# EUROPEAN DEPOSIT INSURANCE SYSTEMS IN THE TIME OF CRISIS

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#### ABSTRACT

Deposit insurance system was primarely created to protect depositors and their deposits. It creates depositors' confidence in the banking system, thus preventing depositor panic and bank run of bank deposits especially in the time of crisis. Since most depositors do not possess adequate knowledge and professional experience, which is necessary to assess bank risks, the operation of deposit insurance system is justified in order to create trust in the banking system. It is believed that the depositor's trust in the banking system and the deposit insurance system ultimately contribute to the maintenance of banking stability. Despite the these significant positive effects of deposit insurance system there are also some negative aspects that have to be taken into account effects on bank stability. They refer to risky bank operations, reduced market discipline, moral hazard, negative selection and the principal-agent problem. Financial crisis in Europe started in 2008, points on the risk operations of banks in certain eurozone countries, which is often associated with high level protection of the deposit insurance system. To prevent depositor panic and further systemic banking crisis, in this period, national deposit insurance systems became more generous by introducing additional forms of protection (paybox plus protection, foreign currency deposits insurance, interbank deposits insurance and government support in raising funds regardless of the management of the system), increasing the amount of protection and leaving co-insurance. Therefore, the aim of this paper is to discuss about changes in the implementation of the deposit insurance systems in Europen Union (EU) countries and selected Southeastern (SE) European countries in the time of financial crisis as well as changes resulting from the requirements of the banking union.

*Keywords: deposit insurance system, bank stability, financial crisis, EU countries, Southeastern European countries* 

### **1. INTRODUCTION**

Deposit insurance system is a measure of protection depositors and banking system and its importance comes from the fact that depositors' trust in the banking system is important for achieving banking stability. Because most depositors do not have sufficient experience and knowledge to assess bank risk, the operation of deposit insurance system is important to create confidence in the banking system. According to Kundid (2013, p. 39) deposit insurance system is part of a "safety net" as well the lander of last resort and the regulation and supervision of banks. Historically, the first formal deposit insurance system in the world was established in 1829 in the State of New York. Because it was not established at national level, the first national deposit insurance system is considered to be the system established in 1924 in former Czechoslovakia.

However, most authors point out US deposit insurance system, established in 1930 as the first national system in the world. Federal Deposit Insurance Corporation was founded to restore depositors' confidence in the US banking system and to protect payment system due to the negative effects of the Great Depression (1929-1933). Since then, deposit insurance systems have become the standard form of depositors and banking protection, especially in times of financial crisis when they prevent depositors' panic, bank run and systemic bank failures. It is important to prevent that because in case of bank run, which results in a withdrawal of liquid monetary assets and deposits, banking liquidity will be threatened as well (Pečarić, Visković, 2013, p. 19). Despite the positive effects of deposit insurance for banking system, there are also some negative effects on bank stability. It is considered that existence of a deposit insurance system encourages banks to risk operations. The negative consequences of the deposit insurance system, Garcia (1996, p. 20) points out as three pitfalls of the deposit insurance system: 1) moral hazard, 2) adverse selection, 3) agency problem or principal-agent problem. Moral hazard occurs on, both the depositors' and on the banks side. It arises from a combination of the lack of depositors' incentives to constantly monitor the operation of banks or the riskiness of their operations as banks take on riskier projects driven by the security provided by deposit insurance system. Adverse selection arises between small and large banks where deposit insurance premiums are not differentiated with regard to the risk of a particular bank. If smaller banks are riskier in their business, deposit insurance system is necessary for them. Since large banks pay the same premium as small banks, on that way, large banks subsidize smaller and riskier banks, which can be justified by the fact that large banks also benefit from greater stability of the banking system (Garcia, 1999, p. 7). The principal-agent problem refers to the situation in which the agent or employee represents his interests, not the interests of the principal or employer. Based on the above "this problem can be multiple due to the greater number of stakeholders involved in the deposit insurance system, such as depositors, banks and regulators" (Faulend, 2002, p. 25). Despite negative consequence of the deposit insurance system, its effect on bank stability depends of deposit insurance system features/characteristics. Forming the deposit insurance system or its features should be determined in accordance with national legislation and regulatory framework as well as the development of the banking system. The features of the deposit insurance system are divided into basic and additional.

| 2019, p. 7  | 0/                                       |
|---|--|
| Basic   | Additional                               |
| the manner of establishing the system<br>(explicit/implicit)  | paybox plus form of protection           |
| the manner of participate within the system<br>(compulsory/voluntary)   | coverage of deposits in foreign currency |
| the manner of managing the system (privat/state/mix)  | coverage of interbank deposits           |
| the manner of collecting the funds (ex-ante/ex-post)  | backstop protection                      |
| the deposit insurance premium (equal for all<br>institutions/<br>aligned with the institution's risk – »fair premium«)<br>the existence of co-insurance |  |
| amount or limit of insured deposits (protection)  |  |

Table1: Features of deposit insurance system (Suljić Nikolaj, Olgić Draženović, Drezgić, 2019, p. 70)

In the next chapter, fallows an explaination of deposit insurance characteristics through the review of scientific research.

# 2. LITERATURE REVIEW

According to Talley and Mas (1990, p. 14) an explicit deposit insurance system implies the existence of rules and procedures in managing deposit protection, i.e. a legal obligation to protect depositors up to the secured limit, while the insurer may have an arbitrary the right to protect uninsured depositors. Under the implicit deposit insurance system, there is no legal obligation in managing deposit protection, so depositor protection is an arbitrary decision by the state. Although explicit deposit insurance systems are more represented in the world than implicit ones, most scientific researches (Cull, Senbet, Sorge, 2002; Demirgüç-Kunt, Detragiache, 2002; Laeven, 2002; McCoy, 2007; Davis, Obasi, 2009; Khan, Dewan, 2011, Lé, 2013; Ngalawa, 2016) prove they negative effects such as banking system instability and/or crises and increasing banks' moral hazard. Participation of banks or all credit institutions within the deposit insurance system may be compulsory or voluntary (Bernet, Walter, 2009, p. 30). According to Wheelock, Kumbhaker (1995), Garcia (2000) and Blair, Carns, Kushmeider (2006) voluntary membership, creates negative selection and increases moral hazard. The management of a deposit insurance system, is divided into: private, state or mixed management. Most scientific researches indicate the advantage of private deposit insurance systems over state systems. Accordingly, Demirgüç-Kunt, Kane, Laeven (2007) argue that private actors are more objective in supervising than civil servants, and that through banks they are more proficient in selecting information needed to manage the system. Garcia (1996, 1999), Demirgüç-Kunt, Detragiache (2002) point out the connection between the private deposit insurance system and a higher level of government development. Respectively, Calomiris (1990), Demirgüç-Kunt, Detragiache (2002), Laeven (2002) and Brandao-Marques, Correa, Sapriza (2013) found that the state deposit insurance system creates moral hazard and has an adverse effect on bank stability. In contrast, Diamond, Dybving (1983) and Pennacchi (2006) consider that the state deposit insurance systems are more efficient than private, because private systems have limited fund's assets, especially in times of crisis. Fund of deposit insurance system which is required for payments if a bank breaks down, may be established in advance - ex-ante fund or ex-post fund - during bank disruptions. Some countries have so-called mixed fund due to the presence of both ex-ante and ex-post funds, but according the classification of the World Bank, mixed fund is also ex-ante because of its dominance. (Demirgüç-Kunt, Kane, Laeven, 2014, p. 4). The disadvantage of the ex-ante system is that becomes an expensive way of financing (because banks continually pay premiums) unless there is a high degree of transparency and analytical control of the amount of funds raised in the fund. The ex-post system does not become too expensive for the members because the fund is formed at the moment of problems in the banking system, but on the other hand, precisely because the funds accumulate at the time of need for payment, the end result may be the problem of late payment. The lack of ex-post systems also includes pro-cyclicality, which means that commitments made in bad economic situations can lead to a domino effect of bank failure (HUB, 2007). Most scientific researches point to the advantage of differentiated, i.e. fair premium, because it reduces risk taking (especially adverse selection) by secured credit institutions (Merton, 1977; Kareken, Wallace, 1978; Sharp, 1978; Flannery, 1982; Faulend, Kraft, 2004; Galac, 2004; Acharya, Santos, Yorulmazer, 2010; Markovinović, 2011...). Also, it encourages credit institutions to operate more conservatively, thereby reducing the cost of deposit insurance, which also contributes to the stability of banking system. Contrary the last, Pennacchi (2006) found that, in times of crisis, fair premiums lead to longer instability. Chiang, Wu, Yu (2007) have found that a voluntary deposit insurance system can provide social welfare if the premiums are low enough to encourage all banks to join the system and vice versa. The authors also point out that risk premiums can mitigate but not completely eliminate the problem of moral hazard and that the mandatory deposit insurance system contributes more to social well-being. Ho, Lai, Lee (2011) concluded from the Taiwanese experience of the deposit insurance system that a fixed premium

rate (non-differentiated by risk) was inefficient. In order for the deposit insurance system to reduce the possibility of moral hazard, the system may include co-insurance, which implies that part of the deposit amount is unsecured in order to encourage depositors to monitor the banks' operations. The amount of insured deposits is one of the main features in the formation of an adequate deposit insurance system. The most commonly suggested conclusion is that the amount to which deposits are secured should be sufficient to prevent the destabilizing effect of withdrawing deposits from banks (bank run), but not so high as to eliminate the effectiveness of market discipline in monitoring risk-taking banks (Blair, Carns, Kushmeider, 2006, p. 9). Paybox <sup>1</sup>plus as an additional feature of deposit insurance presents a payout function guarantees payment to depositors in the event of a bank failure. The state can decide whether to attach to this basic protection model (paybox) the function of a bank supervisor or macroprudential regulator, which is a paybox plus form of protection that includes a higher level of protection for depositors (Suljić Nikolaj, 2018, p. 22). The coverage of foreign currency deposits depends on the use (representation) of foreign currencies in a particular country, that is, the specific of each country. If there is a large proportion of foreign currency denominated deposits in total deposits then it is important to incorporate this form of protection within the deposit insurance system, but foreign currency risk protection is required. The coverage of interbank deposits is much less represented than the coverage of deposits of natural persons, therefore it represents an additional function of the deposit insurance system. Although the deposit insurance system does not primarily need to be state-owned, if the system lacks funds, the state can guarantee it. For some systems, this works on the basis of previously approved credit lines by the ministry, and for other one it is a way of issuing bonds or taking out government-guaranteed loans. According Prohaska, Suljić, Olgić Draženović (2015, p. 45) the form of such support to the deposit insurance scheme is guaranteed by the government, not the central bank. These characteristics of a "generous" deposit insurance system are understandable measures of protection in times of crisis, but they are an additional incentive to create moral hazard (Cull, Senbet, Sorge, 2005; Önder, Özyildirim, 2008; Anginer, Demirgüç-Kunt, Zhu, 2014).

# **3. FEATURES OF DEPOSIT INSURANCE SYSTEMS IN EUROPEAN UNION COUNTRIES AND SOUTHEAST EUROPEAN COUNTRIES 3.1. Deposit insurance in EU countries**

The operation of the deposit insurance systems in the EU States (also known as deposit guarantee schemes) is based on the Directive of the European Parliament and of the Council of the European Union (Directive 94/19/EC)<sup>2</sup>. According to that basic Directive a minimum amount of protection was EUR 20 000 with the possibility of unlimited protection for EU members. Although, the amount of protection of the members were not harmonized and the maximum payout period in the event of a bank breakdown was 3 months. With the onset of the crisis in 2008, governments of the European countries had to introduce additional measures that include liquidity injection and fiscal incentives to restore confidence in the banking system. This indicates an inefficacy of the existing deposit insurance systems and of Directive (94/19/EC) which presented the basis of the minimum harmonization of the EU members' deposit insurance systems, since each member had enough freedom to adjust the Directive to the features of their own banking and financial system. Therefore, it was necessary to create additional forms of banking system protection implemented by Directive 2009/14 / EC (Ayadi, Lastra, 2010, p. 211). In response to the financial crisis, Directive from march 2009 has been increased amount of protection from EUR 20 000 to EUR 50 000 until June 2010 and it was

<sup>&</sup>lt;sup>1</sup> All explicit deposit insurance systems contain the so-called paybox or payback option which guarantees the payment to depositors in the event of a bank failure. Countries may decide whether to add a bank supervisor or macro-prudential regulator function to this basic security model known as the paybox plus model which evidently offers a stronger form of protection.

 $<sup>^2</sup>$  It was supplemented and amended by Directives 2000/12/EC, 2004/39/EC, 2005/60/EC, 2009/14/EC, 2013/36/EU and 2014/49/EU.

determined that the amount of protection in the EU countries will be EUR 100 000 until the end of 2010, while Austria, Denmark, Ireland, Germany, Hungary, Slovenia and Slovakia had unlimited amount of protection in the period from 2008 to 2013 (table 3). By the end of 2010, protection amounts became universal and the differences in the specifics of individual EU deposit insurance systems were in the process of being harmonized with the Directive (2014/49/EU) aiming to preserve EU banking stability. Except for the increase of protection amounts, in time of crisis, deposit insurance systems in EU become "generous" because of leaving co-insurance and introduction of additional forms of protection (paybox plus, foreign currency and interbank deposits, backstop) (table 4). That represents understandable measures in times of crisis in order to prevent depositors' panic and protect the banking system but also promotes moral hazard.

|                   | BASIC |                            |             |             |     |        |            |     |                                     | ADDITIONAL     |        |                     |           |          |
|-------------------|-------|----------------------------|-------------|-------------|-----|--------|------------|-----|-------------------------------------|----------------|--------|---------------------|-----------|----------|
|                   | Par   | ticipation                 |             | Fund        | i   | Ma     | Management |     |                                     | Premium        |        |                     |           |          |
| EU states         | Banks | All credit<br>institutions | Ex-<br>ante | Ex-<br>post | Mix | Privat | State      | Mix | Co-<br>insurance<br>(2003-<br>2008) | Fer<br>premium | Paybox | Foreign<br>currency | Interbank | Backstop |
| Austria           | X     |                            |             | x           |     | X      |            |     |                                     |                |        | x                   |           | x        |
| Belgium           |       | x                          | X           |             |     |        |            | X   |                                     |                | X      | x                   |           | x        |
| Bulgaria          | X     |                            | x           |             |     |        |            | X   |                                     |                | X      |                     | x         | x        |
| Croatia           |       | x                          | x           |             |     |        | x          |     |                                     |                | X      | x                   |           | x        |
| Cyprus            |       | х                          |             |             | X   |        |            | X   | х                                   |                | Х      | х                   |           | х        |
| Czech Rep.        |       | х                          | х           |             |     |        |            | x   | х                                   |                |        | x                   |           | x        |
| Denmark           |       | x                          |             |             | х   |        |            | X   |                                     |                |        | x                   |           | x        |
| Estonia           |       | x                          | X           |             |     |        |            | X   |                                     |                |        | x                   |           | x        |
| Finland           | X     |                            | X           |             |     | х      |            |     |                                     | х              |        | x                   |           |          |
| France            |       | x                          |             |             | X   |        |            | X   |                                     | x              | X      | x                   |           |          |
| Germany           |       | x                          | x           |             |     |        |            | X   | x                                   |                | X      | x                   |           |          |
| Greece            | X     |                            |             |             | X   |        |            | X   |                                     | x              |        | x                   |           |          |
| Hungary           |       | x                          | X           |             |     |        |            | х   | x                                   | х              |        | x                   |           | X        |
| Ireland           |       | x                          | X           |             |     |        | X          |     | x                                   |                |        | x                   |           | x        |
| Italy             | X     |                            |             | x           |     | x      |            |     |                                     | x              | X      | x                   |           |          |
| Latvia            | X     |                            | X           |             |     |        | X          |     |                                     |                | X      | x                   |           | x        |
| Lithuania         |       | x                          | x           |             |     |        | X          |     | x                                   |                | X      | x                   |           |          |
| Luxembourg        |       | x                          |             | x           |     | x      |            |     | x                                   |                | Х      | x                   |           |          |
| Malta             | Х     |                            |             |             | X   |        | X          |     | x                                   |                |        | x                   |           | X        |
| Netherlands       |       | x                          |             | x           |     |        | X          |     |                                     |                |        | x                   |           |          |
| Poland            |       | x                          |             |             | X   |        | x          |     | x                                   |                | Х      | x                   |           |          |
| Portugal          | X     |                            | x           |             |     |        | X          |     |                                     | х              | Х      | X                   |           | X        |
| Romania           | X     |                            | x           |             |     |        |            | X   |                                     | x              | X      | x                   |           | x        |
| Slovakia          | X     |                            | х           |             |     |        |            | х   | х                                   |                |        | х                   |           | х        |
| Slovenia          | X     |                            |             | Х           |     | х      |            |     |                                     |                |        | х                   |           | Х        |
| Spain             |       | x                          | x           |             |     | x      |            |     |                                     |                | Х      | X                   |           |          |
| Sweeden           | X     |                            | Х           |             |     |        | x          |     |                                     |                |        | х                   |           |          |
| United<br>kingdom |       | х                          |             | x           |     |        | x          |     | x                                   |                | x      | x                   |           | x        |

Table 2: Basic and additional features of deposit insurance systems in EU countries, in<br/>period 2008-2014 (Suljić Nikolaj, 2018, p. 29,38)

Table following on the next page

|             |                     |                              |                           |             | - /         |                            |             |             |             |
|-------------|---------------------|------------------------------|---------------------------|-------------|-------------|----------------------------|-------------|-------------|-------------|
| EU states   | 2007                | 11/2008                      | 12/2008                   | 2009        | 2010        | 2011                       | 2012        | 2013        | 2014        |
| Austria     | 20 000€             | 20 000€                      | no limit                  | no limit    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Belgium     | 20 000€             | 20 000€                      | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Bulgaria    | 20 446€             | na                           | 40 000 BGN                | 100 000 BGN | 196 000 BGN | 196 000 BGN                | 196 000 BGN | 196 000 BGN | 196 000 BGN |
| Duigaria    |                     |                              | (20 452 €)                | (51 129 €)  | (100 213 €) | (100 213 €)                | (100 213 €) | (100 213 €) | (100 213 €) |
| Croatia     | 100 000 HRK         | 400 000 HRK                  | 400 000 HRK               | 400 000 HRK | 400 000 HRK | 400 000 HRK                | 400 00 HR   | 100 000€    | 100 000€    |
|             | (13 652 €)          | (55 376 €)<br>20 000 €       | (55 376 €)                | (54 500 €)  | (54 880 €)  | (53 773 €)                 | (53 181 €)  | 100 000€    | 100 000€    |
| Cyprus      | 22 222 €; 20 000 €* |                              | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    |             |             |
| Czech Rep.  | 27 778€; 25 000€*   | 25 000€                      | 50 000€                   | 50 000 €    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Denmark     | 40 265€             | 300 000 DKR<br>(40 233 €)    | no limit                  | no limit    | no limit    | 750 000 DKR<br>(100 000 €) | 100 000€    | 100 000€    | 100 000€    |
| Estonia     | 12 782 €            | 20 000 €                     | 50 000€                   | 50 000 €    | 100 000 €   | 100 000 €                  | 100 000€    | 100 000€    | 100 000€    |
| Finland     | 25 000 €            | 25 000 €                     | 50 000 €                  | 50 000 €    | 100 000 €   | 100 000 €                  | 100 000€    | 100 000 €   | 100 000 €   |
| France      | 70 000 €            | 70 000 €                     | 70 000 €                  | 70 000 €    | 100 000 €   | 100 000 €                  | 100 000€    | 100 000 €   | 100 000 €   |
| Germany     | 22 222 €; 20 000 €* | 20 000 €                     | no limit                  | 50 000 €    | 100 000 €   | 100 000 €                  | 100 000€    | 100 000€    | 100 000€    |
| Greece      | 20 000 €            | 20 000 €                     | 100 000 €                 | 100 000 €   | 100 000 €   | 100 000 €                  | 100 000€    | 100 000 €   | 100 000€    |
| Hungary     | 25 924€; 23 728€*   | 13 000 000 HUF<br>(49 580 €) | no limit                  | 50 000 €    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Ireland     | 22 222€; 20 000€*   | 22 222 €; 20 000 €*          | no limit                  | no limit    | no limit    | no limit                   | no limit    | no limit    | 100 000€    |
| Italy       | 103 291€            | 103 291 €                    | 103 291€                  | 103 291€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Latvia      | 15 000€             | 18 492 €                     | 50 000€                   | 50 000€     | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Lithuania   | 17 377 €; 15 929 €* | 22 000 €; 20 000 €*          | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Luxembourg  | 22 222 €; 20 000 €* | 22 222 €; 20 000 €*          | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Malta       | 22 222 €; 20 000 €* | 22 222 €; 20 000 €*          | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Netherlands | 40 000€             | 20 000€                      | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Poland      | 22 500 €; 20 350 €* | 22 500 €                     | 50 000€                   | 50 000 €    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Portugal    | 25 000 €            | 25 000 €                     | 100 000 €                 | 100 000 €   | 100 000 €   | 100 000 €                  | 100 000€    | 100 000€    | 100 000€    |
| Romania     | 20 000€             | na                           | 50 000€                   | 50 000€     | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Slovakia    | 22 000 €; 20 000 €* | 20 000€                      | no limit                  | no limit    | no limit    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Slovenia    | 21 294€             | 22 000€                      | no limit                  | no limit    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Spain       | 20 000€             | 20 000€                      | 100 000€                  | 100 000€    | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| Sweeden     | 27 030 €            | 26 296€                      | 500 000 SEK<br>(52 093 €) | 50 000€     | 100 000€    | 100 000€                   | 100 000€    | 100 000€    | 100 000€    |
| United      | 2 727€; 51 072€;    | 35 000 £                     | 50 000 £                  | 50 000 £    | 85 000 £    | 85 000 £                   | 85 000 £    | 85 000 £    | 85 000 £    |
| Kingdom     | 46 257 €*           | (44 533 €)                   | (62 945€)                 | (56 164 €)  | (99 170 €)  | (97 974 €)                 | (104 871 €) | (100 108€)  | (105 490 €) |

Table 3: Limit of deposit insurance systems in EU countries, in period 2007- 2014 (SuljićNikolaj, 2018, p. 33)

\* co-insurance represented

Financial crisis was result from years of inefficient regulation and supervision (Tirole, 2010, p. 12-13) and it was further strengthened by the fact that excess liquidity encouraged credit institutions to take risks. Because of that, in addition to the financial crisis, there were banking crises in some EU states<sup>3</sup>, most part of eurozone states. The business riskiness of EU banks stems from the fact that their growth was mostly recorded on secondary securities – derivatives (Grgić, Kordić, 2011, p. 214). All of the above indicated the need for a new form of regulation, therefore the creation of a banking union began. The banking union would weaken the link between national governments and national banking systems because in the crisis periods, national control, harmonization of regulatory rules which sought to the minimum and compliant prudential regulation with the aim of achieving the competitiveness of domestic institutions, resulted in the breakdown of the financial system and poor preparedness for the occurrence of the financial shock which followed. It is based on three pillars: 1) joint bank supervision, 2) a unique mechanism for resolving bank issues and 3) a joint deposit insurance. The main changes, introduced by the amended Directive (2014/49 / EU) of deposit insurance systems, which form the basis of the third pillar of the banking union, are:

- every credit institution should be part of a deposit insurance system,
- reduced deadline for deposit payment to seven working days, which should be implemented by 2024,

<sup>&</sup>lt;sup>3</sup> Systemic banking crises in period 2007-2011 were in: Austria, Belgium, Denmark, Germany, Greece, Ireland, Latvia, Luxembourg, Netherlands, Spain, United Kingdom. In France, Hungary, Italy, Portugal, Slovenia, Sweeden were border cases of systemic banking crisis (Laeven, Valencia, 2012, p. 6).

- introduction of a fair premium, credit institutions' risk assessments will be able to be based on balance sheet assets and risk indicators: capital adequacy, quality and liquidity of assets)
- better information for depositors about ٠
- only 0.8% of secured deposits will be collected by ex-ante until 2025, and the rest of the funds will be collected ex-post.

# **3.2.** Deposit insurance in SE European countries

The banking systems of the SE European countries were stable at the time of the financial crisis (2008-2012) because they based their business on traditional products therefore they didn't have bank crisis. Nevertheless, under the influence of the financial crisis, SE European deposit insurance systems (just like EU deposit insurance systems) have increased the amount of protection to prevent depositors' panic and bank run. However, according to other features, the deposit insurance systems of SE European countries are different, as can be seen from the following tables. It is evident that only in Macedonia, all credit institutions are included in the deposit insurance scheme. With regard to the method of fundraising, all above countries have an ex-ante system, while with regard to the criterion for managing the system, the state system prevails, except for Bosnia and Herzegovina which has a private deposit insurance system. The risk-based premium of institutions within the deposit insurance system is only present in Kosovo. In observed period, paybox plus is present in Bosnia and Herzegovina and Serbia. Prior financial crisis, coverage of foreign currency deposits was present in Albania, Bosnia and Herzegovina, Macedonia and Serbia, but since 2008, these feature is no longer present in Montenegro and Serbia. Coverage of interbank deposits is present in Montenegro and Serbia. Before crisis, it was only in Bosnian deposit insurance system. Among observed SE European countries, Bosnia and Herzegovina and Kosovo don't have government support in case of a shortfall of funds (backstop).

|                                |       |                            | BAS         | ADDITIONAL             |        |                |        |                     |           |          |
|--------------------------------|-------|----------------------------|-------------|------------------------|--------|----------------|--------|---------------------|-----------|----------|
|                                | Par   | ticipation                 | Fund        | und Management Premium |        |                |        |                     |           |          |
| South<br>European<br>countries | Banks | All credit<br>institutions | Ex-<br>ante | Privat                 | Satate | Fer<br>premium | Paybox | Foreign<br>currency | Interbank | Backstop |
| Albania                        | X     |                            | x           |                        | х      |                |        | x                   |           | х        |
| Bosnia and<br>Herzegovina      | x     |                            | x           | x                      |        |                | х      | x                   |           |          |
| Kosovo                         | X     |                            | x           |                        | х      | x              |        | x                   |           |          |
| Macedonia                      |       | x                          | x           |                        | х      |                |        | x                   |           | х        |
| Montenegro                     | X     |                            | x           |                        | х      |                |        |                     | х         | х        |
| Serbia                         | X     |                            | x           |                        | х      |                | X      |                     | х         | х        |

Table 4: Basic and additional features of deposit insurance systems in SE European countries, in period 2008-2014 (Suljić Nikolaj, 2018, p. 53, 57)

*Table following on the next page* 

| South<br>European<br>countries | 2007                          | 2008                       | 2009                       | 2010                       | 2011                       | 2012                       | 2013                        | 2014                        |
|--------------------------------|-------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|
| Albania                        | 2 827€;<br>3 325€;<br>5 653€* | 2 500 000 LEK<br>(20 254€) | 2 500 000 LEK<br>(18 035€) | 2 500 000 LEK<br>(18 145€) | 2 500 000 LEK<br>(17 817€) | 2 500 000 LEK<br>(17 991€) | 2 500 000 LEK<br>(17 820 €) | 2 500 000 LEK<br>(17 863 €) |
| Bosnia and<br>Herzegovina      | 7 500 KM<br>3 828 €           | 20 000 KM<br>(10 226€)     | 20 000 KM<br>(10 226€)     | 35 000 KM<br>(17 895€)      | 50 000 KM<br>(25 517€)      |
| Kosovo                         | na                            | na                         | na                         | na                         | na                         | 3 000 €                    | 3 000 €                     | 3 000 €                     |
| Macedonia                      | 20 000€                       | 30 000€                    | 30 000€                    | 30 000€                    | 30 000€                    | 30 000€                    | 30 000€                     | 30 000€                     |
| Montenegro                     | 5 000€                        | no limit                   | no limit                   | 50 000€                    | 50 000 €                   | 50 000€                    | 50 000 €                    | 50 000€                     |
| Serbia                         | 3 000€                        | 50 000€                    | 50 000€                    | 50 000€                    | 50 000 €                   | 50 000€                    | 50 000 €                    | 50 000€                     |

Table 5: Limit of deposit insurance systems in SE European countries, in period 2007- 2014(Suljić Nikolaj, 2018, p. 54)

*\* co-insurance represented* 

Before crisis, among selected countries of SE Europe, only Albania (2003-2007) and Macedonia (only in 2003) had co-insurance. In 2008 and 2009, Montenegro introduced an unlimited amount of protection, which in 2010 was limited to EUR 50 000. From 2010 to 2014, amounts of deposit protection in SE European countries have remained unchanged.

# 4. CONSLUSION

Deposit insurance system is a common form of depositor protection, which additionally ensures the stability of the banking system, as it prevents the possibility of a depositors panic and consequently bank run. Its importance is especially pronounced in times of crisis when it is necessary to maintain confidence in the banking system. Despite these positive characteristics, the effects of the deposit insurance system are not straightforward, so there is a lot of theoretical and empirical evidence pointing to the negative consequences that the deposit insurance system may imply on bank stability due to moral hazard, adverse selection, and principal and agent problem. The effects of a deposit insurance system on bank stability depend on the formation of the system with respect to its features, which should be determined in accordance with national characteristics, characteristics of the banking system and supervision in order to create the most appropriate model of the deposit insurance system. In time of financial crisis, deposit insurance systems increase the amount of protection and introduce additional forms of protection what was case in crisis (2008-2012) in EU members and SE European countries. The reason for the financial crisis which occurred in 2008 and which was followed by systemic bank crises in some EU member countries is considered to be the insufficient supervision and regulation or liberalization (deregulation). Inefficiency of the basic directive of the EU members' deposit insurance systems (Directive 94/19/EC) and consequences of the financial and banking crisis of individual EU countries, resulted with creation of banking union.

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