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Does the Too Big to Fail Doctrine Have a Future?

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Summary

The global financial crisis proved that the Too Big to Fail /TBTF/ doctrine is an issue which needs a solution. Currently, the solution is found in a number of regulatory measures undertaken on EU level directed to the systemically important banks. These measures in the field of supervision, resolution framework, protection of depositors and bank structures are discussed in this paper. The paper is structured in five sections – review of the TBTF issue, the enhanced supervision on systemically important banks in the euro area, the implementation of resolution mechanisms for the banks, the implementation of minimum required eligible liabilities /MREL/ and total loss absorbing capacity /TLAC/ for the global systemically important banks, the changes in the financial safety net, mainly the creation of the European Deposit Insurance Scheme, and the initiative for the banking structural reform. The reflection of each measure on the TBTF doctrine is analyzed in each section. The paper gives evidence that these regulatory initiatives undertaken on the EU level reduce the probability of bail out of systemically important banks due to the stronger intensity of banking supervision, increased loss absorbing capacity of the systemically important banks, decreased complexity in their structure and the creation of a stronger deposit insurance scheme on European level. These regulatory measures contribute to reducing the systemic risk and moral hazard which are associated with the systemically important banks and more options are provided for the policy makers except the bail-out of systemically important banks with public funds.

Key words: TBTF doctrine, systemically important banks, resolution, deposit insurance schemes, bail-out.

JEL Classification: G21, G28.

1. Introduction

A number of measures aiming to prevent the failure of the systemically important banks in the world were undertaken after the global financial crisis in 2007-2009. At the same time many small banks were left to bankrupt and the losses of their failures were born by the uninsured depositors and investors. The global financial crisis proved that the *Too Big to Fail /TBTF/* doctrine is a serious issue and should be reconsidered. It also proved the necessity of immediate measures in order to mitigate the effects of the *TBTF* doctrine. The *TBTF* doctrine, on the first place, creates competitive advantages for the banks which are too big to fail as it stimulates the existence of informal guarantees for the depositors and investors that the bank is going to be saved when it experiences financial difficulties which may

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lead to its bankruptcy[1]. As a result of that advantage big banks tend to concentrate in themselves huge amounts of deposits above the insured levels and it is easier for them to get funding on the capital market at a lower price compared to the smaller banks. The informal guarantee implied by the *TBTF* doctrine that the bank is going to be bailed out encourages banks to grow in size and to establish complex organizational structures. Credit ratings that are assigned to those banks also tend to be higher as they reflect the possible government support that could be provided in cases of difficulties.

The global financial crisis, however, "provided" examples of systemically important financial institutions that were left to fail as Lehman Brothers, Washington Mutual, the three biggest Icelandic banks /Glitnir, Kaupting and Landsbanki/ but at the same time there were cases of many financial institutions of significant importance /SIFIs/ that were "chosen" to survive through capital injections and government guarantees /AIG, Citigroup, Morgan Stanley/. In the majority of the cases of these huge bail-outs the governments even did not require certain actions to be undertaken by the banks' management bodies. In the USA billions of dollars were granted to the banks just for out-of-money warrants or preferred stocks[2]. During the global financial crisis the *TBTF* issue also placed the necessity of reconsidering the role of the financial safety net, namely the deposit insurance. The financial safety net creates incentives both for the banks and for the depositors to take more risk as it provides guarantees for the small depositors that they are going to receive back their money up to a certain amount and within a certain period of time - the only thing the depositors should care about is the maximum guaranteed amount. Additionally, the problem with the moral hazard is increased by the role of the central bank as a lender of last resort when it provides lending to the troubled banks.

The paper argues that the regulations implemented since 2012 in the European Union aim to mitigate the TBTF issue and as a result the TBTF doctrine lost partially its significance. The measures in the field of supervision, resolution, implementation of requirements for minimum required eligible liabilities /MREL/ and total loss absorbing capacity /TLAC/ for the systemically important banks as well as the initiated reforms regarding the bank's structure and the creation of stronger deposit insurance scheme mitigate the TBTF issues by making systemically important banks more stable, transparent, resolvable and less complex. These regulatory initiatives undertaken on the EU level reduce the probability of bailing out systemically important banks due to the stronger banking supervision, increased loss absorbing capacity of those banks, decreased complexity in their structure and the creation of a stronger deposit insurance scheme on European level. These measures contribute to reducing the systemic risk and the moral hazard which are associated with the systemically important banks and they provide policy makers with more options except the bail-out of systemically important banks with public funds.

The creation of the European Banking Union which initiated a tremendous regulatory framework in the field of banking – the CRD IV package, the Bank Recovery and Resolution Directive and the new Deposit Insurance Directive as well as the proposal for the creation of European deposit insurance scheme – provides more options for the policy-makers when a bank experiences serious financial difficulties except the

[1] During the global financial crisis we were evident of massive bail-outs of banks by the governments.

[2] There is an insteresting discussion on the issue in the book of Micael Lewis "The Big Short. Inside the Doomsday Machine", W. W. Norton & Company, 2011, reprinted edition.

bail-out or insolvency. This new regulatory framework should be applied by each EU member-state and the creation of common resolution tools for the EU banks is one of its major achievements. As a result of the new EU regulatory framework the supervisory authorities and the governments face three options when a bank experiences serious difficulties that may lead to its insolvency. Those options are the bail-out of the undercapitalized bank by using the taxpayers' money, the resolution of the bank through certain resolution tools or the withdrawal of the bank's license and the subsequent activation of the deposit insurance scheme. The historical examples and especially the last global financial crisis of 2007-2009 show that in cases of systemically important banks /TBTF banks/ the policymakers chose the option of bailing out. The last huge bail-outs pointed out the significance of the TBTF problem and the necessity of finding an alternative solution. Through the adoption of the BRRD in 2014 and its subsequent transposition in the member-states in 2015 four resolution tools were implemented and the banks should go first through a resolution before any interventions from the state are undertaken. State interventions for the systemically important banks are only possible after the resolution measures have been exhausted and the bank continues to experience financial difficulties that threaten its financial state, the performance of the bank's core functions and it could have capital shortages.

Nowadays, banks offer to their clients complex or bundled products and this places the issue about the extent to which investors (banks' clients) in those products can benefit by the guarantee provided by the financial safety net /those products could be among the exclusions form the guarantee provided by the financial safety net schemes/. Additionally, the complexity of the banking operations hinders the resolvability of a bank which is in financial difficulties as well as the banking supervision and auditing. Efforts in this direction to mitigate the risks related with the opaque structure of the banks are made with the incentive for the so called "structural reform" initiated in 2012 by the ex-governor of the Finish central bank – Erki Liikanen. This initiative and its influence on the *TBTF* doctrine are also going to be discussed in the paper. The author has to note that the paper does not go in a detailed review and analyses of the texts of the respective legal acts /Directive 49/2014[3], Directive 59/2014[4], the Proposal for a Regulation on the creation of European Deposit Insurance Scheme[5] and the Proposal for a Regulation on structural reform in banks[6]/ as the idea is to investigate the influence of these legal acts on the TBTF doctrine as well as the aspects in which the doctrine is affected.

The paper is structured in five sections – literature review of the TBTF doctrine, the undertaken regulatory measure on the EU level aiming to mitigate the TBTF issue as the enhanced supervision on systemically important banks in the euro area, the implementation of resolution mechanisms for the banks as well as MREL and TLAC, the changes in the deposit insurance scheme, mainly referring to the creation of the EDIS and the banking structural reform. The reflection of each measure on the TBTF doctrine is analyzed in each section.

[3] Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes;

[4] Directive 2014/59/of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms.

[5] Proposal for a Regulation of the European Parliamnet and of the Council amending Regulation (EU) 806/2014 in order to establish a European Deposit Insurance Scheme, Com/2015/0586 final.

[6] Proposal for a Regulation of the European Parliament and of the Council on structural measures improving the resilience of EU credit institutions, Com/2014/043 final.

2. The TBTF Doctrine

According to the TBTF doctrine systemically important financial institutions are not allowed to bankrupt as their bankruptcy could cause enormous disruptions to the whole financial sector and can create systemic risk[7]. Abbreviations as TCTF /Too Complex To Fail/ and TITF /Too Interconnected To Fail/ appeared currently in the economic literature[8]. According to the *TBTF* doctrine a bank should be saved in order to prevent systemic risk and bank panic. When the policy-makers take the decision to save or not the bank they consider the number of insured depositors as well as the capacity of the local deposit insurance scheme to pay out these depositors. Regarding the size of a financial institution Brewer and Jagtiani /2011/ point out that the general perception is that relatively larger financial institutions are more likely to be considered as TBTF despite a specific TBTF threshold has never been specifically defined[9].

According to Stern and Feldman[10] /2004/ there are three motives for policymakers to engage in the *Too Big to Fail* doctrine – the systemic risk that threatens the system whose effects could be very costly, personal gains related with the level of professionalism and independence of the supervisors and the incentives to control how credit is going to be directed in the economy. Mishkin[11] /2005/ argues that Stern and Feldman overestimate the TBTF issue and do not give enough credit to the Federal Deposit Insurance Corporation Improvement Act /FDICIA[12]/ for improving bank regulation and supervision. Maino[13] /2012/ discusses proposals for enhancing the role of the resolution authorities and examines a proposal for high-trigger contingent convertible bonds for the systemically important financial institutions /SIFIs/. Rose and Wieladek[14] /2012/ prove empirically that the bank's size has a strong impact on the likelihood of public intervention as large banks are more likely to be supported through capital injections, government funding, central bank liquidity insurance schemes or even to be nationalized outright. Anginer and Warburton[15] /2011/ argue that the expectation for public support to large financial institution constitute a subsidy, which lowers the funding costs of those institutions. They even proved that this implicit subsidy provided large banks with annual funding cost advantage of approximately 16 basis points before the global financial crisis in 2007-2009 which increased to 88 basis points during the crisis.

The *TBTF* doctrine appeared in the 1980s when Continental Illinois, the seventh biggest bank in the United States in 1984 was saved by the government in order to prevent bank panic as well as the huge negative economic and social effects that

[7] For more information see Labonte, M., Systemically Important or "Too Big to Fail" Financial Instituions, CRS Report for Congress, 2013.

[8] For more information see Barth, J., A. Prabha, Just How Big is the Too Big to Fail Problem, 2012.

[9] For more information see Brewer, E., J. Jagtiani, How Much did Banks Pay to Become Too-Big-To-Fail and to Become Systemically Important?, WP, Journal of Financial Services Research, 2011.

[10] For more information see Stern, G., R. Feldman, Too Big to Fail: The Hazards of Bank's Bailouts, Brookings Institution Press, 2004.

[11] Mishkin, F., How Big a Problem is Too Big To Fail, WP, National Bureau of Economic Research, 2005.

[12] FDICIA is implemented in 1991 when the so caled Savings and Loan Crisis is at its height. This act strenthens the role of FDIC as well as its resources in consumer protection.

[13] Maino, R., Tackling the Too Big To Fail Conundrum: Integrating Market and Regulation, LSE Financial Markets Group Paper Series, 2012.

[14] Rose, A., T. Wieladek, Too Big To Fail: Some Empirical Evidence on the Causes and Concequences of Public Banking Intervention in the United Kingdom, WP No. 460, Bank of England, 2012.

[15] Anginer, D., A. Wartburton, The End of Market Discipline? Investor Expectations of Explicit State Guarantees, World Bank, 2011.

could be caused by its failure. On the contrary, from depositors' point of view Lehman Brothers that failed in September, 2008 was not *TBTF* as it was an investment bank without a single depositor and the FDIC[16] was not activated after the bank's failure. However, Lehman Brothers was "Too Interconnected to Fail" and financial experts determined the failure of Lehman Brother as the counterpoint that turned the financial turmoil in 2007 with its local dimensions into a global financial crisis. Despite not having a single depositor Lehman Brothers had huge amounts of bond issues that were traded on the global money markets. The bank was a counterparty in many financial contracts being a buyer or a seller of financial instruments. In the majority of those transactions the settlement of the securities was at a value date T+2 or T+3 which in fact meant that the transactions that were concluded the day before the bank's failure pended and the securities or funds were not transferred to the respective counterparty. Additionally, as an investment bank Lehman Brothers had been a third counterparty in a number of transactions, e.g. responsible for the settlement of the securities and due to its failure the settlement was not finalized.

The contagion in the banking system can be also spread via the payment systems or through the market of interbank deposits[17]. Net settlement systems despite saving liquidity for the banks expose them at a higher risk compared to gross settlement systems. RINGS and TAGRGET 2-BNB are gross settlement systems contrary to BISERA 6 which is a system for retail payments /less than 100 000 BGN/[18]. The risk of the net settlement system can be mitigated by the existence of the guarantee fund where each bank participating in the payment system is obliged to participate. The interconnectedness between financial institutions in the world today and the complex structures of the banks should be considered when the TBTF doctrine is applied to financial institutions. The failure of Lehman Brothers showed that there are a number of factors except the number of depositors and the amount of the deposits that should be paid in case of bank's bankruptcy that must be considered when the policy makers take a decision whether to bail-out a bank.

3. The Systemically Important Banks/ SIBs/, the Direct Supervision of the ECB and the New Resolution Framework

The size of a bank is a significant factor in order to determine it as a TBTF bank. The size can be considered in absolute terms / the total amount of the bank's assets, its capital, the number of its branches/ or in relative terms /the ratio of the amount of its assets to GDP, the ratio of its cross border assets/liabilities to the total amount of the bank's assets/liabilities/. In the recent decades due to the increase of financial intermediation the total value of banks' assets increased enormously compared to the amount of banks' assets in the 80-ies – nearly by 30%. What is typical for the

[16] Federal Deposit Insurance Corporation.

[17] For more information see Carletti, E., Competition and Regulation in Banking, Handbook of Financial Intermediation and Banking, University of Frankfurt, 2003.

[18] RINGS and TARGET 2-BNB are large value payment systems respectively in BGN and EUR operated by the the Bulgarian National Bank. According to the Law on Payment Services and Payment Systems each individual payment over 100 000 BGN should be executed via RINGS. An individual payment transaction at a lower amount than 100 000 BGN can be also performed via RINGS at the client's wish but in that case the client is charged more in comparison with a payment that is done through BISERA 6. The majority of the Bulgarian banks /22 at the moment of submission of this paper for a review/ participate in the national component of TARGET 2-BNB which provides them with a possibility to perform payments in EUR at a value date T+1. BISERA 6 is operated by the joint-stock company "Borica-Bankservice" AD.

banks is that the amounts of their assets are several times higher than the amount of their capital which is quite different compared to the non-bank companies. That is also valid for the Bulgarian banking sector as the ratio *capital/total assets* is 13,89% and 13,34% respectively for the banks in the first and in the second group according to the classification of the Banking Supervision Department of the BNB as of 31st of March 2016[19]. Despite not being characterized with a huge level of concentration as other sectors in the economy the Bulgarian banking sector has still considerably high level of concentration and some banks with significant importance on domestic level can be outlined in the first group[20]. It is not even necessary to go far from the financial sector in order to point out examples of such huge concentration. We can just refer to the credit rating agencies where "The Big Troika" – Standard & Poor's, Moody's and Fitch Group hold a market share of approximately 95% despite the attempts to break the oligopolistic structure in that sector as well as the overreliance on the ratings provided by those companies through a legislation implemented in 2009[21].

During the creation of the European Banking Union /EBU/ the efforts were concentrated on the systemically important banks in the euro area. The systemically important banks became subject to the direct supervision of the European Central Bank /ECB/ - the Single Supervisory Mechanism /SSM/ which is the first pillar of the EBU. Those banks are also subject to single resolution on European level after a decision from the Single Resolution Board /SRB/ with the funds from the European Resolution Fund /ERF/ - the Single Resolution Mechanism /SRM/, which is the second pillar of EBU. The criteria for a bank to be under the direct supervision of the ECB are based on the bank's size, its significance for the EU or the national economy, its cross-border activities, the usage of direct public financial assistance and the presence of the bank among the three biggest banks in a certain euro area member-state. These criteria are a prerequisite for a bank in the euro area to participate in the SSM[22]. In more details the criteria are as follows:

- Size: the total value of assets of the bank or a group exceeds 30 bln. euro as the total value of assets from the balance sheet for prudential purposes is taken into consideration;
- Economic importance: the supervised bank or the group meets the criteria that the ratio *total assets/GDP* exceeds 20% and the total value of the bank's assets is more than 5 bln. euro or the national supervisory authority considers the bank has significance for the national economy. When accessing the significance of the credit institution for a certain member-state the ECB or the national supervisory authority takes into consideration its significance for specific economic sectors in the country, its interconnect-

[19] The Banking Supervision Department of the BNB classifies the banks operating in Bulgaria into three groups. The first group includes the five biggest banks in terms of assets. The second group includes the rest of the banks and the third group – the banks' branches operating in Bulgaria.

[20] The assets of the banks in the first group are 57,6% of the total amount of assets in the banking system as of 31st of March 2016.

[21] These were the main drivers for the creation of Regulation 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies which had several amendments since its adoption. There are over 100 credit agencies world-wide and those that meet the criteria set in the CRA Regulation are registered by the European Securities and Market Authority /ESMA/.

[22] The supervisory powers of the ECB are regulated by Regulation 1024/2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions as the separation of the supervisory functions of the ECB from its functions on conducting monetary policy is stipulated in Art. 25 of that Regulation. The direct supervision of the banks participating in the SSM started since the 4th of November 2014.

edness, its substitutability as a market participant and clients' service provider as well as its business, structural and operational complexity;

- Significant cross-border activities: the credit institution has established a subsidiary in more than one member-state and the ratio *cross-border assets/total assets* exceeds 20% or the ratio *cross-border liabilities/total liabilities* exceeds 20%;
- Direct financial assistance: the bank has received assistance through the European Financial Stability Facility /EFSF/ or by the European Stability Mechanism /ESM/[23]. Banks which have received assistance for recapitalization from the ESM should be supervised by the ECB regardless they meet or not the criteria for systemic importance.
- Being among the three biggest banks in terms of assets in a certain member-state.

Appendix No.1 shows the banks supervised by the ECB as of 30th of December 2015 as they are classified in accordance with the criteria for a systemically important bank falling under the scope of the direct supervision of the ECB. It is evident that the prevailing criterion is the size - total value of assets exceeding 30 bln. euro. This criterion is typical for the biggest euro area countries with huge banking systems as Germany, France, Italy, the Netherlands and Spain. Countries where the financial intermediation is characterized by its internationalization or the level of financialization of the economy is significant have banks that fall under the direct supervision of the ECB on the basis of the criteria "significant cross border activities" /Belgium, Austria/ and "economic importance" /Luxembourg, Malta, Cyprus/. Banks in the smaller euro area economies fall under the direct supervision of the ECB due to the criterion "being among the three biggest banks in the country" /Latvia, Lithuania, Slovenia, Slovakia/. If we view the Bulgarian banking system considering the official data published on the BNB Internet site as of September 2016 and if the country has chosen the opt-in option[24] for participation in the SSM, the situation will be the same as in the smaller economies as Latvia, Lithuania, Slovenia and Slovakia despite UniCredit Bulbank is very close to the criterion for economic importance – 8,88 billion euro and the ratio *total assets/GDP* is equal to 19,61%. DSK Bank and FIBANK have total amount of assets respectively equal to 5,94 billion euro and 4,44 billion euro and the ratio *total assets/GDP* for both banks is 13,13% and 9,8%[25]. The criterion for economic importance is cumulative and the banks are not eligible to fall under the direct supervision of the ECB due to the criterion "Economic importance" despite the total of amount of assets of UniCredit Bulbank and DSK Bank is above the minimum of 5 bln. euro. The criterion under which these banks would fall under the direct supervision of ECB is "Being among the three biggest banks in the country".

The specific tasks that are performed by the ECB as a direct supervisor of the systemically important banks in the euro area refer to the supervision on the application by the banks of the provisions

[23] The European Stability Mechanism /ESM/ is established in September, 2012 and it replaces the two EU temporary programmes for funding that existed earlier – the European Financial Stability Facility and the European Financial Stabilization Mechanism. This mechanism is created as a firewall for the euro area to provide instant access to financial assistance for the member-states.

[24] An opt-in option means that an EU member-state that is not a part of the euro area may decide to participate in the SSM despite not being obliged. As of 30th of June 2016 none of the EU member-states that are not in the euro area has chosen the opt-in option.

[25] Own calculations.

[26] Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC and Regulation 575/2013/EU on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012

of CRR and CRD IV[26], namely – granting and withdrawal of authorization, keeping the own funds requirements by the banks, incl. securitization, the limits on large exposures, the liquidity requirements, the leverage ratio, public disclosure of information, on-spot supervisory inspections, asset quality review and stress tests as well as carrying out supervisory tasks in relation with the recovery plans and early intervention and tasks regarding macro-prudential regulation[27]. The supervision of the systemically important banks by the local supervisory authorities is limited to the protection of the economic interests of the consumers that make transactions with financial service providers, supervision of financial services and prevention of usage the financial system for the purposes of money laundering and terrorism financing. The national supervisory authorities retain also their powers to apply specific macro-prudential measures not provided in the CRD IV package as loan-to-value ratios, loan-to-income ratios, debt service-to-income ratios, loan-to-deposits limits, higher real estate risk weights, stricter lending criteria and higher minimum exposure-weighted average loss given defaults. The direct supervision of the ECB should not be considered as panacea for tackling the financial troubles arising among the systemically important banks in Europe as due to positive sides of the SSM there are some weak points regarding the supervisory functions assigned to the ECB. One of those weaknesses that I could mention here is the difference in terms of assets, bank's structure, products' development and management of the banks falling under the direct supervision of the ECB, e.g. there are small banks from less developed economies falling under the direct supervision of the ECB and the ECB should apply a different approach to those banks. Additionally, the local supervisors have a huge advantage compared to the ECB because they know the local economic state and peculiarities of the local banking system better than the ECB as well as the historical experience regarding the supervision of the banks.

The focus on the systemically important banks and putting them under the direct supervision of the ECB aims at creating common instruments and practices for them regarding macro-prudential supervision in order to achieve more stability in the financial system, to decrease financial distress and to prevent the contagion of the problems in the systemically important banks to the financial system as they are usually too interconnected with the whole economy. Through the macro-prudential policy of the ECB it is aimed to address the systemic risk in two dimensions – time dimension and cross-sectional dimension[28]. According to the first dimension macro-prudential policy aims at strengthening the resilience of the financial system at times of economic downturns by limiting procyclicality by "adjusting" the financial system to lean against the cycle. It is historically proven that the overdue loans and credit losses that appear in the periods of the economic downturn arise from the credit expansion during the upside economic cycle. The second dimension refers to the allocation of the risks in the financial system at any given point of time which can result from the

[27] These tasks performed by the ECB are in compliance with the provisions set in the Regulation No. 575/2013 on prudential requirements for credit institutions and investment firms and amending Regulation No. 648/2012 /CRR/, Directive 2013/36 on access to the activity of credit institutions and prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC and Directive 2014/59 establishing a framework for recovery and resolution of credit institutions ans investment firms /BRRD/.

[28] For more information see Galati, G. and R. Moessner, Macroprudential Policy – a Literature Review, BIS Working Paper, No. 337, 2011.

concurrent exposure of several banks to the risks arising from similar exposures or from the exposures of an individual bank due to its huge interconnectedness with other companies and financial institutions. In cases of bank's failure the contagion effect in the economy will be huge. *Considering this, the direct supervision of the ECB to the systemically important banks by applying the same micro and macro prudential tools decreases the probability for interventions by the governments in the credit institutions due to liquidity difficulties and capital shortages resulting from considerable risk exposures, irrational investments, lending and unsustainable capital.*

The Single Resolution Mechanism/ SRM/ supplements the SSM regarding the systemically important banks whose resolution is also performed on the EU level, e.g. the decisions for resolution, the use of the resolution tools and the usage of funds from the European Resolution Fund /ERF/ are taken by the European Resolution Board /ERB/, which was created at the beginning of 2015. The ERF was created at the beginning of 2016 and it should collect resources at the amount of 55 bln. euro within a period of 8 years. The aim of the resolution of a bank is to keep its critical functions, e.g. the products and services that it offers to its clients, to avoid the significant adverse effects of the bank's failure by preventing the contagion to the financial markets, market infrastructures and the different sectors in the economy and thus to protect public funds /taxpayers' money/ by minimizing the reliance on the state support. A bank is resolved by the usage of four resolution tools stipulated in the BRRD[29] – the sale of business, bridge institution, asset separation and the bail-in tool. The resolution of a bank should be done in accordance with the following principles: insured deposits should be fully protected; the shareholders should be the first who bear the losses; the creditors should bear the losses after the shareholders in accordance with the order of priority as set in the BRRD; the creditors from the same class should be treated in an equitable manner; creditors should not incur greater losses than those that could be incurred in case of the bank's failure; the management body of the credit institution should be replaced. *Considering the main principles of the BRRD it can be concluded that through the creation of a common resolution framework for the EU banks the potential spillovers between banks and sovereigns will be mitigated, the systemic risk created by the big banks will be reduced and building up excessive risk and leverage among the banks will be avoided.*

The backbone of the new approach towards banks facing difficulties that is implemented by the BRRD is the bail-in tool which practically shifts the costs of recapitalization and resolution to private creditors. Despite the fact that the resolution regime and the implementation of the bail-in tool reduce the usage of the tax payers money due to the reduced possibilities of banks' bail-outs the legislation implementing the provisions for bank's resolution also provides options for state intervention and government support in cases where the resolution tools are exhausted and the state can provide extraordinary public stabilization support through the application of financial stabilization tools. The government financial stabilization tools are used as last resort tools after thorough assessment and after the other four resolution tools have been exhausted. The government financial stabilization tools are recapitalization of the credit institution /through the acquisition by

[29] Directive 2014/59/EU of the European Parliamnet and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms.

the state of CET 1, Additional Tier 1 and Tier 2 capital instruments/ or the temporary ownership by the state through the transfer of shares to a nominee or a company appointed by the state[30]. The European Stability Mechanism /ESM/ which has been operating since the 8th of October 2012 and which is a successor of the European Financial Stability Facility /EFSF/, provided up to December 2014 indirect financial support to the euro area member states for recapitalization of banks under the following conditions: a loan is provided to the respective government under the conditions for recapitalization of financial institutions and the funds are directed for the recapitalization of one individual bank or at group level. This indirect financial support increases the level of the state debt. As of December 2014 the ESM is able to provide direct funding to the banks in order to recapitalize them as that funding should be provided on the basis of detailed financial analysis after all possible instruments for covering losses have been exhausted, incl. private funds as well as public resources on national level, i.e. the direct support by the ESM will be the last option for a bank in the euro area for recapitalization. This direct support is possible in cases of serious financial disbalances threatening the fiscal stability of the member-state and there is probability for spreading the contagion from the financial sector to the state finances. Despite the legislative measures directed to the bank's restructuring in order to prevent its insolvency and bankruptcy the regulatory resolution framework and the existing European mechanism for providing direct support to troubled banks indicate that the option for bailing out has not been eradicated completely despite it has been modified completely as it can be applied only after the resolution tools have been applied to maximum degree.

The resolution of a bank is initiated in accordance with the provisions of the BRRD only if the bank meets the conditions for resolution[31]. The resolution authority makes an assessment after a thorough examination and analysis of the costs for the resolution of the credit institution and the costs for its insolvency, as the most economically effective and less costly solution is taken. This requirement is developed in the supplemented regulation regarding the application of BRRD[32]. And despite there is no formal requirement set in the BRRD in cases of big and middle sized banks the responsible authorities after considering the economic and social costs could prefer to put the bank under resolution instead of initiating insolvency procedure due to the huge losses that would be incurred in cases of failures of systemically important banks/ of course, in cases where the bank fulfills the criteria for resolution/. Considering the resolution framework /the BRRD and the supplemented legal acts/ it can be concluded that the insolvency could be considered as an option instead of resolution in cases of smaller banks whose failures could be easily tackled with the accumulated resources by the deposit guarantee funds. The individual contribution made by a bank to the resolution authority is calculated on the basis of the ratio between bank's liabilities decreased by its own funds and the guaranteed deposits

[30] This possibility is stipulated in Art. 57 and Art. 58 of BRRD. Regarding the stipulated temporary ownership in case of Bulgaria the nominee, for instance, can be the minister of finance or the minister of economy and the company appointed by the state hypothetically could be Bulgarian Development Bank which is 99,9% owned by the state.

[31] These conditions are defined in Art. 32, para 1 of BRRD.

[32] For more information see Art. 2 of the Commission Delegated Regulation 2016/1450 of 23 May 2016 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying the criteria relating to the methodology for setting the minimum requirement for own funds and eligible liabilities.

to the total amount of the liabilities in the banking system decreased by the own funds and guaranteed deposits of all banks. The individual contribution also reflects the risk prifile of the bank. In accordance with the BRRD the national resolution fund should reach a target level within a period of 10 years equal to 1% of the guaranteed deposits in the banking system. In the euro area the national resolution authorities should cover the banks that are not defined as systemically important, e.g. smaller banks. This means that the individual contributions collected by those banks will be based on smaller amounts of liabilities. As the SRF will be responsible for the biggest euro area banks falling under the direct supervision of the ECB with the bigest balance sheets in terms of assets and liabilities, the contributions to that fund is going to be higher in absolute terms compared to contributions to the respective national resolution fund. As Bulgaria does not participate in the SSM and the SRM the resolution of a local bank is going to be handled by the local resolution authority which has already been created as an independent body at the Bulgarian National Bank /BNB/. The individual contributions of the Bulgarian banks are calculated in accordance with the requirements set in the BRRD which has been transposed in the national legislation through a new law – Law on Recovery and Resolution of Credit Institutions and Investment Firms which has been enacted since August, 2015. It is worth noting that more conservative target level of 2% is determined compared to the minimum target level of 1% which is set in the BRRD[33].

4. Minimum Requirement for Own Funds and Eligible Liabilities/ MREL/ and Total Loss Absorbing Capacity /TLAG/

The MREL[34] is implemented in order to guarantee that a bank when entering into a resolution process has enough liabilities /bail-inable instruments[35]/ to absorb losses when the bail-in tool is applied. The aim of the MREL is to ensure that the bank's shareholders and large creditors will be able to bear the bank's losses and the bank has sufficient loss absorbing capacity which allows the conduct of the resolution process and keeping the critical functions of the bank. The bail-in tool is the most disputable tool among the other four tools set in the provisions of the BRRD. In fact the

[33] It is worth noting that first contributions that were paid by the Bulgarian banks in 2015 equalled to 42,013 mln. euro. Those contributions were paid at the end of the year and they increased the burden to the banks as in the same year the banks paid contribution to the deposit insurance fund /the deadline was 31st of Marct 2015/, which was equal to 0,5% of the total amount of the liabilities in the banking system in accordance with the old Law on Deposit Insurance. The new Law on Deposit Insurance has been in force since August, 2015 and it implemented the requirements of the new Deposit Insurance Directive – Directive 2014/49 which requires the individual contributions to be based on the amount of the guaranteed deposits and they should be risk-based as well. The implementation of risk-based contributions which are not based on the total amount of the bank's liabilities but on the guaranteed deposits is expected to reduce the burden to the banks in terms of payments to the deposit insurance schemes. This in line with the general concept that insolvency procedures will be rather initiated for the smaller banks instead of for medium sized and big banks brings the conclusion that the deposit insurance scheme is going to be activated in cases of small banks' failures. That's why there is no necessity deposit insurance schemes to accumulate huge resources from the banks. In order to be precise regarding the legislation the BRRD as well as the regulatory framework supplementing the resolution process provides possibilities deposit guarantee schemes to be involved in the resolution process in certain circumstances.

[34] MREL is defined in Art. 45 of Directive 2014/59. The liabilities that should be excluded from the bail-in tool should not be taken into consideration by the credit institution for the perposes of meeting the MREL requirements.

[35] In BRRD the bail-inable instruments are defined on the basis of exclusion, e.g. the instruments that cannot be inlcuded in the bail-in tool. Those instruments are guaranteed deposits, secured liabilities, incl. covered bonds and liabilities in the form of financial instruments used for hedging purposes, UCITS, alternative investent funds, liabilities to institutions with original maturity less than 7 days, liabilities with residual maturity less than 7 days and liabilities to bank's emplyees.

bail-in tool makes a revolutionary change in banking as certain liabilities can be used for the bank's recapitalization. The aim of the bail-in tool is to enable the bank to continue carrying out its activities and thus to keep the market confidence and avoid deposits run. The exclusion of some instruments, e.g. some liabilities with a short-term maturity of 7 days from the bail-in tool is necessary in order to keep the critical functions of the bank as well as its key operations, services and transactions. The MREL is calculated by the resolution authority on individual basis for each bank by weighing the effects and losses in cases of a bank's insolvency or its resolution[36]. When the resolution authority estimates that it will be less costly the bank's license to be withdrawn, the MREL will be smaller compared to a big bank which is more likely to be resolved. In conclusion, the amount of MREL will be higher in relative terms for the systemically important banks for which the activation of the deposit insurance scheme will not be an option and resolution is more likely to be undertaken if the bank meets the requirements for resolution as set in the BRRD[37].

MREL is applied for each bank regardless it is classified or not as a SIB. MREL is calculated as a amount *own funds[38]and eligible liabilities[39]/own funds and total liabilities* in accordance with the BRRD and SMIR requirements[40]. MREL should not exceed the amount of the own funds and the eligible instruments that are sufficient to cover the losses of the banks. The capital adequacy ratios of the bank should be in compliance with the CRR requirements and the bank should be able to continue its functions even if the bail-in tool has been applied. The required capital buffers under the CRD IV should be also kept after the use of the bail-in tool. Regarding the systemically important banks the European Resolution Board /ERB/ is going to determine the individual amount of MREL for each bank by considering its size, business model and risk profile, the extent to which the national deposit insurance scheme can contribute in the resolution phase of the bank, the strength of the adverse consequences to the financial system in case of a failure as well as the critical activities of the bank that should be kept during its resolution /all these conditions should be also considered on the national level when MREL is calculated individually for each domestic bank by the national resolution authority/. MREL can be divided into two components – the first component of MREL consists of the bank's loss absorption amount and the second component – of the bank's recapitalization amount. For example, if the resolution authority estimates that the most costly effective solution for a certain troubled bank is to be liquidated and the deposit insurance scheme to be activated then the MREL is going to consist of only one component – the bank's loss absorbtion amount and no additional funds for the

[36] In Bulgaria the calculation of MREL should be performed for each bank subsidiary on individual basis by the resolution authority at the BNB.

[37] For more information see Report on the Implementation and Design of the MREL Framework, Interim Report, Euroepan Banking Authority, July 2016.

[38] Own funds include Tier 1 and Tier 2 capital instruments. The BRRD does not establish a common MREL but there are some estimations that are performed during impact assessment of BRRD and those estimations are equal to 10% of the total liabilities.

[39] Eligible liabilities are liabilities and capital instruments that are not classified as Tier 1 and Tier 2 capital instruments and which are not excluded from the bail-inable instruments.

[40] The calculation of MREL is stipulated in Art. 45, para 1 of BRRD and in Art. 12, para 4 of SMIR /Regulation 806/2014 of the European Union and of the Parliament establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010.

bank's recapitalization will be foreseen and included in the calculation of MREL. In case the estimations of the resolution authority show that it will be more cost efficient to resolve the bank instead of initiating an insolvency procedure then MREL is going to consist of its two components – the loss absorption and the recapitalization component. The loss absorption amount should be sufficient to ensure the absorption of the losses and the recapitalization amount should be enough in order to enable the institution to re-enter the market and to fulfill the regulatory capital requirements as in accordance with the CRR. The MREL can be adjusted by reflecting the estimated contribution of the deposit insurance[41] in the resolution process and the business model of the bank, its risk profile and governance.

Despite the MREL is determined on individual basis for each bank, its calculation is done in accordance with certain principles set in the BRRD and the technical standards developed by EBA[42]. The regulatory technical standards about MREL developed by EBA provide the conditions for harmonization of those instruments regardless the country where the resolution authority calculates and applies them. It means that similar levels of MREL are expected to be applied for banks with similar risk profile, resolution capacity and characteristics. Contrary to the levels of the minimum required regulatory capital which are set in the CRR there are no minimum levels established for MREL and the resolution authorities can by their discretion determine the MREL in accordance with their own estimations on individual basis. Despite the discretionary powers prescribed to the resolution authorities Art. 44, para. 5 of the Directive require that the bail-inable instruments should be at the amount of 8% of the bank's total liabilities before any external funds to be accessed /funds provided by the local deposit insurance scheme or government support/. The resolution authority at the Bulgarian National Bank is responsible for determining the level of MREL for the banks in Bulgaria on individual basis. This is totally new exercise for that authority and it is lacking experience and practice how to tackle it. Despite the obstacles that may arise in defining the appropriate individual MREL another issue should be carefully considered and it is how the implementation of MREL for each banks is going to be communicated with the general public and investors. Due to the components of MREL – loss-absorption and recapitalization – low values of MREL could be a signal for the public that probably the bank would not be resolved in cases of financial distress and the insolvency procedure is more likely to be triggered. Additionally, investors should be very well aware about the nature of the instruments that are included in MREL and that investing in such instruments is riskier as in cases of bank's resolution those instruments can be used for loss absorption.

The implementation of resolution tools aims at minimizing the moral hazard and the usage of tax payers' money in cases of bank's failure, esp. in cases of systemically important banks making the shareholders and creditors internalize the burden of bank's failure. Although there is no formal obligation the resolution to be applied only for systemically important banks, the resolution will be more an option for the bigger and medium sized banks rather than for the smaller banks. As it is

[41] Art. 109 of the BRRD stipulates the use of deposit guarantee schemes, respectively the funds of the deposit guarantee scheme in the resolution process.

[42] Directive 2014/59/EU requires the European Banking Authority to develop regulatory technical standards and criteria for determining the minimum requirements for own funds and eligible liabilities. MREL is considered as a prerequisite for the effectiveness of the bail-in and the other resolution tools.

written above the banks should prove to be eligible for resolution in accordance with the requirements of the respective legislation and the resolution authority should estimate the application of the four resolution tools. The economic and the social effect of the bankruptcy of a smaller bank with a small number of depositors will be weaker compared with the failure of a medium sized or big bank and the local deposit guarantee scheme will have enough funds to deal with the failure as no public funds will be used. This situation is very different compared with the failure of a systemically important bank where the state may intervene by providing support to the bank in order to prevent its failure or if the bank is declared insolvent and the government provides funds to the deposit guarantee scheme in order to enable it to pay out the insured deposits /in cases of failures of big banks deposit guarantee schemes usually experience shortages of funds to cover the insured deposits/[43].

Additional to MREL which is applied to each bank and is stipulated in the BRRD, there are requirements for the Global Systemically Important Banks /G-SIBs/ to maintain TLAC[44] /Total Loss Absorbing Capacity/, which are set in the standards developed by the FSB /Financial Stability Board/. It is important to note that those standards, esp. the scope and application of TLAC is still under development and far from finalization at the time of the submission of the paper. Contrary to the MREL which does not have a minimum required level and is determined on individual basis for each bank, TLAC[45] is foreseen as a minimum level equal to 16-20% of the risk-weighted assets. The main TLAC eligible instruments are very close to the definition of the instruments that should be included in the MREL. The G-SIBs should maintain sufficient loss absorbing and recapitalization capacity during the resolution process that will guarantee minimizing the negative impact of the troubled bank on the financial system, and thus ensuring the continuity of the critical functions of the bank. The aim of the TLAC is to prevent bailing out of G-SIBs, avoiding using the tax payers' money as well as the loss of confidence in the banking system. TLAC is going to be applied to the world's 30 largest banks 13 of which are in the EU jurisdiction[46]. Contrary to the MREL, which is a Pillar 2 requirement /a bank-specific add-on after supervisory review/, TLAC is a

[43] In reference to my statement I would compare briefly the failure of International Bank for Trade and Development in 2005 which was 17th in rank regarding the amount of assets in the Second Group according to the grouping of the Banking Supervision Department of the BNB and Corporate Commercial Banks which was 4th in rank in terms of assets and being in the First Group in 2014. The licence of International Bank for Trade and Development was revoked by the BNB in June 2005 and the amount of the insured deposits that should be paid out was 12 826 thousand euro as the accumulated funds by the Bulgarian deposit insurance scheme at that time were 153 880 thousand euro, much more than the required resources for the payments. The failure of that bank did not cause any tension in the society and the payment of deposits was easily tackled as only one bank was involved as an agent in the payment process. The KTB case was a totally different situation. The license of the bank was revoked in November 2014 by the BNB and the guaranteed deposits at the bank amounted to 1,89 billion euro. The accumulated resources by the Bulgarian deposit insurance fund as of October 2014 were 1,07 billion euro as the insuficient resources for deposits'payments were provided to the Fund by a state loan.

[44] According to Principles of Loss-absorbing and Recapitalization Capacity of G-SIBs in Resolution, Total Loss-abosirbing Capacity /TLAC/ Term Sheet issued by the Financial Stability Board on the 5th of November 2015 the liabilities that should be excluded from TLAC are guaranteed deposits, sight deposits and short-term deposits with a maturity less than one year, liabilities arising from derivatives, debt instruments with derivative linked features, liabilities arising other than through a contract such as tax liabilities, liabilities which are prefered to senior unsecured liabilities such as secured liabilities up to the secured amount as well as any liabilities that are excluded from the bail-in or cannot be written down or converted into equity by the resolution authority.

[45] Initially, the idea of the TLAC appeared during the G-20 Summit in 2013 where the G-20 leaders insisted for a proposal on measures prividing for the loss absorption and recapitalization capacity of the global systemically important banks /G-SIBs/. The development of those measures was assigned to the Financial Stability Board /FSB/.

[46] As of the end of 2015.

Pillar 1 requirement, which means that it is a minimum standard for all G-SIBs. According to the FSB requirements the level of TLAC is equal to 16% of the risk-weighted assets subject to a minimum of 6% total leverage exposure. This requirement will be in effect as of 2019 and it will rise to 18% of the risk-weighted assets in 2022. TLAC may consist of instruments that are included in the CET 1, additional Tier 1 and long-term unsecured debt. Subordinated and unsecured senior debt must be at least 33% of the total TLAC amount. Capital conservation buffer and G-SIBs buffer are not included and must be covered by additional CET 1 capital. In Bulgaria there is no bank that is classified as G-SIB and the TLAC requirements are not going to be implemented for any bank in the country. However, the requirements for MREL should be implemented for each bank on individual basis and the amount of the MREL should be determined by the resolution authority in the country. Despite the fact that BRRD MREL requirements apply for banks which are not G-SIBs the resolution authorities may decide to apply MREL for G-SIBs together with the international framework for TLAC /as I mention in Bulgaria only MREL will be applied for the banks/. Until the submission of the paper for publication the scope of TLAC as well as its application and collaboration with the requirement for MREL is still under consideration. A proper solution which is under consideration is the merger of the MREL and TLAC instead of their overlapping as the requirements for own funds and eligible liabilities can be higher for the global systemically important banks[47].

In the current discussions on TLAC requirements the European Commission has also some proposals TLAC requirements to apply not only to G-SIBs but also to D-SIBs /Domestically Systemic Important Banks/. The Commission's proposal also refers to the scope of TLAC, esp. to the TLAC requirement which should be met by the Tier 2 capital instruments. Thus, the minimum required capital is going to increase from 8% to 18% due to the increase of the Tier 2 capital which in fact is going to increase 5 times for the G-SIBs /currently, according to the requirements of the CRR the Tier 2 capital is 2% of the risk weighted assets/. The implementation of TLAC requirements for G-SIBs aims to strengthen the financial stability of the global systemically important banks. There are many cases of bail-outs of G-SIBs, esp. during the global financial crises due to capital shortages, losses and lack of liquidity. But the requirements for TLAC will drastically increase the minimum required capital for those banks and esp. the level of the Tier 2 capital which will even exceed the level of the Tier 1 capital. Another "hot" issue that is debated is the type of banks which should apply TLAC. The initial proposal of the Financial Stability Board /FSB/ refers only to the G-SIBs but the Commission proposal is the scope to be enlarged to the banks which fall under the SSM. On the other side, the SSM includes only banks from the euro area as some of those banks are very small in terms of assets as the countries where they operate are very small[48]. On global level those banks are small which raises the issue about the necessity and effectiveness of applying TLAC to those banks and to burden them with additional capital requirements. In this case the large increase in the minimum capital requirements will multiply the costs of funding for the banks subject to TLAC requirements and may create un-level playing field between the large European banks and the big banks outside Europe. The Tier 2 instruments can be converted

[47] I would point again here that as I described above considering the two components of MREL – loss absoption and recapitalization – the requirement for MREL will be higher for the medium sized and big banks.

[48] For more information see Appendix 1.

into capital in case of the bank's non-viability[49]. The aim of the TLAC instruments is to provide a guarantee that the bank will be able to absorb its losses and continue its functioning. The increase of the minimum required capital increases bank's vulnerability to a financial crisis and esp. in cases of a liquidity crisis the banks may have difficulties to refinance their Tier 2 capital instruments. Additionally, the coexistence of Tier 2 capital instruments and TLAC instruments that fall within the scope of the Tier 2 capital may create confusion for the investors in banks' instruments falling under the definition of Tier 2 capital[50].

The main aim of TLAC is to diminish the risk of contagion as much as possible but the risk of contagion itself cannot be eliminated. Through the reductions of the Tier 2 capital that are foreseen in cases where an investing bank holds TLAC instruments of another bank it is aimed to limit the cross holding of TLAC-eligible instruments among the banks. But this is somehow dangerous as by limiting the participation of the banks as investors in TLAC-eligible instruments a niche for other players from the non-bank financial sector is opened. This may increase the spread of the contagion not only in the banking sector but also to the non-bank financial sector and the consequences may be fatal.

Both MREL and TLAC aim to ensure that systemically important banks have enough loss absorbing capacity when they are in a difficult financial state, which will enable them to keep their core functions. Despite both instruments have many similarities and there is an impression that TLAC is going to duplicate MREL for G-SIBs its role in fact is to create additional buffers for loss absorption for the globally systemically important banks. TLAC is a regulatory measure undertaken after the global financial crisis aiming to mitigate the TBTF issue. Nevertheless, it should be noted the existing confusion about the instruments that are eligible to be used under the resolution process, esp. for the investors in those instruments who should be aware that MREL and TLAC-eligible instruments are under special regime as they can be used in the resolution process. This may create less incentives for investing in those instruments as well as difficulties for the banks to provide sufficient own funds and eligible liabilities and TLAC-eligible instruments in order to satisfy the requirements of the BRRD and the FSB standards.

5. The Creation of the European Deposit Insurance Scheme /EDIS[51]/

What is typical for the European banks is that commercial and investment banking is united in one operational structure. In some countries the banking system exceeds several times the share of GDP. As the main source to accumulate resources by the banks is the public taking of deposits, the banks are strongly threatened by deposits outflows in times of financial crises and lack of confidence in the banking system. The financial safety net contributes to keeping the confidence of depositors in the banking system but in cases of failures of systemically important banks the activation of the deposit guarantee schemes is not effective as they are not able to provide compensation to the guaranteed depositors due to shortages in the accumulated funds. Additionally, the big uninsured depositors

[49] In fact this is the aim of the Tier 2 instruments in principle.

[50] Considering the level of protection that is provided to the investor in cases of failure of the issuer. The existance of bail-inable instruments creates confusion among the investors and they have to be well aware that those instruments can be lost in case the bank is restructured and the bail-in tool is used.

[51] I have to note that the creation of European deposit insurance scheme and the banking structural reform that is discussed below are under development and both initiatives have not been finalised yet.

and investors suffer strong losses as a result of the bank's failure. Those huge losses may disturb the economic activities of the economic agents – households and enterprises and the bank crisis can spill to the whole economy.

The European Deposit Insurance Scheme will be the third pillar of the Banking Union and it is going to exist together with the SSM and SRM[52]. The creation of such new body should be carefully considered in the context of the increased capital and liquidity requirements enforced by the CRR and the recovery and the resolution framework set by the BRRD. The increased capital and liquidity requirements and the enhanced supervision /e.g. the regular stress tests performed by EBA as a part of SREP[53]/, the requirements for resolution plans which should be submitted to the resolution authorities by the banks in the EU, MREL and TLAC – all these measures and initiatives aim to enhance banks' stability and to decrease the TBTF problem. They should be taken into consideration when EDIS is established. As discussed above the requirement for the banks to hold sufficient bail-inable instruments and esp. the more stringent requirements for such instruments for the systemically important banks[54] decreases the probability of using the funds of the deposit insurance schemes. The implemented regulatory measures that were described above limit the functions of the deposit insurance schemes mainly to the pay-box function. However, the accumulated funds by the local deposit guarantee scheme can be used in the resolution process together with the application of the resolution tools[55] or for implementing alternative measures in order to prevent the failure of the bank[56]. Such alternative measures can be implemented in cases where resolution actions are not taken in accordance with the requirements of the BRRD. The resources of the deposit guarantee scheme can be used in the resolution process in cases where the bail-in tool is applied, the covered deposits have been included in the bail-in tool and they have been written-down in order to cover losses. If a different tool than the bail-in tool has been applied and the covered depositors have suffered losses due to the application of the respective tool in the resolution process the deposit guarantee scheme should cover those losses to the same extent as the losses born by the creditors with the same level of priority in case an insolvency procedure would have been applied. A strict rule for the usage of funds of the deposit guarantee scheme is that the losses that should be borne by the deposit guarantee scheme in the resolution process should be less compared to the situation where a bankruptcy procedure for the bank has been initiated. If alternative measures are implemented by the deposit insurance

[52] The European Central Bank performs the function of the single regulator for the systemically-important banks in the euro area and the European Systemic Risk Board performs the function of the European Resolution Body for those banks in the euro area, the European Deposit Insurance Fund is expected to guarantee the deposit insurance for those bannks in cases of a bank insolvency in the euro area. That is what is meant by the author by using the term "third pillar" regarding the European depposit insurance fund.

[53] Supervisory Review and Evaluation Process.

[54] As it was described above the MREL consists of loss-absorbtion component and re-capitalization component. If the resolution authority considers that it is more probable for the bank to enter into a resolution process rather than into an insolvency then the value of the MREL will be higher. That's why here I refer that the requirements for the systemically important baks in terms of MREL are higher. Additionally, as it is described above TLAC is also going to be required for the global systemically important banks additionally to MREL.

[55] The respective provisions for this are stipulated in Art. 109 of Directive 59/2014.

[56] The usage of the funds of the deposit guarantee scheme is stipulated in Art. 11 of Directive 49/2014 of the European Parliament and of the Council on deposit guarantee schemes.

scheme aiming to prevent the bankruptcy of the bank and the resolution authority has not initiated resolution measures, the intervention with the resources of the deposit guarantee scheme are considered as state aid.

The creation of EDIS is a logical step considering the regulatory initiatives undertaken on European level since the aftermath of the global financial crisis. The systemically important banks are supervised and restructured on European level / respectively by the ECB and the SRB/ but they are still left to die locally /the local deposit insurance schemes should pay-out the guaranteed deposits and manage by themselves the possible shortages of funds/ resources/. EDIS will be responsible for paying out deposits in cases of a bank failure in the EU and it is foreseen to accumulate enough funds in order to guarantee deposit payments in cases of big banks, avoiding in this way bank panic and state interventions on local level. The local deposit insurance schemes are going to participate in EDIS as their main functions will be reduced to the collection of contributions, co-insurance and intermediation between the local depositors and the EDIS. The local deposit insurance schemes are foreseen to exist until a harmonized insolvency regime in the EU is established which is a logical approach as the initiation of an insolvency procedure is a prerequisite for activation of the scheme. There are a lot of differences and discrepancies in the insolvency regimes in the EU member-states and the harmonization of the insolvency regime on EU level is a challenging task that requires a lot of efforts and time. Simultaneously, through the implementation of MREL and TLAC which are considered to provide enough instruments for absorbing losses in the process of restructuring the deposit insurance scheme is going to interfere by suffering least losses which will be equal to the amounts over the bank's capital, MREL/TLAC, senior debt and non guaranteed deposits.

There are some deficiencies in the proposal for EDIS which I will discuss briefly in this section. The proposed target level of funding at 0,8% of the guaranteed deposits is too high and it will be more efficient to be decreased to 0,5% of the guaranteed deposits in the EU. Additionally, some peculiarities of the national deposit insurance schemes regarding the contributions collected from the banks and the level of funding which varies widely /there are some national schemes with huge deficits while others have accumulated enough resources, even exceeding the target level/ should be considered. According to the EC proposal for the establishment of the EDIS it is envisaged that EDIS is going to reach its target level of 0,8% until 2024. If the EDIS is going to be created in 2017 it means that the target level should be reached within 8 year and the annual contribution of the banking system will be 12,5% per year in order to reach the required target level. EDIS and the local deposit guarantee schemes are foreseen to cooperate in the accumulation of contributions to the EDIS and in cases of paying out deposits. This cooperation is in the form of re-insurance and co-insurance as the re-insurance phase is foreseen for the first 3 years of the implementation of the EDIS and the co-insurance phase – until the full implementation of EDIS[57]. During the re-insurance phase the EDIS should be able to provide funding up to 20% of the amount of the deposits to the insured depositors in case the resources of the local scheme are exhausted. If there is a failure of a big bank leading to huge payments of deposits the resources provided by the EDIS will not be

[57] According to the Proposal for a Regulation of the European Parliament and of the Council amending Regulation /EU/ 806/2014 in order to establish a European Deposit insurance scheme the depositors' money are going to be entirely paid by the EDIS as of July, 2014.

enough and government support could be required. Nevertheless, the contribution of EDIS despite being limited to 20% in case of shortages of funds by the local deposit insurance scheme decreases to a certain extent the amount of the government support. Two options for the funding and coverage of payments by EDIS are discussed – through equal steps /16% between the period of re-insurance and co-insurance and during the period of co-insurance/ or funding linked to the degree of risk mutallization. The first option provides higher involvement of the EDIS during the period of co-insurance as well as smooth move to the level of the full coverage.

Through the creation of the EDIS the shocks on local level arising from huge deposit pay outs due to the failure of big banks will be mitigated. The existence of such scheme on the EU level that will collect contributions from all the banks in the EU participating in the European Deposit Guarantee Scheme will alleviate the burden to the local deposit insurance schemes to accumulate huge resources from the banks and will reduce the necessity of government support in cases of big banks' failures as in the KTB case in Bulgaria. In fact, considering the deposit insurance schemes in Europe through the creation of EDIS it is not foreseen new resources to be accumulated by the banks. The resources that are collected by the local deposit insurance schemes will be transferred to one place – the European Deposit Insurance Scheme – which is going to redistribute those money to the member-state where there is a case of bank's insolvency. The accumulation of the funds of the individual European deposit insurance schemes through the redistribution of the funds accumulated by the local deposit insurance schemes to one body on EU level will provide stronger possibilities for intervention and payments to the insured depositors in cases of bank's insolvency. *The EDIS is going to create possibilities for providing liquidity to the local schemes which do not have enough resources when the scheme is triggered and is unable to collect extraordinary contributions from the participants in a short term. The collection of extraordinary premium contributions is very limited in times of crises as they are in fact additional expenditures for the banks which may aggravate their financial situation. EDIS is going to create conditions for eliminating the link between the state and the banks and the funding of the schemes from the governments in cases of shortages of resources.* However, the creation of such a new EU body poses a number of issues that should find a proper solution as risk sharing and the role of the big deposit insurance schemes /big banking systems in the EU/ in providing the necessary resources to EDIS. *The creation of a framework for resolution and recovery of banks, the creation of EDIS which is going to accumulate sufficient resources to tackle huge bank failure as well as the possibilities for providing liquidity to the local schemes in cases of lack of funds mitigates the negative effects of the TBTF doctrine and reduces the necessity for state intervention in cases of banks facing insolvency.*

6. The Banking Structural Reform

The last regulatory measure which I will discuss in the paper is the banking structural reform which was initiated in 2012 through the creation of a high level expert group by the ex-governor of the Finnish Central

[58] The initiative for a banking structural reform was started by the European Commission in February 2012 when a High-Level Expert Group led by Erki Liikanen was established. The aim of this working group was to investigate the possible reforms in the banks' structure. The result of the activities of that group was the creation of a report which was a quantifying estimation of the different options for a structural reform in the banking sector in Europe. As a result of the activities of that group in January, 2014 the European Commission came with a Proposal for a Regulation on structural measures improving the resiliance of the EU credit institution, which until the submision of this paper for a review was still under discusion by the European authorities. As it was noted in the statement of the European Commission to the public this regulation aims to "stop the biggest banks from engaging in the risky activities of proprietary trading".

Bank – Erki Liikanen[58]. This initiative led to the creation of a Proposal for a Regulation of the EP and the Council on Structural Measures Improving the Resilience of EU Credit Institutions in January, 2014 as this proposal is still not adopted by the EP and the implementation of a structural reform continues to be under consideration. The structural reform aims at diminishing the systemic risk in the banking system by preventing the creation of "too big to fail", "too opaque to fail" or "too interconnected to fail" banks. Similar initiatives as the structural reform have been undertaken in the recent years in Great Britain – Vicker's Report and in the USA – Volcker's Rule. The Vicker's report proposed a fundamental change in the banking system in Great Britain where the retail products and services offered by the banks should be separated from the investment services and corporate banking. The Volcker's rule bans speculative investments by the banks with the accumulated deposit resources. Generally, the idea of the banking structural reform, Volcker's rule and Vicker's report is to impose a ring-fence on certain banking activities in order to achieve better protection of depositors and to avoid the exposure of taxpayers to any requests for intervention.

The banking structural reform deals with the bank's size which is considered as one of the main problems of the European banks as some of them represent three to four time the GDP of their home countries[59]. Two main problems arising from the oversized banking system /compared to the domestic GDP/ can be pointed out: the larger the banks are, the greater the probability is the problems in the banking system to impact negatively the creditworthiness of the state. The other problem is that the size of the banking system may create lack of credibility in the local deposit guarantee scheme whether it will be able to pay out the guaranteed deposits in cases when it is activated. If the size of the banking system affects the credibility of the state, then the ability of the government to provide adequate financial support to the deposit insurance scheme is also undermined. These considerations initiated measures directed to the bank's size in terms of its assets and liabilities as well as separation of certain activities.

Despite the undertaken regulatory measures the banking groups in Europe continue to be too big /in terms of their assets to GDP/ and with very complex structures which hinders the adequate supervision. Too big banks and banks with very complicated structures are hardly managed, the regulatory authorities also have difficulties to supervise them and the resolution authorities can hardly propose a proper solution for their restructuring. The structural reform provides more options for the supervisory authorities when they have to find solutions for huge banking groups that are in financial difficulties. Figure No. 1 show the share of the assets of the banking system to the home GDP for the EU member-states plus Iceland and Norway as of the end of 2015 and it is evident that in the majority of cases this share is between 200% and 400% with some extreme values for Luxembourg /1848%/ and Malta /646%/. There are some countries where the level of financial intermediation of banks is moderate as Romania /56%/, Lithuania

[59] As I noted above the Financial Stability Board defined 30 global systemically important banks in relation with setting the requirements for TLAC. Of these 30 global systemically important banks, 13 are in the European Union which provides evidence that the issue of the bank's size also exists in other jurisdictions and it is not only a problem for the European Union banks. Nevertheless, I can conclude that compared to other countries and initiatives in that field, the European Union has a leading role regarding the measures that are undertaken in order to limit the bank's size and to prevent the issues arising from the TBTF doctrine.

/69%/, Slovakia /82%/, even Bulgaria /101%/ are such examples. Figure No. 2 shows the Loans/Deposits ratios for the EU member states, EEA countries and Switzerland as of the end of 2015. This ratio shows the part the bank's lending that is provided through the accumulated funding of the attracted deposits. Deposits attracted by the banks are considered as a sustainable source of funding and the aim is the majority of the lending operations to be covered by resources attracted as deposits. As it is evident from the figure below there are two extreme cases where that ratio exceeds 150% - Denmark /210%/ and Sweden /172%/ where a huge part of the accumulated resources by the universal banks are attracted through non-depositary resources as financial instruments issued by the banks.

Today universal banks offer except the typical banking services as collecting deposits, granting loans and providing

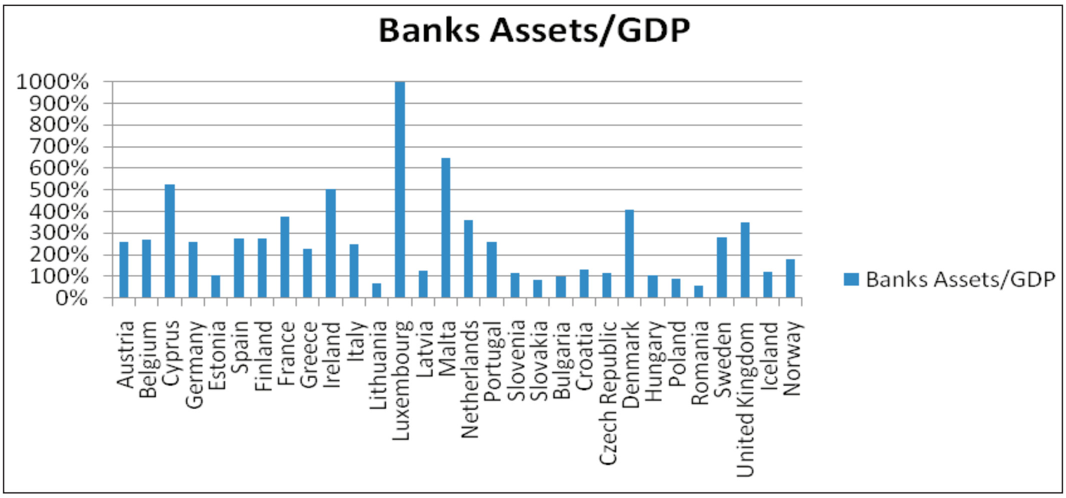

Fig. 1. Banks Assets/GDP
Source: Eurostat, European Banking Federation, own

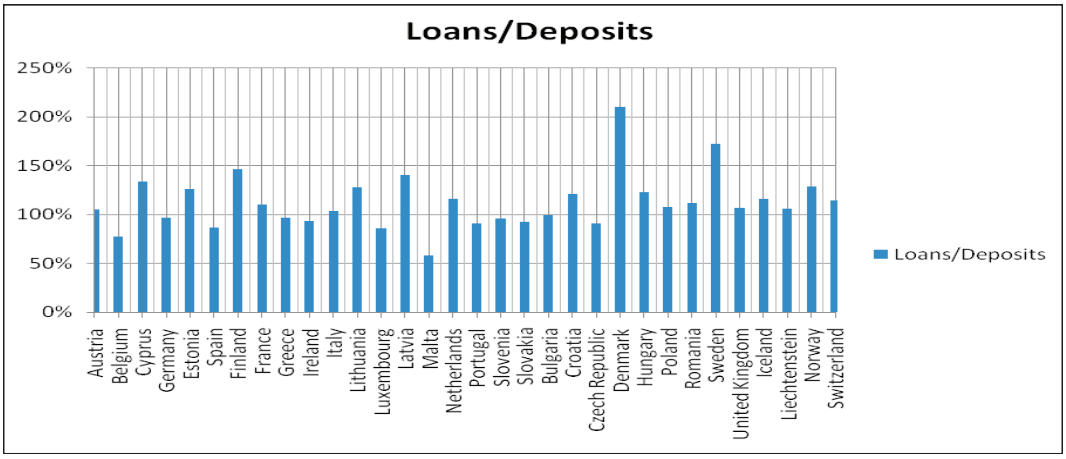

Fig. 2. Loans/Deposits
Source: European Banking Federation, own calculations

payment services also services at their own account, e.g. proprietary trading. The structural reform applies to all EU credit institutions defined as G-SIBs in accordance with CRD IV. According to CRD IV a bank that is defined as G-SIB at EU level should fulfill the following requirements: for three consecutive years have total assets equal to or exceeding 30 bln. euro and trading activities equal to or exceeding 70 bln. euro or 10% of the total assets of the bank. According to the proposal for structural reform banks are prohibited to engage in proprietary trading and to have exposures in hedge funds. Certain activities as market making, securitization and derivatives trading should be also separated from the bank's activities if they reach a certain limit but the supervisory authority has the last say to allow the bank to carry out or not those activities above the defined limit. Trading with government securities is exempted from the requirements for separation. The options for the separation are under discussion and they are functional separation and ownership separation. According to the banks' balance sheets in the period between 2006-2011, only 29 banks /of all 8000 banks in the EU/ should fall under the scope of the Regulation for the bank structural reform. This shows that the structural reform targets banks which are TBTF on global not only at EU level and it does not influence the small banks as saving banks and cooperative banks which play a significant role for the funding of the SMEs.

The structural reform is not applicable for all the SSM banks due to as we noted above in the paper some of the banks falling under the direct supervision of the ECB are systemically important on local level but compared internationally in terms of assets and volume of bank's activities these banks are small. This conclusion refers to the banks in the euro area countries falling under the direct supervision of the ECB due to the criterion "Being among the three biggest banks in the country". *The structural reform is a legislative initiative that affects the systemically important banks and it aims to limit their size and to encourage less complexity and more transparency in their structures through the separation of certain activities. The proposed changes in the bank's structure by the banking structural reform through the separation of certain activities is expected to reduce the risks for the retail depositors and investors, make the supervision easier and more efficient as well as the implementation of resolution measures.* Nevertheless, this proposal has some weaknesses which should be considered in order to achieve the goals mentioned above without imposing additional burden to the banks.

Considering the structural reform in the context of the regulatory initiatives described in the paper some doubts arise about its effectiveness. The requirements for the preparation of recovery and resolution plans that should be submitted to the respective resolution authorities, the implementation of the resolution tools, esp. the bail-in tool and the requirements for MREL and TLAC are going to affect the organizational structures of banks as well as the liability management, instrument pricing and bank's communications with depositors and investors. The bail-in tool has its controversy considering its pro-cyclicality as huge depositors /holding deposits over 100 thousand euro/ and investors in bonds issued by the bank are going to draw back in periods of crises when the banks are more likely to survive financial difficulties and probability for bankruptcy is higher as those investors will not be willing to lose their money. Additionally, the new regulations also influence the role of the banks as financial intermediaries and there are expectations that their dominance in the field of financial intermediation could be undermined by the non-bank financial intermediaries which are not subject to such strict regulations / shadow banking/.

7. Conclusion

The recent global financial crisis provided enough evidences on the effects of this vicious cycle – banks received support by the national governments, the fiscal position of the governments worsened, refinancing costs rose, banks' balance sheets weakened more and the crisis deepened. There were many examples of bail-out of TBTF banks during the crisis, the harmful consequences of the TBTF doctrine appeared and showed that measures should be undertaken to avoid the creation of TBTF banks. The bail-out of TBTF banks placed a number of issues as difficulties in recovery and restructuring of the systemically-important banks, increased moral hazard, excessive growth of the financial institutions, conflict of interests, worsened competition and creation of banks which are more oriented to perform transactions instead of developing new products and services.

The global financial crisis proved that the TBTF doctrine is an issue which needs a solution. The solution was found in a number of regulatory measures undertaken on EU level directed to the systemically important banks. These measures in the field of supervision, resolution framework, protection of depositors and decreasing the complexity in the banks' structures were discussed in this paper. The direct supervision of the ECB to the systemically important banks by applying the same micro and macro prudential tools decreases the probability for interventions by the governments in the credit institutions due to liquidity difficulties and capital shortages resulting from considerable risk exposures, irrational investments, lending and unsustainable capital. The main principles of the BRRD, the creation of a common resolution framework for the EU banks and the participation of the systemically important banks in the euro area in the single resolution mechanism create conditions the potential spillovers between the banks and sovereigns to be mitigated, the systemic risk created by the big banks to be reduced and building up excessive risk and leverage among the banks to be avoided. The structural reform directed to the systemically important banks aims to limit their size and encourages the creation of less complex and more transparent structures of the banks. Both MREL and TLAC aim to ensure that systemically important banks have enough loss absorbing capacity when they are in a difficult financial state, which will enable them to keep their core functions. The EDIS is expected to create possibilities for providing liquidity to the local schemes which do not have enough resources when the scheme is triggered and it is not able to collect extraordinary contributions from the participants in a short run. All these regulatory measures are a serious step to mitigate the negative effects of the TBTF doctrine.

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	Systemically Important Credit Institutions by Country and by Criteria for Importance as of 31st of December 2015 Falling under the Direct Supervision of ECB					
Country	***TotaL Value of Assets Exceeding 30 bln. €***	***The Value of Total Assets to GDP exceeds 20%***	***Cross-border Assets to bank's Total Assets exceed 20% or Cross-border Liabilities to Bank's Total Liabilities exceed 20%***	***Direct Public Financial Assistance***	***The Credit Institution is among the Three Biggest Banks in the Country***	***Total number of Banks supervised by the ECB***
Belgium	**6** */Investar, Axa Bank Europe SA., Belfius Banque SA., Dexia SA., KBC Group N.V., The Bank of New York Mellon S.A./*	-	Banque Degroof SA	-	-	**7**
Germany	**22** */Aareal Bank AG, Bayerische Landesbank, Commerzbank AG, DeKa Bank Deutsche Girozentrale, Deutsche Apoteker -und Ärtze Bank EG, Deutsche Bank AG., DZ Bank AG Deutsche Zentral-Genosseschafts Bank, Erwerbsgesellschaft der S-Finanzgruppe mbH&Co. KG, HASPA Finanzholding, HSH Nordbank AG, Deutsche Pfandbriefbank AG, Ladesbank Baden-Württemberg, Landesbank Hessen-Türingen Girozentrale, Landeskreditbank Baden-Württemberg-Förderbank, Landwirtschaftliche Rentenbank, Münchener Hypothekenbank EG, Norddeutsche Landesbank-Girozentrale, NRW Bank, SEB AG, State Street Europe Holding S.a.r.l.&Co. KG, Volkswagen Financial Services AG, WGZ Bank AG Westdeutsche Genossenschaft-Zentralbank/*	-	-	-	-	**22**
Estonia	-	**2** */AS SEB Bank, Swedbank AS/*	-	-	-	**2**
Ireland	**4** */Allied Irish Banks Plc., Permanent tcb Group Holdings Plc., The Governor and Company of Bank of Ireland, Ulster Bank Limited/*	-	-	-	-	**4**

Greece	**4** /*Alpha Bank SA, Eurobank Ergasias SA, National Bank of Greece SA, Piraeus Bank SA/*	-	-	-	-	**4**
Spain	***14*** */Banco Bilbao Vizcaya Argentaria S.A., Banco de Sabadell S.A., BFA Tenedora De Acciones S.A.U., Banco Mare Nostrum, Banco Popular Español, Banco Santander S.A., Bankinter S.A., Ibercaja Banco S.A., Criteria Caixa Holding S.A.U., Banco de Credito Social Cooperativo, Kutxabank S.A., Liberbank S.A., Abanca Holding Financiero S.A., Unicaja Banco S.A./*	-	-	-	-	**14**
France	***14*** */Agence Francaise de Developpment, Barclays Bank, BNP Paribas, BPCE, Bpifrance, Confederacion Nationale du Credit Mutuel, C.R.H. - Caisse de Refinancement de l'Habitat, Credit Agricole, HSBC France, La Baque Postale, RCI Banque S.A., SFIL S.A., Societe Generale S.A./*	-	-	-	-	**14**
Italy	***15*** */Banca Carige S.P.A. - Cassa di Risparmo di Genova e Imperia, Banca Monti dei Paschi di Siena S.P.A, Banco Popolare - Societa Cooperativa, Banca Popolare dell'Emilia Romagna Societa Cooperativa, Banca Popolare di Milano - Societa Cooperativa a Responsabilita Limitata, Banca Popolare di Sondrio - Societa Cooperativa per Azioni, Banca Popolare di Vicenza - Societa Cooperativa per Azioni, Barclays Bank, Credito Emiliano S.P.A., ICCREA Holding S.P.A., Intesa Sanpaolo, Mediobanca - Banca di Credito Finanziario S.P.A., UniCredit S.P.A., Unione di Banche Italiane Societa Cooperativa per Azioni, Veneto Banca/*	-	-	-	-	**15**
Cyprus	-	**4** /Bank of Cyprus Public Company, Co-operative Central Bank, Helenic Bank Public Company, RCB Bank Ltd./	-	-	-	**4**

Latvia	-	**1** /Swedbank AS/	-	-	**2** /ABLV Bank AS, AS SEB Banca/	**3**
Lithuania	-	-	-	-	**3** /AB DNB Bankas, AB SEB Bancas, Swedbank AB/	**3**
Luxembourg	**3** /Banque et Caisse d'Epargne de l'Etat, Luxembourg, Pricicion Capital CA, State Street Bank Luxembourg S.A./	**3** /JP Morgan Luxembourg S.A., RBC Investor Service Bank S.A., UBS Luxembourg S.A./	-	-	-	**6**
Malta	-	**2** /Bank of Valletta Plc., HSBC Bank Malta Plc./	-	-	**1** /Medifin Holding Limited/	**3**
The Netherlands	**7** /ABN Amro Group, Bank Nederlandse Gemeenten N.V., Cooperative Centrale Raiffeisen-Boerenleenbank B.A., ING Groep N.V., Nederlandse Waterschapsbank N.V., SNS Holding B.V., RFS Holding B.V./	-	-	-	-	**7**
Austria	**6** /Promontoria Sacher Holding N.V., Erste Group Bank AG, Volksbank Wien AG, Raiffeisen Holding Niederösterraich -Wien reg.Gen.m.b.H, Raiffeisenbankengruppe OÖ Verbund eGen, Raiffeisen Zentralbank Österreich Aktiengesellschaft	-	**2** /Sberbank Europe AG, VTB Bank / Austria/ AG/	-	-	**8**
Portugal	**4** /Banco BPI, S.A., Banco Comercial Portugues, AS, Caixa Geral de Depositos SA, Novo Banco SA/	-	-	-	-	**4**
Slovenia	-	**1** /Nova Ljubljanska Banka d.d. Ljubljana/	-	-	**2** /Abanka d.d., Nova Kreditna Banka Maribor d.d./	**3**

Slovakia	-	-	-	-	**3** /Slovenska Sporitelna A.S., Tatra Banka A.S., Vseobechna uverova banka A.S./	**3**
Finland	3 /Nordea Bank Finland Plc., OP Osuuskunta, Kuntarahoitus Oyj/				1 /Danske Bank Plc./	**4**