand the management and owners are very interested in the successful operation of the bank in respect of achieving the appropriate rates of profit, as it provides for the appropriate market value of the bank and also the possibility of the bank to attract additional capital in the open market (through additional issue of shares or the issue of short-term securities and bonds) On the other hand managers themselves are interested in achieving good results for reasons of prestige, which contributes to their better rating in the manager market. In this way the managers and owners take responsibility for the healthy and profitable operations of privatized banks.

The establishment of a system of protection and responsibility by the bank owners and managers in BH has been created on the basis of the completion of privatization and the restructuring of the entire system of commercial banks.

In mid 2007 99% of the entire equity of 9 banks in Republika Srpska was in private ownership and 86% of the capital was in foreign ownership. In the Federation there were 23 banks of which only 4 operated with majority local capital, having a rather small market share of 2,9%. Five state-owned banks accounted for 4,1%. Therefore, 14 banks with majority foreign capital had 93% of the market share. The four biggest banks held 69% of the bank market. This demonstrates the high degree of concentration in the banking sector of the Federation.

All business activities of banks in BH are under the supervision of the Entity Banking Agencies (those of the Federation of BH and Republika Srpska), which, on the basis of a number of decisions (around twenty) regulate and supervise the operations of local banks. If the Agencies observe any irregularities or disrespect for their decisions or other legal regulations by a bank, the bank is warned and requested to remove the observed shortcomings. If necessary, other measures are also taken including the ultimate measure of revoking the bank's operating license. The Agencies also have a broader discretionary right to react in cases where they judge that a bank, although not violating the law, is operating carelessly, and they intervene with the appropriate measures.

Bank supervision in the Entities is carried out on the basis of the regulatory framework which was harmonized between the Entities. For a long time now there has been a debate going on about bringing the Entity Agencies under the umbrella of the Central Bank of BH, which, according to the law governing the Central Bank of BH, has the function of coordinating the operations of the Entity Agencies. In this way, banking regulation and supervision would be combined. It seems that there is a general agreement on this issue, but there remain the dilemmas of whether the unique supervision would apply only to the banking sector or to the entire financial system, whether supervision would be placed within the CBBH or would be a separate independent agency, and whether supervisors would be located in Sarajevo or in Banja Luka (IMF, 2006 p 18).

The IMF staff's attitude is that unique supervision should initially cover banks and leasing as the growing activity substituting the bank credit. The main argument of the IMF staff is that bringing supervision under the Central Bank or uniting it in a separate institution would insure the political independence of the supervision as has been achieved in the case of the CBBH. Theoretical

literature on integrated supervision (meaning unique supervision of all financial institutions) is considered to be unconvincing (Čihak M. Podpiera R. 2006 p.25). Among observers the prevailing attitude is that there is no optimal supervisory structure but there are different *pro et con* arguments which need to be considered in individual countries' cases. The findings of research have shown that unique supervision shows better consistency in respect to the quality of supervision, but to a great extent it is explained by the degree of development of the countries where supervision is integrated. Placing the supervision under the central bank or outside it has no significant impact on the quality of supervision. Integration of supervision does not effect a significant staff reduction. Benefits from integration are achieved if it is done medium to long term. The supervision covers the lender of last resort, deposit insurance and supervision, and their roles are related, thus requiring a higher degree of coordination. As supervisory institutions have been established with different mandates it is possible that conflicts might appear.

A study exists that shows that one regulator leads to insufficient monitoring of banks and sub-optimal bank investment in credits. It can also lead to restraint in lending. In the case of asymmetry of information among regulators it is more useful to determine in advance the rates of last resort lending. If it is not possible to determine such rates, then it is a good idea that the Central Bank and deposit insurance should act as lenders of last resort. In such a structure it is important that lending of last resort should not be insured in order to decrease the tendency to lend excessively. Asymmetry of information among regulators is present and they do not show initiatives to share the gathered information. As some regulators find it easier to collect special information, this leads to the conclusion that the allocation of banking regulation has some advantages (Santos A.C. J. Kahn M.C. 2001).

Strong regulation and supervision are an important part of a safe and sound banking system. In many developing countries supervision is strengthening but it is a complex and expensive process as human resources are modest and supporting institutions are weak. Research into a sample of 39 countries shows that in the countries where supervision relies more on the Basel Core Principles, the banking systems are healthier (Demirguc-Kunt A. At all 2006 p.14). The countries requiring the banks to present their reports to regulators and market participants regularly and accurately have banks with much higher ratings as the timely disclosure of high quality information strengthens the monitoring and control by supervisors and markets. The countries that wish to improve banking regulation and supervision have to make the supply of information a priority in relation to other Basel Core Principles. This is related to a certain type of sensitive

information which would be treated as confidential by supervisors, and the banks should know that such information will remain confidential with the supervisors and their supervisory partners in other countries.

Providing information is the basic condition for effective discipline. These recommendations are in accordance with those provided in a number of studies by Barth, Caprio and Levine (2006). They emphasize the significance of mechanisms strengthening the market discipline and they are sceptical about structures that give too much power to regulators.

One of the key institutional improvements in BH would be the strengthening of the information base of the banks as regards financial status and operations of legal entities and bank clients, thus enabling both better knowledge of clients and risk avoidance. A lot has been done in this respect by establishing the single registry of bank clients - credit users. However, rating agencies, which would represent another important source of information on credit applicants (in addition to the bank's internal sources of information) are still missing. This is also required because the Basel II standards will be introduced in the near future with the necessary presence of other sources of information on clients beside the bank's own sources, which will be necessary for many banks for the purpose of implementing the IRB approach ("Internal rating based approach"), i.e. the system of internal rating of clients.

Strengthening the principles of transparent and public bank operations effect the strengthening of market discipline and the public's confidence in the banking system.

The highest degree of financial discipline expected from banks is related primarily to credit operations. Therefore, it is necessary to strengthen the credit culture of banks. The central issue is providing conditions for the realization of collateral and providing protective clauses, and strong monitoring is of key significance. Supervisory authorities have to provide precise estimations and classifications of credit portfolios and other assets and provide adequate allocations for potential loss provisions. In the BH banking system there is also the problem of adverse selection, i.e. it is known that debtors, individuals and companies with the most risky projects are prepared to pay the highest interest rates, which are rather high in BH, but such projects also have the biggest chances of failing. It is clear that such credit applicants are likely to be successful in obtaining credit as they expect significant profits and at the same time they are willing to accept a very

high interest rate. Large losses of banks in lending operations can lead directly to financial crises. In order to avoid this, the following is necessary:

- detailed checks and efficient monitoring
- establishing of a long-term relationship with the client
- significant protective clauses
- collateral and compensational balance
- credit rationing (which to some extent local banks have already been doing for a long time).

In addition to good quality of lending decisions making, we should also take into account the importance of institutional surroundings, i.e. the capacity of institutions to provide adequate support for safer bank operations. It cannot be said that the optimum conditions have been reached in BH and further improvements of the institutional market structure such as regulations and courts are necessary. For several years, the Entity agencies have stressed in their reports the need for the upgrade of the institutional surrounding, i.e. judicial and legislative "logistics" which could greatly improve the efficiency of banks' operations. Efficient courts would solve court proceedings faster, particularly the execution of collaterals and mortgages. According to the IFC data resolving a court proceeding in BH lasts on average 595 days (Banks in BH, March 2007 p.56). In relation to this problem it has also been suggested that special departments in courts to deal with economic disputes should be established. The Agency of the Federation has suggested passing a special law that would provide better protection of creditors' rights and stress the responsibility of debtors. It is certain that a number of other regulations are necessary to strengthen financial discipline. The Agency of the Federation thinks that it is necessary to have a law or at least to improve the existing regulations regarding safety and protection of the currency in banks and in transport, as this would also decrease the operative risks of banks.

## **2. Supervision, the Central Bank and Bank Stability**

In the report to the Executive Board of the IMF on Article IV Consultation for Bosnia and Herzegovina, the stability of the local financial sector is estimated to be quite good (IMF, 2007). Some of the key indicators, such as uncollectible loans and return on equity are improving. According to the Financial Sector

Assessment Programme (FSAP) recommendations<sup>1</sup>, the Central Bank of Bosnia and Herzegovina (CBBH) has established the Financial Stability Unit within the CBBH which should provide frequent estimates of financial sector trends and potential risks. As there is room for the removal of other weaknesses, bank supervisors have started to work on stricter loan classification with the objective of introducing it into practice in the following months. The authorities support the recommendation of the FSAP that the Banking Agencies should accept it in order to decrease the requirement for the maturity adjustment of a bank's assets and liabilities and improve the banks' liquidity and weaken the relation between credit expansion and incurring of debts abroad (IMF, 2007).

A less positive assessment of banking supervision relates to the unrealized intention to centralize the supervision in one institution instead of the two existing Entity Agencies. In this case the opinion is that "the authorities mainly agree" that a unique, independent and efficient supervisor at the state level, either in the CBBH or as an independent institution, would be more efficient in keeping financial stability. Such expectations may be realistic, but it cannot be said that supervision has been inefficient so far: to the contrary it has been very efficient as this is the best regulated sector of the local economy, and its stability is recognized by all the observers. The unique supervision is expected to provide better international cooperation which would be consistent with the suggested approach of creating a single economic area in BH. The authorities still stress that the decision on the final regulation of banking supervision has significant political implications. While waiting for the final resolution of this issue, the CBBH is trying to improve the coordination of the banking system supervision, which it is entitled to do according to the CBBH law.

The usual component of bank protection through the function of the central bank's role as the lender of last resort is still missing due to the rule of the currency board, present for ten years in the CBBH, which to some extent makes the safety network incomplete. The only possibility available to banks at the moment is to take care of their liquidity by keeping a larger volume of financial reserves in their accounts as a precaution or by using the credit of other banks, i.e. withdrawal of liquid funds from mother banks in foreign countries, which is a common practice. However, it is possible that in the future the currency board system could be relaxed and the CBBH start carrying out this function as well. Regarding the monetary regulation instruments, the CBBH uses the mandatory

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<sup>1</sup> Financial Sector Assessment Programme (FSAP) - programme performed by IMF staff in the member countries, providing certain recommendations

reserve requirement, at a rate which is currently 18% . Taking into account the limited effectiveness of this instrument in monetary policy, it should not be changed too frequently.

The Central Bank has a key role in maintaining the stability of the financial system. The sources of vulnerability are the underestimation of credit risk by banks (especially foreign banks) and reliance on cheaper foreign sources of funds for local lending. In this respect, the CBBH has created credit registries for legal and physical entities. It should be pointed out that there is a need to integrate the use of these registries into bank regulation and the work of supervisors. By loosening the current requirements for maturity adjustment, the CBBH allows the banks to rely more on the cheap local short-term deposits for lending, instead of cheap foreign sources, and not to rely too much on potentially changeable capital flows. The introduction of a bigger reserve requirement for banks' foreign liabilities would decrease their cost advantages, yet the experience from other countries in the region shows that it would also de-stimulate intermediation.

It should be taken into account that bank operations in BH are much riskier than in Western countries (economically unreliable clients with high credit risk and no long business tradition, poor and undeveloped mechanisms of risk protection, inappropriate institutional surroundings). This is primarily reflected in more strict standards (the required capital rate of 12% in relation to risk weighted assets, while the standard rate is 8%). For these reasons, more rigorous regulations and bank supervision are necessary. The appropriate mechanisms and institutions that could efficiently restructure failed banks and provide possible additional funds for their financial recovery are also missing.

The Deposit Insurance Agency in BH based in Banja Luka insures small deposits up to KM 7,500, with the objective of raising the limit to KM 10,000 and in the long-term reaching the European standard of insuring deposits up to EUR 20,000 (Nevjestić J. March 2007, p. 17). Actually all deposits (up to the legal limits) are included in the insurance scheme, as 97% of deposits and 98% of savings deposits are placed in insured banks.

Supervision, stable currency, and a privatized and relatively stable banking system have effected a significant increase in the volume of citizens' bank savings, and a corresponding strong growth in the volume of lending. The growing confidence of the public is due to the fact that foreign ownership capital dominates the local banking system.

Although the domestic banking system is consolidated with the established mechanisms of protection, it should be taken into account that absolute safety and protection of the financial sector does not exist even in developed, industrialized countries with highly developed financial structures and does not exist here either. Banking system crises have been much more frequent and much stronger in the developing countries and transition economies. The cost of solving them has amounted to USD 250 billion, paid for by bank depositors and creditors of failed banks but principally by the governments of those countries. (Honohan P. 2007 p. 3). Individual failures of banks are inevitable; however the objective is to keep the system as the whole stable. In industrialized countries there are often problems in bank operations so bankruptcies occur, or problem banks are restructured, acquired by stronger institutions in a bank merger or rehabilitated by state agencies. In BH we have the system of protection for small depositors but large depositors need to diversify their financial assets and investments as the most effective form of protection.

One of the significant reasons for the appearance of financial crises in banking is related to the processes of liberalization in the financial sector or, more precisely, to the periods of transition in that process (Stiglitz, E.J. Greenwald B. 2003. p. 220). In this respect, the focus is on the standards of capital adequacy. It is explained by opening possibilities for higher profitability and growth of competition (with the decrease of profitability) with the consequential involvement in more risky operations by banks. At the same time, deregulation makes supervision more difficult due to the increased complexity of the task. Generally, financial liberalization brings benefits to countries in the form of financial sector strengthening, as shown by research (Bailliu J., 2000). Financial liberalization contributes to the development of the local capital market in new economies: however once a moderate level of regulatory and institutional development is reached it does not follow that less developed countries will realize those benefits (Chin, M. Ito H. 2005).

In the Eastern Asian crisis a large part of the responsibility was placed on the countries themselves, which had not provided for strong supervisory institutions. In fact there is no precise recipe for building strong regulatory and supervisory institutions. The problem should be observed in the context of the fact that even developed countries with strong institutions have not avoid significant financial crises (Scandinavia) and strong countries with transparent governance structures have failed to establish strong institutions. On the other hand, in some countries with strong institutions (the Central Bank of Thailand is one of the strongest in developing countries) those institutions weakened with the liberalization process.

So, as concluded by Stiglitz and Greenwald, it is not sufficient if institutions are sound before liberalization: they need to be strong enough to endure the inevitable process of weakening which is part of the liberalization process, and the liberalization itself needs to be conducted so as to minimize damage, which has not been given sufficient attention in the past. Even when the regulators are aware of the difficulties they face a difficult task as when liberalization is announced the initiatives to take larger risks are automatically present.

The Financial Sector Assessment Programme (FSAP) which is implemented by the IMF in the South-Eastern European countries shows that significant progress has been made in those countries with regard to financial reforms since the period of financial turbulence in the nineties. It has resulted in greater financial stability and resistance to exposure to financial risks. However on the basis of experiences from other parts of the world it is recommended that financial supervision and regulation be further developed, particularly because financial risks arising from a fast credit growth and potential macroeconomic imbalances could be realized in the future (Maehler M.A. et al. 2007 p.3).

Returning to the local field, i.e. to the market in BH, one should be aware that the problems and tasks of the local regulators and supervisors are becoming increasingly complex as besides the general dangers related to the intensified credit expansion potential there are other problems such as macroeconomic instability and, the slowly broadening range of financial institutions and activities performed by them, which make supervision increasingly difficult. The banks operating here are often members of significant banking groups which have more experience with supervision in the mother countries, so they can be in better position in relation to the requirements of local regulation and supervision.

### **3. Sources of Potential Dangers for the BH Banking System**

#### **3.1 Flows of Debt and Potentials for Crises**

The flows of debts incurred abroad are much less stable than other types of inflows and they are easily reversible at time of crises. It is more likely that reversible flows of international capital will take place among the countries that rely more on the flows of debt including bank credits and less on foreign direct investments. Short-term bank credits to developing countries are pro-cyclic and they tend to increase during the economic expansion (boom) and rapidly decrease during the economic decline (the World Bank, 2000). The pro-cyclic behaviour results in the

highly unstable character of these flows which can intensify the reverse impact of negative shocks on the economic growth.

The appearance of financial crises is directly related to the processes of globalization and internationalization of international capital flows (Kaminsky L.G., Schmukler L.S. 2003 p.4). Therefore, Krugman (1998) believes that the control of capital can help at least temporarily to prevent the disorderly withdrawal of capital. These discussions on introducing old restrictions on the capital flows have been reintroduced. On the other hand the advantages of liberalization, such as the improvement of the functioning of the financial system, the growth of the available financial assets, and risk diversification, are stressed intensively by numerous countries.

The opening of debt flows could lead to an “extravagant government” and give the financial sector that is subject to poor supervision much more space, which will increase vulnerability to shocks. In their two studies, McKinnon and Pill (1996, 1998) examine the problem of excessive lending by banks in case of financial liberalization without adequate supervision. They provide a theoretical model in which the moral hazard in the local financial market and unrestricted capital flow together create a potential for disaster. They further show that an open capital account can intensify the reverse effect of poor supervision of the financial sector by allowing banks to expose their balance sheets to currency risk and enabling them to have open speculative positions in foreign currency. It is interesting that the countries with unfavourable conditions tend to rely more on short-term external debts, denominated in foreign currency, as the main source of foreign capital. It creates vulnerability, especially when the local financial system, through which such capital is extended, is undeveloped and poorly supervised. Such a situation is to a great extent characteristic of Bosnia and Herzegovina.

There is a systematic empirical relationship between the exposure to short-term debt and the probability of the appearance of financial crises. Literature, i.e. research on early warning clearly shows that a high level of short-term external debt denominated in foreign currencies significantly increases vulnerability to financial crises (Berg, A. Borensztein E., Pattillo C. 2004). These findings are not surprising as currency and maturity non-adjustments of debt structures have often been present in countries that have had crises. The rate of short-term debt compared to foreign reserves is very significant for predicting financial crises in emerging economies. Rodrik and Velasco (2000) show that countries with a higher short-term debt than foreign exchange reserves are three times more likely to experience a sudden and large change in financial flows. The results of

their research also show that the crisis becomes more serious as the exposure to short-term debt increases.

Even if it is likely that the flow of debt, especially with short-term maturity, is accompanied by less desirable results, it cannot be automatically concluded that prohibition to incur debts would always have a positive effect. Banks in developing countries have little choice other than to generate liquidity through short-term debts with the aim to finance illiquid projects in a low quality investment surrounding. The implications for developing countries are that they become more vulnerable to potential financial crises. Generally this is not a result of their larger stocks of short-term debt, but is an undesired consequence of illiquidity, low credit ability and investment possibilities in such countries (Diamond D. Rajan, R. 2001). The countries poor in capital have little or no access to shares, i.e. portfolio investments and inflows based on foreign direct investments and FDI inflows. They can still benefit from debt inflow for financing illiquid investments although this might potentially bring more risk. Short-term debt could be a useful and obligatory instrument for strengthening macroeconomic policy, although debt to foreign countries increases the vulnerability to external shocks.

### **3.2 Macroeconomic Determinants**

The dangers that might appear in the BH financial system, at the global level, are related primarily to unfavourable capital flows between the country and foreign countries. The disastrous scenario of enormous withdrawal of foreign exchange deposits by foreign owners and panic conversion of the local currency into foreign cash by the local residents is, of course, a less likely scenario. In case of a disaster, the intervention of the IMF is usually expected as the lender of last resort at the international level. Therefore one can speak, to some degree, about moral hazard towards the IMF, as contrary to the claims from the “Mussa theorem” (Mussa M. 2004) and other authors, according to whom there is no danger of moral hazard because of regular credit repayment to the IMF.

It is clear that larger withdrawal of foreign exchange deposits and cash could have a stressful or even disastrous effect. The foreign exchange reserves of the Central Bank of BH at the beginning of 2008 exceeded the level of KM 6.6 billion (around EUR 3.3 billion). More than half of the created foreign exchange reserves come from the inflow of funds into the BH banking system through deposits, credits and investments in shares made by the “parent” banks. These capital flows are larger than those expressed in the balance of payments as the previously stated categories are included in the balance of payments and in foreign direct

investments (Caruana J. Deppler M. 2006 p 16). The reserves have also been growing because of greater foreign assistance, which had been continuously declining in previous years so had a smaller impact on the creation of foreign exchange reserves in the Central Bank. According to IMF experts the growth of foreign reserves related to the banking sector i.e. investments in the local banks by mother banks, is accompanied by the danger of their decrease because of financing a high current account deficit.

The continuity of citizens' trust in the local currency would limit the withdrawal of foreign exchange reserves, but if the conversion of the local currency into euro deposits and of KM deposits into euros were to become more intensive the existing foreign exchange reserves of the Central Bank would be endangered. The size of the deficit would determine the size of the decrease in foreign exchange reserves in case of a reduced inflow of euro funds through the banking system. This stresses the importance for macroeconomic policy of decreasing the foreign trade deficit with the purpose of reducing the risk of financial instability. Foreign exchange reserve risk lies first of all in the fact that a relatively high level of euroization is present in BH, that the foreign exchange rate has been fixed for ten years now through the currency board arrangement, that the banks are in foreign ownership and rely on external sources of funds, and that large external imbalances are present.

The fact is that the growth of credits to the private sector in BH has been mainly directed to the household sector. There are clear indications that such a strong growth of credits to citizens has had a much larger negative impact on the growth of the trade imbalance (a very strong growth of imports compared to exports, i.e. very low coverage of imports by own exports) than credits to companies. It is also shown by empirical research by Kanda D. (2006) with an econometric model on the basis of which the conclusion was reached that the best results in correcting the foreign trade deficit would be achieved by restricting the credits to households. It is also stated in the research that fiscal expenditures are the variable with direct influence on the trade imbalance, followed by credit flows and fiscal revenues, so it is concluded that a direct correction in the restriction of fiscal spending would be necessary.

Observing the relative power of fiscal or credit policy to decrease the trade imbalance, empirical projections start from the given large tax burden and fiscal policy assessment which would be focused on the restriction of expenditures. It is assumed that credits to the private sector should remain the same as in 2005. In a one year period, it is indicated that fiscal restriction by 1 percentage of GDP

would generate 0,45 percent of GDP of decrease in foreign trade deficit, where the decline of credit flows by 1% of GDP would at the same time generate the decrease of the trade deficit by 0,44% of GDP. Fiscal and credit restrictions would have approximately the same effect on the decrease of foreign trade deficits during one year.

The author further observes that the currency board arrangement and the open capital account of BH mean that it is very difficult to target a certain credit growth rate. Generally, credit restriction could be achieved through the strengthening of required reserves or tighter prudential regulations. However as the banking system relies on banks in the mother countries with easy access to liquid funds these instruments would obviously be inefficient. This means that the only instrument that remains available is the fiscal policy which could affect the trade balance. In practice, the restriction of demand in the short term would be focused on fiscal policy. In the long-term, deep structural reforms would be necessary to bring the trade deficit to a sustainable level.

In the sample of 180 countries, BH stands out as the country with high external deficits. The countries with deficits higher than 15% of GDP belong to the group of economies with low revenue. Current account deficits in BH amounted to -13.3% in 2001, -19.1% the following year, -20.9% in 2003, -19.3% in 2004 and -21.3% in 2005 (Kanda D. 2006 p 22). According to this, BH is also outside the sample of countries with currency boards (except for small countries on islands). No country that had an active currency board had such a high deficit (Argentina had 3% of GDP) during the period when such a system was in effect. External imbalances are only one of the indicators of potential monetary instability. Other indicators are the poor export performance of the economy, instability of the financial sector, low or declining foreign exchange reserves, fast growth of money supply and credits, slow growth of real GDP, domestic inflation and fiscal deficit. In BH some of those indicators are positive, such as foreign exchange reserves, inflation and fiscal balance, and strong banks. Others deserve attention. While the fiscal balance is strong its structure is weak, with a significant accompanying risk. The growth of GDP has slowed down from the 2000s to date, and bank credits have been expanding (Zeuner J. 2005 p 35).

The relation between currency instability and previous credit expansion was noted a long time ago. In the study by authors Caprio G. and Klingebiel D. (2003) crises have been identified i.e. the periods of instability in banking when the majority or all of the banking capital in the country was destroyed. There have been 117 crises in 93 countries since the nineteen-seventies. Zeuner J. (2006) compares the

trend of the credit rate to the private sector in relation to GDP for 140 countries in the same period. The credit boom has been defined as a cumulative credit growth to the private sector during three years amounting to 10 percentage points or more. The conclusion is that a prolonged credit boom increases the probability of bank crises. Out of the sample of 140 countries, 74 countries had at least one episode of difficulties in the banking sector. Out of 74 countries, 22 experienced the growth of credits to the private sector exceeding 10 percentage points in the three preceding years.

Around 40 percent of the credit boom was related to these 22 countries, which indicates a high frequency of bank instability in countries with a credit boom. In the countries with a fast credit growth, the relation between the crisis and the fast credit growth is strong although not inevitable. In the countries with greater financial depth, i.e. credit growth over 25%, the crisis is more likely in the beginning (75% of the 22 countries with a fast credit growth and financial crisis). In the countries with growth below 25%, only a quarter experienced a crisis. Therefore in the countries with initially low financial depth the probability that a crisis will appear on the basis of the credit boom is lower but remains significant. The majority of those countries went through instability at the beginning of transition in the early nineties before the start of the credit boom. After the boom, crises took place in three countries: Poland in 1993, Bulgaria in 1996 and Slovakia in 1997.

It is not clear if the recent appearance of crises are related to credit growth. International experience shows that it happens in the continuation of credit expansion. However in many respects the economy of BH does not correspond with the sample of transition countries. The comparisons with other countries with currency boards show that credit growth was significant in those countries before the difficulties in the banking sector took place. The conclusion is that international data shows that a fast credit growth is one of the most important indicators that difficulties in the banking sector will appear. Numerous studies show that such significant and accelerated credit growth precedes such events. The probability of difficulties in banking following the credit expansion exceeds 20 percent, depending on the data and the methodology used.

The popping of the credit balloon costs a lot. As the experience of transition economies is short it is difficult to draw conclusions from the experiences of this small group of countries. Even compared to these countries, credit expansion in BH is strong and it seems to be atypical so it deserves special attention. Some empirical research shows that the foreign exchange rate regime has an impact

on banking crises probability. Economies with a rigid foreign exchange rate are more vulnerable to moderate economic challenges. In such cases, commercial banks tend to underestimate foreign exchange risk if the foreign exchange rate is fixed and extend credits in the local currency on the basis of credits taken in foreign currency.

However this is not the case in Bosnia and Herzegovina, as banks lend in the local currency on the basis of indexation in a foreign currency (euro). More than half of the credits to the economy and citizens have been extended in this way and no one asks for a credit at a lower interest rate, which would compensate for the takeover of foreign exchange risk arising from the indexation. According to one interpretation the reason is high confidence in the local currency and according to another the credit users are not aware of this technical condition in their credit contracts. If such a high degree of indexation is present it indicates primarily that consumers are not sophisticated enough rather than signalling high confidence in the KM - or the truth is somewhere in the middle. (Kanda D. 2005 p. 11).

BH also shows other features that accompany financial instability at the international level. Such factors are an unsustainable macroeconomic policy as in Argentina in 2001, full liberalization in the absence of an adequate and appropriate prudential regulation base as in Chile in 1984, the direct effects of fiscal difficulties on the local banking system as in Argentina, shocks of the conditions of exchange and change in foreign exchange rates as in Venezuela in 1994, and political instability and civil conflicts which can accompany banking difficulties. To a certain degree, according to the IMF experts, BH shows some of these weaknesses including the unsolved state debts, fiscal pressures and exposure to regional instability.

It cannot be said with certainty that, taking into account the features of the BH economy, a banking crisis will take place. It cannot be excluded either, considering many elements of concern which are characteristic of the real and financial sectors of the BH economy which do not exclude the possibility of the appearance of a banking crisis. The problems of credit expansion and external deficit are important but they are not unique in international comparisons. The countries where such or similar features were present had disproportions but they did not always experience later periods of instability. Other dimensions of economic behaviour together with international instability in BH may have varied effects. Even with the possibility that GDP is underestimated, there seems to be a good basis for moderate credit growth and lower external imbalance in BH, which guarantees stability, according to the evaluations of the IMF experts.

### **3.3 Microeconomic Factors**

Local credit expansion is financed by funds withdrawn by daughter banks from their mother banks in foreign countries. Of all bank inflows from foreign countries, 70% are for this purpose (Caruana J. Deppler M. 2006 p. 14). These funds are obtained at the EURIBOR interest rate plus 150 to 250 basis points so the costs of these funds amount to 4-5 percent. These percentages are below the local interest rate on long-term euro deposits while the interest on euro indexed long-term credits was from 7% to 11%. The local deposits are mainly short-term, and as banks give long-term credits they need to rely on foreign long-term deposits.

Euro indexed credits are mainly based on long-term euro deposits and credits from foreign countries and the local short-term deposits represent the excess reserves. Banks hold local short-term deposits in euros with counterpart banks in foreign countries. Such segmentation contributes to the vulnerability of the financial sector due to a bad relationship between bank lending and capital flows. It also leads to the bank transfer of residents' euro deposits to foreign countries rather than using them for local financing. The reduction of such balance sheet segmentation is recommended. The funds obtained abroad are in euro, credits are extended in KM with indexation in euros. Conversion of euros into KM when extending a credit in the local currency brings about a significant increase of foreign exchange reserves. Naturally foreign reserves also grow on the basis of help and credits that the country receives and inflows based on private remittances and spending in the country. The reduction of the inflow of bank assets would have the opposite effect on the level of foreign reserves. Confidence in the local currency prevents this, but any higher dynamic of conversion of KM into euros or domestic deposits into euros would cause a further decrease of foreign exchange reserves. Risks for the decline of foreign exchange reserves arise from numerous macroeconomic and financial features of the BH economy such as high euroization, fixed foreign exchange rate, and the large reliance of the banking system, largely in foreign ownership, on foreign sources of funds and high external imbalances.

The possible abandonment of the currency board system and devaluation of the local currency could bring the entire banking system into crisis as credits are mainly made with the foreign exchange clause. It would cause a large pressure on debtors, who will in the future probably be even more burdened with debt<sup>2</sup>.

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2 The increase of the exchange rate of the currency that the credit contract is limited to brings about the increase of the principal of debt in the local currency. With the possible increase of interest rates in the market, the burden of debt increases if flexible rates are contracted.

This is probable considering the scenarios in neighbouring countries. The debt of citizens and companies in BH is still not high compared to Croatia and Serbia, so that there is still some remaining space to incur additional debt, not only for citizens but also for companies, as less credit has been extended to them to date.

There is always, everywhere, the risk of a large withdrawal of deposits that can jeopardize the banking system (Rose P. 2003 p. 491). The ensuing danger is excessive involvement in dangerous operations, “the moral hazard”. Efficient protection from the consequences of such operations is provided by an adequate volume of bank capital. However, the issue of capital was raised a long time ago, and the “proper” volume has not been clearly defined either in practice or in theory. Although much progress has been made in banking research since the Basel agreement in 1988 there is still no agreement on the optimal design of bank capital regulation. Modern banking theory is still being developed. For example there is no answer regarding the relative efficiency of various financial intermediaries in the processing and aggregating of information. There is also no complete understanding of optimal allocation of risk among different holders of claims in the general balance model (Santos J. 2000 p 23). Increase of the minimum capital requirement can increase bank stability but it is a potential source of costs which are easily overlooked. The increase of operating costs in the banking business can lead to inefficiency as mediation through other financial intermediaries is not a perfect substitute for bank intermediation. The increase of the share of bank capital in the economy can be expensive as bonds are not a perfect substitute.

The main issue is whether capital is the key indicator of the safety of a bank’s operations. Empirical research has found that more important indicators are profit and costs, which, if inadequate, better indicate potential problems in the bank.

The crucial public interest is to preserve the financial stability of the system i.e. undisturbed functioning of the payment system. The biggest danger is banks’ risky behaviour i.e. involvement in dangerous operations or so-called “moral hazard”.

Generally, potential causes of crises in transition and emerging markets are the following:

- poor functioning of the legal system which makes difficult the use of collateral and protective provisions

- slow bankruptcy procedures
- low efficiency of collateral collection (Mishkin F. 2006 p 188)

In a highly competitive banking system such as ours, there is a realistic danger that banks, competing for clients, i.e. credit users, will not be so thorough in checking somebody's actual debt (the credit registry of credit users, companies and citizens in the Central Bank has only recently become operational). Although there is a high degree of concentration in banking the domestic banking market is competitive and there is a danger of banks loosening the conditions of lending, which, together with poor accounting standards and poor financial reporting can result in excessive risk exposure.

Research has shown that in circumstances of asymmetric information available to credit applicants and banks, banks prefer clients with minor deviations from historically average rates of return and with whom they have established good long-term relations. Therefore the primary clients are those with a well known productive function and long-term credit history. If market imperfections are present to a higher degree the interest margin can be wider (Blavy R. 2005 p. 25). The high costs of termination of the credit contract make banks accumulate bad credits on their balance sheets. If there are non-economical reasons such as lending to related parties this is intensified. The consequence is turning to well known clients with a well known productive function and long-term stable return which affects the widening of the interest margin i.e. the spread of deposit and credit prices where depositors receive a lower interest rate and potential credit users receive more expensive credit. It is reinforced in the conditions of limited competition as in monopolistic surroundings.

Studies in the practice of banking in the USA point out the basic indicators of a damaged credit culture. They are related to larger transactions with related parties while sound operating principles are disobeyed. Failure to respect credit rules arises when credits with higher risk of repayment are extended under dissatisfactory conditions with full awareness of deviation from these principles. The reason for this is operating with related parties, the concern related to the realization of income and competitive pressure on key markets. When credit data is incomplete the result is the inadequate estimation of the debtor's credit ability. Inadequate business practice is reflected in the absence of proper supervision of well-known debtors, reliance on verbal information instead of financial reports, optimistic interpretations of well-known credit weaknesses, the ignoring of warning signs related to a particular debtor and neglecting indicators and the situation in the macro surrounding. It happens when there is no credit collection

procedure or there is no appropriate legal procedure. The absence of effective monitoring can cause the originally good credits to bring about problems and losses. Credit officers' lack of professional skills in the analysis of financial reports and the estimation of relevant credit data causes problems. Extension of credits with an initially low level of financial risk to the amount exceeding the reasonable repayment ability of the debtor is a frequent problem in unstable economies with changeable interest rates. Extending credits where the participation in the financial costs compared to the total investment of the owner is too high easily leads to problems. Problems can also be connected with credits based on the expectations of the successful completion of a business transaction instead of the credit ability of the debtor, and also credits extended for the speculative purchase of securities or goods. The same applies to credits to companies in problem regions and activities. The credits extended due to large bank deposits without economic justification bring high risks. Finally, problem credits can be those based on the collateral which has a suspicious liquidation value or insured credits where appropriate insurance margins are missing (Greuning H. Bratanović S. 2006. p. 150).

Operative risk is present in BH banking and it is related to possible mistakes in the quality control, inefficient supply of services, and mistakes in managers' estimates. Operative risk is related to criminals and fraud which can be carried out by staff members or outsiders. With the expansion of the ATM network, we can expect a bigger volume of criminal activity and risks for banks. Control of operative risk means preventing fraud by employees and mistakes in the supply of services, avoidance of accounting mistakes and computer defects and taking into account possible natural disasters and other damage that can happen to tangible assets. Efficient measures are the purchase of appropriate insurance cover, maintenance of back up service capacities, internal control and information of the management, and contingency plans. It should be said that operative risk does not have a generally accepted measurement scale. It is not known how to calculate the quantity of the present exposure to risk and it is impossible to assess how such risk will change over time (Rose P. 2004 p. 505).

Risky elements in the BH financial system could include the enormous growth of domestic credit. From 2000 to 2004, the volume of bank credits tripled. Between 2005 and 2006 credits in the Republika Srpska increased by 35%. This increase was mainly long-term credit extended to citizens and also general purpose consumer credit. Private companies account for 51% of credits, and citizens account for 43%. In the Federation, private companies account for around 44% and citizens around 51%.

The excessive growth of the volume of credit endangers banks' capacities to evaluate adequately credit applications. The worsening of the quality of approved credits is often not noticed in a new credit boom so bad credits are temporarily concealed and the appearance of the problem is postponed. Institutional weaknesses are reflected in the lack of adequate instruments of credit monitoring and corporate governance: poor accounting, audit, financial reporting and data disclosure, and in non-transparent ownership structures. Poor data quality is the basic reason why systems of risk management and risk measurement created for the conditions of developed countries are not effective in many countries of Central and Eastern Europe. In BH it has been partly related to the non-existence of a credit bureau or registry and other sources of data, so mother banks cannot rely on estimates of credit risk or risk-adjusted return per share but need to rely on the local managers' assessments. This is the reason banks rely on collateral and guarantors. Some improvements have already been made, such as the aforementioned registry of companies' and citizens' credit with the central bank and the registry of collaterals. Underestimation of credit risk can arise also from the indexation of the majority of credits in the KM against the euro. Indexed credits are often extended to clients without protection from foreign exchange risk and in that way they indirectly increase credit risk. This credit risk can be underestimated due to moral hazard arising from the perception that the international community (the IMF) will not allow the currency board to fail, which results in underestimation and failure to provide sufficient loss provisions.

Objectives related to bank profits set by the parent banks (ROE) in relation to their subsidiary units could contribute to the risk of a stronger slow down of credit growth. According to data of the IMF experts those objectives for the banks in BH are between 20% and 25% of return on equity before taxation. Banks underestimating the increase of credit risk will try to achieve too ambitious objectives in respect of ROE after creating too low provisions. When the increased underestimation is recognized or when the risk is realized, banks will increase the rates of provisions according to the repeated estimations of credit risk by decreasing the projections of ROE. This could make the management of large foreign groups conclude that their ambitious objectives cannot be realized. In response they could decide to decrease the credit growth depending on the degree to which they re-examine their long-term strategic objectives in BH and the region.

In circumstances of high credit growth clients' lack of creditworthiness, insufficient transparency of their credit ability, and a very competitive lending environment can all lead to banks operating carelessly and becoming involved in

dangerous credit activities. Evidence shows that increased competition directly increases banks' lack of caution and their larger involvement in risky investments. Therefore in the current financial environment there is a real danger of weakening bank discipline. The financial discipline of banks is reflected in the following elements: the degree to which banks get involved in risks and the volume of risk taken, the proper assessment of risky investments, the proper valuation of assets and allocation of appropriate rates for potential loss provisions.

Credit monitoring, i.e. reporting on bad credits and non-performing credits, which might result in credit contraction, should not be liberal. Adequate classification of credit requires consideration of the debtor's financial position, i.e. assessment of their net value, money flows, collateral and history of credit repayment. The example of Chile is given as the only country where banks classified the credit users according to their credit rating (Villar A. 2006 p. 102).

### **3.4 Financial Instability Risks**

The biggest danger for the banking system is the possible appearance of bank insolvency. Good indicators of financial soundness combined with the capacity of foreign banks to receive help from parent banks lead to the conclusion that the banking system of BH is highly resistant to traditional solvency crises (Caruana J. Deppler M. 2006 p. 19). The capital in relation to risky assets (CAR indicator) significantly exceeds the required minimum of 12%. The fact is that the group of respectable foreign banks has a significantly lower capital rate, which reflects the strategy of these banks to maintain such low level of capital rate in their subsidiary units. The reason is the need to increase the ROE rate and rely on the possibility that mother banks could intervene if additional funds are necessary.

The stress test done by the IMF experts in 2007 shows that in the case of credit reclassification into bad loans with identification of a bigger than 15%, risk the group of significant foreign banks' capital would decrease to below the required minimum, although those are the banks which could withdraw funds from mother banks.

This stress test is focused on risks for banks' financial stability which might arise from larger reliance on potentially changeable inflows of capital extended through banks which are used to finance credit growth. The analysis is focused on liquidity risk which might arise from the slow-down of credit growth. It would then slow down the inflow of capital and cause potential effects that would arise in the next step, the conversion of KM into euros, but this would be limited by continuous

trust in the KM. These two shocks might arise as the result of recognition of the volume of the taken credit risk or by transfer of effects from foreign countries. It can have a direct macroeconomic impact through more difficult lending but it can also have indirect effects through the impact on capital flows, which contribute to the potential for financial instability.

According to the conclusions of the IMF experts, the BH financial system is resistant to these sources of shock. The stress test has shown that the financial and monetary system could absorb relatively moderate losses of foreign exchange reserves accompanied by the reduction of credit growth and capital inflows that finance it. However when this loss of reserves is combined with the effects of the exchange of KM into euros, the total impact could be large enough to require more attention. Although it is very difficult to estimate the probability of financial instability, this stresses the importance of maintaining trust in the currency. For example ignoring the possible feedback effects - the scenario where two factors are combined, when credit growth is slowed down to zero with 10 percentage points of the exchange of the local currency, the KM and deposits to euros - would decrease foreign exchange reserves by around 29% which would amount to 7.6 percents of GDP. The experts emphasize that this stress test is hypothetical and does not include predictions in any way. Particularly, they ignore macroeconomic feedback effects that would decrease the impact of shocks where the slow-down of credit activity would bring about recession, which would decrease the trade imbalance and slow down the loss of foreign exchange reserves. The stress test points out the need to strengthen financial supervision in order to adequately estimate these risks and develop policies that would take care of them and provide confidence.

The crisis prevention includes the adequate financial discipline and adequate control of supervisory authorities. With the dominant presence of foreign owned banks the local supervisors have to raise the quality of their work and increase the number of staff in order to better supervise the banks' sophisticated activities and new "products". It is also necessary to establish closer cooperation with supervisors from the home countries of banks operating in the local market. The Banking Agencies of BH have set up cooperation with the control supervisory institutions of banks from the countries whose banks have the majority ownership shares in the local banks. The basis for cooperation in most cases are bilateral memorandums of understanding. The areas of cooperation include: the exchange of information on the operations of banks in foreign ownership in the country and in the home country, exchange of information on the management, joint consultation and visits to banks in foreign ownership. The problem of cooperation

is often related to different legal treatment of confidential data and information within different legal jurisdictions.

According to some polls conducted by the BIS, host supervisors are often not sufficiently informed about the situation of the mother bank. A special challenge is when the bank in foreign ownership is managed from a foreign country, i.e. the headquarters of the bank is in the foreign country and the management has a *global perspective*, meaning that different transactions are booked in various bank points world-wide. Thus some subsidiary banks can have a higher degree of concentration of certain risks. As information goes through local managers, the local authorities are often not well informed on the liquidity problems of the subsidiary bank. Various accounting standards also make problems, particularly with respect to the type of business performed by foreign banks in the host country. It is often the case that foreign subsidiary units have a minor significance for the mother bank but a large significance for the host country. The key question that arises is how the mother bank will react in case of difficulties of its subsidiary bank in a foreign country, which is very important for the host country, and of minor importance from the point of view of the bank from the home country (Mihaljek D. 2006 p. 60). There have been cases where the mother bank reacted without a request for assistance by the host country and cases when the mother bank refused to help its subsidiary bank. Mihaljek states the example of Riječka banka, the biggest Croatian bank, which in 2002 had losses, incurred through foreign exchange transactions, to the amount of USD 100 million, i.e. equal to three quarters of the bank's capital. Germany's Bayerische Landesbank, the owner of the capital, decided to sell its share of 59% for 1 dollar to the Croatian government when the losses were discovered. Later on, the Croatian government sold the same bank for EUR 55 million to Austrian Erste Bank. Mother banks might not help their daughters and local depositors in specific circumstances when the government freezes, expropriates or devalues the bank assets bringing about bank losses (as in the case of Argentina in 2001) or in case of fraud in the privatized bank which goes undetected by the foreign bank during the take-over (the case of Riječka banka). The response of the mother bank will depend on its financial strength. If it is poor the mother bank will care less about the reputation cost and will abandon its daughter bank.

For this reason the question arises if it would be better if the bank turned its subsidiary unit in the host country into its branch. Such a process took place in the European Union after the introduction of the single banking license. The centralized decision-making process in the global financial institutions actually makes the subsidiary bank act more or less as a branch. This makes irrelevant the

question whether the mother bank will react in case of a stress of the branch or quasi branch, as legal claims are directed to the mother bank. The more important issue is if the central bank and supervisory authorities will be able to manage the loss of liquidity in the domestic banking system and the interruption in the payment system if the mother bank decides to close the branch, which is a small matter for the mother bank but systematically important for the host country.

Foreign banks are the key source of credit in BH. In 2005 they extended 84% of the total credit, and of this only 6 banks extended 65 percent of the total credit. Many banks carried out credit expansion in the countries of Central and Eastern Europe as part of a wider strategy of their bank groups. Namely, in those countries, banks perform above the average profit rate. They try to increase the total yield rate on shares, compensating in this way for the low rates of return in their mother countries (Caruana J. Deppler M. 2006 p. 13). This strategy seems to be successful, as the profits in countries of Central and Eastern Europe constitute a disproportionally high share in the groups' profit. For example Austrian bank groups earn 43% of their profits in the countries of Central and Eastern Europe although only 23% of their assets are invested in those countries.

Theoretical research suggests that foreign ownership in banking brings many benefits for the local economy (Mishkin S.F. 2006). Foreign banks provide access to foreign financial markets. They effect the improvement of the regulatory and supervisory structure in the local banking. They effect the improvement of credit quality and decrease the influence of the government on the financial sector. Foreign banks introduce new financial instruments and new technologies and influence the growth of banking competition, thus improving the quality of financial services. They increase the trust of the domestic public in respect to bank solvency. Empirical research confirms that foreign presence reduces bank costs and profits (Kose A. M. et al. 2006).

The fast expansion of banks in foreign ownership in BH has contributed to financial stability but it has also created potential channels for the transfer of negative effects from other Central and Eastern European countries. This transfer of negative effects depends on the operations of the risk management systems in foreign banking groups.

Fast credit growth in the region has contributed to the creation of significant risks. The transfer of negative effects could take place when the risk in these countries is recognized and realized which would initiate repeated risk assessments. It would make banks consider their exposure in BH as a risky area. The consequence could

be the slow-down or reduction of credit growth in BH. Development trends in the banking of mother countries could also make them decrease risk exposure in BH.

A large asymmetry in the relative significance of bilateral credit exposure to BH and of the BH economy to foreign banks means that changes in the credit policies of parent banks directed from the perspective of those banks could have a large impact on BH. For example the exposure of Austrian banks to BH is only 2 percent of their total exposure in the region of Central and Eastern Europe but in BH their credit accounts for almost 70% of the total credit extended by foreign banks (Caruana J. Deppler M. 2006 p. 19). Purchase of Hypo Alpe Adria bank by a German bank decreased the exposure of BH to Austrian banks but it also decreased the exposure, which is anyway low, of Austrian banks to BH. German banks' exposure in BH was only 0,3% of their total exposure in the countries of Central and Eastern Europe.

The process of mergers and acquisitions that take place in European banking and in BH to some extent change the picture of the ownership of local banking. Recently Hypo Alpe Adria Group AG has been taken over by German Bayerische Landesbank. The bank Hypo Alpe Adria Group AG is one of the most profitable banks in the region of Central and Southeastern Europe and is considered to be one of the most profitable and attractive in Europe. It certainly disturbs their main competitors, i.e. Raiffeisen, Erste Group and Unicredit Group, and means the intensification of competition in the South-East of Europe. One of the possible consequences could be riskier bank operation in that area.

Mergers of two bigger banks from developed countries, in the case that those two banks have their subsidiary units in a third country, could lead to the undesired increase of concentration in that third country. This was the case in Poland after the merger of Unicredito and HVB banks, which resulted in the merger of the second and third largest banks in Poland, whose owners were these first two banks.

#### **4. Conclusions**

The financial sector in BH has several positive features. Banks had been consolidated, privatized (mainly by foreign owners) and a high degree of concentration had been achieved. They rely on the foreign financial groups which they belong to to obtain funds and on the European financial market. They provide

a sufficiently large supply of credit to companies and citizens. Macro-economic stability is achieved in the area of monetary policy (currency board), a low inflation rate and high public confidence in the local currency. Value added tax has been introduced and public spending is reduced to a realistic level, i.e. fiscal balance has been established. Good and so far effective regulation and supervision of the banking sector and other financial institutions has been established. As of now there are no serious problems as credit expansion is still underway. The problem is that the safety network is incomplete, as the Central Bank does not perform its function of the lender of last resort. The next problem is excessive exposure to foreign banks (Austrian and German) which, however, have very low exposure in Bosnia and Herzegovina. Their appearance and behaviour in BH is a direct result of the international strategies of parent banks which bring some risks for BH economy. High competition in the domestic banking sector and the drive to make profits can cause carelessness in banks and the growth of risky investments, and possibly endanger the banks' stability.

It has been noticed that big banks have a low CAR (capital in relation to risky assets). The BH economy is open and liberalized (financial and foreign trade area) which means that it is exposed to the unfavourable effects of irreversible flows of foreign capital. A high domestic credit expansion deteriorates the trade balance and current balance of payments. The inflow of foreign capital compensates for this and has a positive impact on the growth of foreign exchange reserves and the degree of international liquidity in the country. An unfavourable scenario can take place on the basis of a decrease of the inflow of capital from foreign countries or withdrawal of euro deposits from banks (conversion of the KM into euros) which could lead to the abandoning of the currency board (devaluation) and cause larger bank losses.

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