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DEPOSIT GUARANTEE SCHEMES

A European Perspective

Francesca Arnaboldi

Deposit Guarantee Schemes

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Deposit Guarantee Schemes: A European Perspective

Francesca Arnaboldi
Associate Professor, University of Milan, Italy

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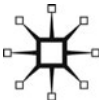

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Foreword

Marco Onado

The financial crisis has shown the fundamental flaws of the European financial integration and in particular of the supervisory framework. The Euro Area countries had to face what Dirk Schoenmaker called the 'financial trilemma': financial stability, financial integration and national regulatory policies cannot coexist. Any two of the three objectives can be combined but not all three; one has to give. As a matter of fact, the crisis has been aggravated in the first years of the crisis by the stubborn defence of national solutions to bank crises that were European in scope. This was the case not only of peripheral countries, but also of core countries such as France, Germany, and the Netherlands.

At long last, the political agreement on the Banking Union has been reached in 2012. It is not a coincidence that in these months the European Central Bank could announce its intention to do 'whatever it takes' to save the euro. Since then, the combined effect of the more aggressive monetary policy and the announcement of the solution of the main weakness of the European financial integration have dramatically improved the situation for all peripheral countries.

From the political point of view the most important decision has been to create the Single Supervisory Mechanism (SSM): as any other solution would have required a lengthy process of approval of a new Treaty, the European governments have wisely decided to confer the

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task to the European Central Bank, using the provision of the current article 127.6.

But there is also a second dimension of the trilemma: to be effective in promoting financial stability a supra-national supervisory mechanism must be supported by a common mechanism for resolving potential bank crises and a common mechanism for insuring deposits. Having only the SSM or any combination of the three tools leads to a sub-optimal equilibrium in which the European countries woes are not solved.

Francesca Arnaboldi's paper highlights the importance of one of the three pillars of the Banking Union, the common mechanism for insuring deposits. The analysis of the various schemes currently in place helps to explain why coordination is difficult.

The new regulatory framework implies significant changes for European countries, in terms of funding, organizational arrangements and risk adjustment. In particular, Francesca Arnaboldi's work measures the change in contributions to be paid to the national schemes. Some countries, such as Czech Republic, Estonia and Poland, would have to pay more than ten times their current contributions.

Furthermore, the paper assumes the establishment of a pan-European scheme, following the initial Commission's proposal. Compared to national schemes, a single fund would have the following advantages: it would save administrative costs of about €40 million per year, and it would set an incentive for riskier banks to enhance risk adverse behaviour in order to pay lower contributions, thus indirectly reinforcing Basle III framework. In particular, as all European banks would belong to a single ranking, a common fund would allow countries with less risky banking systems, such as Germany, to pay lower contributions than if national compartments are kept in place.

This book is aimed at academics and practitioners interested in the new regulatory framework on deposit guarantee schemes and its link to the first two pillars of the Banking Union.

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About the Author

Francesca Arnaboldi is Associate Professor in Banking and Finance at the University of Milan (Italy). She gained her Bachelor's and Master's in Finance from Bocconi University (Italy), her Master's in Financial Management from the University of London, CeFiMS (UK), and her doctorate in Finance from the University of Bologna (Italy). She has been working as a visiting researcher in the Centre for Banking Research at Cass Business School, City University, London (UK) since 2009 and she is a member of the Research Center on Financial Studies at University of Modena and Reggio Emilia (Italy). Her research interests focus on the areas of financial innovation; international banking; bank competition and performance; bank corporate governance, regulation and supervision. Her research has been presented at international conferences and published in books and journals.

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Introduction

Abstract: *This book fits within the debate on deposit guarantee schemes in the European Union, currently under revision, first by investigating the key initiatives towards the creation of the banking union and the role played by the schemes. Deposit guarantee safeguards deposits and strengthens overall financial sector stability by removing incentives for bank runs and thus limiting financial contagion. Second, the book describes the various features of the schemes currently adopted by member states, providing extensive information on their main features. Finally, it empirically investigates the impact of the new rules on the amount of contribution banks have to pay to the national schemes and assuming the establishment of a single pan-European scheme.*

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Progress towards a common European financial framework has been a constant trend over the past 40 years, with ongoing harmonization of national legislation and practices. The financial sector has played a key role in the integration of the European countries. Indeed financial integration has been enhanced by the introduction of a single currency.

Despite the positive achievements in the integration of European financial markets and economies, the financial crisis confirms that closer coordination of prudential policies and safety nets is required. The European financial system has revealed to be more fragile than expected. The crisis meant a serious setback for financial integration and the possibility of the break-up of the single currency.

As regards the European retail banking markets, the financial crisis illustrated once more how banks are susceptible to the risk of 'bank runs' and the need of a coordinated supervision at the European level. Deposit guarantee schemes help to reduce the risk of bank runs promoting bank soundness and stability.

Financial stability in the EU is a concern common to all member states and European authorities consider financial integration to be one of the key issues in making Europe more efficient and competitive. The Larosière Report has set out guidelines for improving the European regulatory framework, both in macro- and micro-supervision.

Against this background, in principle, this book fits into the debate investigating the key initiatives towards European banking integration (Chapter 1). The creation of a banking union is the final step in a process that started with the introduction of the First Banking Directive in 1977 and continued with the deregulation of financial services, the establishment of the Economic and Monetary Union and the introduction of the euro. Although much progress has been made, it is unclear whether a single market can ever operate properly across an area which is so heterogeneous. It is argued that the single market for financial services was in a sense too successful, as it allowed the creation of banks that are too large relative to individual member states, thus highlighting the need for an integrated framework for cross-border crisis management and resolution, surpassing a supervisory framework based predominantly on domestic supervision (Chapter 2).

Prior to the crisis, EU banking groups rapidly increased in size, scope and complexity, but financial integration was incomplete, in particular in retail banking. Nevertheless, until 2008, financial markets tended to price sovereign risk within the euro area in a similar way, irrespective

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of differences across countries' fundamentals. Financial markets started to discriminate on the basis of fundamentals more strongly during the crisis. This 'wake-up call' led markets to price the risk of redenomination, that is, the risk that the euro would break up. Among policy interventions to mitigate the impact of spillovers between banks and sovereigns, the creation of a single banking union has a key role to play, promoting bank soundness and stability, thus increasing market confidence in the European banking system as a whole. As discussed in the Chapter 2, the banking union is formed by three pillars: a single supervisory framework, a single resolution mechanism and common rules on deposit guarantee schemes. The latter protects depositors from loss of deposit values up to a pre-specified level in the event of bank failure thus safeguarding the bulk of the financial assets of bank clients. It also strengthens the overall stability of the financial sector by removing incentives for bank runs by depositors who are uncertain about the condition of their bank and thus should limit financial contagion and prevent the development of a negative spiral between the financial sector and the real economy.

Since 1994, Directive 94/19/EC has ensured that all member states have had a safety net in place for bank account holders. If a bank was closed down, national deposit guarantee schemes were to reimburse account holders. However, excessive leeway given to member states in implementation of the 1994 directive caused differences in the level of protection for depositors across member states, decreasing the effectiveness of the new framework. Overall, the situation was confusing for depositors, who may have had many different protection levels within the same member state if there were branches of foreign banks there from other member states.

Chapter 3 investigates the difficult process leading to the revision of legislation on deposit guarantee schemes. In the EU, deposit guarantee is provided by a variety of national schemes. Although membership, coverage and depositor reimbursement were harmonized in 2009, national schemes still vary greatly in their number (there can be more than one scheme per country), organizational and funding arrangements. Such a variety of arrangements clearly illustrates the difficulties encountered at the European level in blending different frameworks and agreeing on common principles. This chapter concludes with a comparison of the role played by the deposit insurance scheme in the US in relation to the diversity of the model in the EU.

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Chapter 4 empirically investigates the possible approaches for calculating contributions on the basis of the risk profile of European banks, which is a key element in the revision of deposit guarantee schemes. Among the various models which can be applied to compute these amounts, the numerical experiment applies the multiple indicators model, which better captures a bank's overall risk. The aim of the assessment is to give a first insight into the impact of the application of the new legislative framework on EU banking systems.

A certain number of choices have had to be made to perform the analysis and the results should be read with caution. First, at the country level, on average, contribution to the scheme is going to be higher under the new regime. This is caused by two factors: the change in the rate applied to compute the amount of contribution member banks have to pay to the scheme and the change from a flat rate to a risk-adjusted contribution. The first factor increases the contributions for all European banks to various extents. The second element, that is, risk adjustment, increases the contribution a riskier bank has to pay, up to twice the standard contribution, but diminishes contributions for safer banks. At country level the effect on riskier banks is offset by the one on less risky banks.

Thus the assessment has been performed under the assumption that a pan-European scheme would be in place. Such an experiment helps to disentangle both effects, showing the impact of risk adjustment on the contribution to be paid at country level. As a final remark, the assessment investigates whether the amount of contribution to be paid under a pan-European scheme would be significantly different from that paid under the new framework proposed by the Commission, involving national schemes. The percentage change is, in fact, similar for all countries, suggesting that a unique deposit guarantee scheme would be a viable solution for the EU.

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The European Financial Framework

Abstract: *This chapter covers the progress in European banking integration over the past 20 years. Since the signing of the Treaty establishing the European Economic Community in Rome in 1957, the European Union has grown to comprise 28 member states and a population of nearly half-a-billion citizens. The financial sector has played a key role in the process of European Union economic integration. This role is illustrated by reviewing the major legislative changes that have contributed towards European banking integration, which set the background for the establishment of a banking union.*

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1.1 Introduction

Despite the positive achievements in the integration of European financial markets and economies, the financial crisis that started in 2007 (hereinafter 'the financial crisis') confirms that closer coordination of prudential policies and safety nets is now required. Against this background, this chapter covers the key initiatives towards European banking integration over the past 20 years. Since the signing of the Treaty establishing the European Economic Community in Rome in 1957 (11957E/TXT), the EU has grown to comprise 28 member states and a population of nearly half-a-billion citizens. Nowadays, the EU is the largest integrated economic area in the world, accounting for more than 20 per cent of the world's GDP. The financial sector has played a key role in the process of EU economic growth. Since the introduction of the First Banking Directive in 1977 (Council Directive 77/780/EEC), the deregulation of financial services, the establishment of the Economic and Monetary Union and the introduction of the euro have helped create the single market for financial services. European authorities consider financial integration to be one of the key issues in making Europe more efficient and competitive (European Central Bank, 2005). The next four sections present a review of the major legislative changes that have contributed to European banking integration.

EU financial integration has brought with it a range of benefits, from increased income generation, to improvements in technology and risk management, risk diversification and deepening of financial markets (Arnaboldi & Casu, 2012). Despite the positive achievements, it is unclear whether the single market can ever operate properly across an area which is so heterogeneous. It is argued that the single market for financial services was in a sense too successful, as it allowed the creation of banks that are too large relative to individual member states and an excessive accumulation of debt in many countries, thus highlighting the need for an integrated framework for cross-border crisis management and resolution, surpassing a supervisory framework based predominantly on domestic supervision (European Commission, 2009b; Fonteyne et al., 2010). Regulators have also begun to question the suitability of financial institutions' supervisory systems (European Commission, 2010a).

A review of the period of advanced integration and of the structure of the European banking system helps develop greater understanding of

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why deposit guarantee schemes are still fragmented in the EU, why they are so important and the policy issues raised by pan-European schemes, all of which are discussed in the following chapters.

1.2 The establishment of the common market

Deposit guarantee schemes are extremely important from a financial stability perspective, because they protect depositors in case of bank failure. This promise prevents sudden withdrawal of deposits, thereby reducing the potential for severe economic consequences. In the new European framework, deposit guarantee schemes play a central role, being one of the three pillars of the banking union, together with the single supervisory and the single resolution mechanism. Thus, deposit guarantee schemes in Europe cannot be investigated without some preliminary consideration of the key legislative changes that led to the banking union, which is then discussed in Chapter 2. The process of creating a unique economic area in Europe, which dates back to the Treaty establishing the European Economic Community in 1957, can be broadly summarized in relation to five periods, described below.

Period one: from 1957 to 1973

The European Commission and the Council of Ministers worked to deregulate entry into domestic markets. The goal of the Treaty of Rome was the transformation of highly segmented national markets into a unique common market and this was achieved through the recognition of the right of establishment and the coordination of legislation. In particular, the Council Directive 73/183/EEC of June 1973 and the Council Directive 73/240/EEC of July 1973 required the member states to implement the principle of non-discriminatory treatment and abolish the restrictions on freedom of establishment. However, the goal of the Treaty of Rome was far from achieved in the banking sector. It is difficult to secure international competition and the supply of cross-border services because of regulations on capital flows. Furthermore, banking supervision was still fragmented. Banks operating in different countries could be subject to different regulatory frameworks, thus lowering bank profitability in cross-border operations.

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Period two: from 1973 to 1983

Various attempts towards the harmonization of regulations were made, for instance with the adoption of the First Banking Directive in 1977 (First Council Directive 77/780/EEC), which set common conditions with which banks should comply to be granted authorization by member states' competent authorities. Nevertheless obstacles to the creation of a single European banking market were still in place. Host country authorization was needed when a bank started operations in another member state by opening branches. However, according to article 4.2, authorization could not be refused to a branch of a bank 'on the sole ground that it is established in another member state in a legal form which is not allowed in the case of a credit institution carrying out similar activities in the host country'.

Period three: from 1983 to 1991

The completion of the internal market was made possible thanks to a new approach towards European integration prompted by the European Commission and consisting of home country control with minimal harmonization of national regulation (Dermine, 2006). In 1985, the European Commission published a White Paper on the completion of the internal market which established the free circulation of persons, goods and capital in the EU (Commission of the European Communities, 1985). The Second Banking Directive (Second Council Directive 89/646/EEC) applied free circulation to the banking sector, establishing the principle of home country control.[1] The supervision of banks operating in two or more member states was gradually transferred to the home country authority of the parent bank. A single banking license, home country control and mutual recognition were established. A bank authorized in an EU country could open foreign branches or provide cross-border services without further authorization. The universal banking model, which permits banks to undertake a wide range of activities including investment banking, was adopted. The minimal harmonization of national regulation was also attained through Commission Recommendation 87/62/EEC (Commission of the European Communities, 1987), which set limits on large exposures of credit institutions, and through Directive 89/299/EEC on credit institutions' own funds, which defined the concept of 'own funds' on the basis of the Basle Capital Accord of 1988.[2] The capital of a bank can

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serve to absorb losses which are not matched by a sufficient volume of profits and also act as an important measure for competent authorities, in particular for the assessment of the solvency of credit institutions and for other prudential purposes. Capital also ensures the continuity of credit institutions and protects savings. The harmonization of the rules concerning the definition and calculation of capital promoted the supervision of credit institutions and contributed to further integration in the banking sector. The directive was part of a wider effort to reconcile minimum prudential standards for financial institutions in the EU with the dual aim of safeguarding the safety and soundness of the financial system and establishing a level playing field for financial institutions competing in the single market.

In addition, free movement of capital was finally achieved. A first step was Directive 86/566/EEC, which modified the previous framework, extending liberalization to long-term lending for commercial transactions and purchases of securities not dealt in on the stock exchange (Usher, 2007). Council Directive 88/361/EEC cancelled all remaining restrictions on capital movements between residents of the member states as of 1 July 1990. As a result, liberalization was extended to monetary or quasi-monetary transactions, which were likely to have the greatest impact on national monetary policies, such as loans, foreign currency deposits and security transactions.[3]

In 1989, the Delors Report (Committee for the Study of Economic and Monetary Union, 1989) set out a plan in three stages over 10 years leading to European Monetary Unification (EMU), which is summarized in Table A.1 in the Appendix.

Period four: from 1992 to 2005

The Treaty on European Union (11997M), signed in Maastricht on 7 February 1992, confirmed the White Paper programme on the creation of a single market. In addition, Directive 94/19/EC first provided for mandatory insurance for all EU banks, even if, as discussed in Chapter 3, deposit guarantee schemes are still highly fragmented across member states. The European System of Central Banks (ESCB) was established to maintain price stability and national central banks retained regulatory and supervisory powers according to the principle of decentralization. The European Central Bank (ECB) was allowed to regulate and supervise financial institutions only under very special circumstances and with unanimity in the European Council. Thus

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the euro, which was created in 1999, was not backed up by a common supervisory framework.[4]

In the same period, the Financial Services Action Plan (FSAP) was launched (European Commission, 1999) with the goal of accomplishing the full integration of banking and capital markets by the year 2005 through the creation of a single EU wholesale, retail banking and insurance market and the development of state-of-the-art prudential rules and supervision. Fiscal rules to implement a single financial market in an effective manner were included in the plan. The FSAP comprises more than 20 Directives, which fall into two categories:

- level 1 Directives or Lamfalussy Directives, which set out the framework principles;
- level 2 Directives, which set out the implementation measures that allow these principles to be put into practice.

There are four level 1 Directives, specifically the Directive on Markets in Financial Instruments (Directive 2004/39/EC), the Market Abuse Directive (Directive 2003/6/EC), the Prospectus Directive (Directive 2003/71/EC) and the Transparency Directive (Directive 2004/109/EC). All four directives are crucial pieces of legislation to accomplish the full integration of banking and capital markets in the EU and to maintain investor confidence. The Directive on Markets in Financial Instruments, for example, effectively creates a 'single passport' that allows investment firms to operate across the EU. The Market Abuse Directive aims to prevent insider dealing and market manipulation, which is essential if investor confidence is to be maintained. The Prospectus Directive provides issuers (including small and medium enterprises) with a 'single passport', which allows them to raise investment capital on a pan-European basis and to seek out the cheapest capital available to them. The Transparency Directive sets out uniform rules for the disclosure of accurate, comprehensive and timely information by issuers throughout the EU.[5]

The level 2 Directives include, among others, the Capital Requirements Directives, which represent the common framework for the implementation of the Basel II Capital Accord (Directive 2006/48/EC and Directive 2006/49/EC), the Directive on the Reorganization and Winding-Up of Credit Institutions (Directive 2001/24/EC), Regulation (EC) 1606/2002 on the application of international accounting standards, Regulation (EC) 2157/2001 on the Statute for a European company, supplemented

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by Directive 2001/86/EC, and Council Directive 2003/48/EC on the taxation of savings income in the form of interest payments. All directives have been transposed in the national framework and their general economic impact has been assessed (Box 1.1). Table A.2 in the Appendix summarizes the action taken, the relevant directive number and the transposition deadline.

BOX 1.1 *Assessments of the impact of the FSAP*

In the framework of the economic evaluation of the Financial Services Action Plan, the European Commission launched two studies: a study to assess the general economic impact of the FSAP and a survey to estimate the cost of compliance with the FSAP measures. Work on both studies started in December 2007 and was completed in 2009.

The aim of the first study was to provide an economic assessment of the specific impact of the FSAP on the EU financial services sector (Malcolm et al., 2009). The FSAP was found to result in observable market impacts on the banking, securities and insurance sectors under scrutiny. However, the degree to which an impact could be observed differed significantly. In banking, the most significant measures within the FSAP occurred relatively recently and the ability to observe its impacts was complicated by the banking crisis that started in 2008 and is investigated later in this chapter. For securities, there were clear market impacts and there is an expectation that these will grow over time. Insurance was found to have been the least affected by the FSAP, but positive market impacts could be seen from a number of recent measures. In addition to the market impacts associated with the different sectors, there is general support for the premise that the FSAP provides certainty regarding the direction of financial regulation and that this in itself is beneficial.

The second survey was based on direct interviews with representatives of a sample of companies to obtain their estimates of the costs of compliance with the provisions of selected directives. Banks typically reported experiencing higher costs of compliance than either asset managers or financial markets. However, this should be seen as a function of the directives studied rather than a more general observation. Implementation costs significantly exceeded

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ongoing costs. This largely reflects the tendency of firms to adopt information technology (IT) infrastructure and processes up front, so that the recurring costs are absorbed into the business as usual (Europe Economics, 2009).

Period five: from 2005 to date

In 2005 the European Commission published a Green Paper on financial services policy over the period 2005–2010 (European Commission, 2005c). The paper focused on implementing existing rules and enforcing cooperation among member states rather than proposing new laws. The integration of retail banking markets had been slower than expected because of the fragmented legislation and different national rules. A major achievement in this paper is the single euro payments area (SEPA) and the harmonization of the processing of retail payments in euro (Directive 2007/64/EC). The goal is to make payments in euro and across Europe as fast and safe as national payments and to improve competition by opening up payment markets to new entrants, thus fostering greater efficiency and cost reduction. SEPA enables customers to make cashless euro payments to anyone located anywhere in Europe, by credit transfer and direct debit.[6]

Nevertheless, the financial crisis has revealed important shortcomings in financial supervision, which has failed to anticipate adverse macroprudential developments and to prevent the accumulation of excessive risks within the financial system. Thus, banking supervision in Europe has undergone a radical evolutionary process to overcome the deficiencies of the harmonized national supervision model on which European legislation had previously been based and to achieve a real banking union, with fully integrated supranational banking supervision.

The Larosière Report

The crisis showed the need to strengthen the European supervisory framework, both at the macro- and micro-levels, particularly for the core group of large complex financial institutions. This need is a necessary step towards financial integration. In 2009, to tackle this problem, a high-level group, chaired by de Larosière, made recommendations to establish an EU-level body charged with overseeing risk in the financial system as a whole (de Larosière et al., 2009).

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Following these recommendations, the Commission suggested a series of reforms at the EU level, in particular including the creation of a European Systemic Risk Board (ESRB) responsible for macro-prudential oversight. The new legislative framework has been in place since 2010 (Regulation (EU) 1092/2010, 1093/2010, 1094/2010, 1095/2010, 1096/2010).[7] The ESRB's task is to monitor and assess systemic risk in normal times to mitigate the exposure of the system to the risk of failure of systemic components and to enhance the financial system's resilience to shocks. In this respect, the ESRB should contribute to ensuring financial stability and mitigating negative impacts on the internal market and the real economy. To accomplish this goal, a European System for Financial Supervision (ESFS) has been established. As Onado (2012) describes it, the ESFS brings together the actors of financial supervision at national and European level, creating a network which includes the ESRB and three micro-supervisory authorities: the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Securities and Markets Authority (ESMA), collectively referred to as the European Supervisory Authorities (ESA). The interconnectedness of financial institutions and markets implies that the monitoring and assessment of potential systemic risks should be based on a broad set of relevant macro-economic and micro-financial data and indicators. The three supervisory authorities contribute to the work of the ESRB by providing data and undertaking stress tests in close coordination and they form part of the joint committee which works to ensure cross-sectorial consistency and joint positions in the area of supervision of financial conglomerates.[8] This means though that the ESRB not only has no information power, but depends on the three European authorities for getting data.

This is not the only weakness shown by de Larosière report, since it results from the need to reach a workable compromise between different national interests (Onado, 2010). Indeed, the report seems to reflect a narrow interpretation of macro-prudential supervision and therefore gives the ESRB a rather general and high-level role with limited powers and no responsibilities in matters of macro-prudential relevance. A better solution would be to give the board a wide mandate and very detailed powers of intervention.

In addition, the ESRB issues warnings to encourage action at the micro-level and thus to correct possible threats to financial stability. Unfortunately, this solution is not considered efficient even in a national

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environment, and it is doubtful whether it could work at the European level.

Furthermore, the relationship between the different authorities involved has not been clarified, as well as the role of the European Central Bank, a very delicate matter on which the report is vague.

Finally the ESRB, as the European body in charge of macro-prudential supervision, must be fully independent, but the European Commission has assigned a Commission representative a seat (with voting power) and has allowed the finance ministries to be represented indirectly. Both these provisions undermine the ESRB's independence.

As far as micro-prudential supervision is concerned, the problem was not to abolish national supervisors, but to decide what kind of body should be in charge of coordinating the decisions. The report and the European Commission discarded both the option of creating a true system of European supervisors on a federal basis, similar to the Eurosystem, and the option of giving the ECB responsibilities in this field, using Article 105(6) of the Treaty of European Union (Onado, 2010). The chosen compromise assigns micro-supervision to the three European Supervisory Authorities. However, without clear rules concerning effective powers and the decision-making process, it is very difficult for ESA to reach a decision, particularly during a crisis.

1.3 European financial framework

The process of achieving a real banking union is still under way and focuses on five regulatory corpuses, of which only the European System for Financial Supervision, Capital Requirements Directive IV and the Capital Requirements Regulation (CRR) are currently in force. The Capital Requirements Directive and regulation form the so-called CRD IV package (Directive 2013/36/EU; Regulation (EU) 575/2013). A key factor in the reform is the two-speed approach, which has distinguished European law since the adoption of the single currency. The architecture of the new system of supervision is described as two concentric circles:

- the outer circle includes regulatory innovations applicable to all member states;
- the inner circle comprises regulations applicable only in the euro area countries or in countries that apply them spontaneously (Mancini, 2013).

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The outer circle

The outer circle includes regulations providing for the European System for Financial Supervision, Capital Requirements Directive IV, the CRR and two proposed directives on crisis resolution and on deposit guarantee schemes. Table 1.1 summarizes the main progress towards a common financial framework for Europe and a banking union for the euro zone.

The effort to provide the EU with a more consistent set of standards was accomplished in 2013 with the approval of Capital Requirements Directive IV and the CRR. The aim of the package is to tackle some of the vulnerabilities shown by banks during the crisis, namely the insufficient level of capital, both in quantity and in quality, resulting in the need for unprecedented support from national authorities.

TABLE 1.1 *European financial framework*

	All member states (28 countries)	
Outer circle	**Reference**	**In force since**
European system of financial supervision (ESFS)	Regulation (EU) 1092/2010, Council Regulation (EU) 1096/2010, Regulation (EU) 1093/2010, Regulation (EU) 1094/2010, Regulation (EU) 1095/2010, directive 2010/78/EU	January 2011
Capital Requirements Directive (CRD)	Directive 2013/36/EU	January 2014
Capital Requirements Regulation (CRR)	Regulation (EU) 575/2013	January 2014
Bank Recovery and Resolution Directive	COM/2012/0280 final – 2012/0150 (COD)	Expected (2015)
Directive on Deposit Guarantee Scheme	COM/2010/0368 final – COD 2010/0207	Expected (2015)
Inner circle	**Euro member states (18 countries)**	
Regulation on the Single Supervisory Mechanism (SSM)	Council Regulation (EU) 1024/2013, Regulation (EU) 1022/2013	October 2013
Regulation on the Single Resolution Mechanism (SRM)	COM(2013) 520 final, 2013/0253 (COD)	Expected (2015)
Single Bank Resolution Fund	COM(2013) 520 final, 2013/0253 (COD)	Expected (2016)

Source: author's elaboration from http://www.eur-lex.europa.eu and Council of the European Union (2014e).

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The package set stronger prudential requirements for banks, requiring them to maintain sufficient capital reserves and liquidity as a cushion against crises. In particular, the directive includes the coordination of national rules and standards concerning access to the activity of credit institutions and investment firms, the modalities for their governance and their supervisory framework. Even if the rules on bankers' remuneration and bonuses, prudential supervision and corporate governance remain the responsibility of the competent domestic authorities, the directive is an essential tool to attain an internal market in the banking business from the point of view of both the freedom of establishment and the freedom to provide financial services. The smooth operation of the internal market requires not only legal rules, but also close cooperation and significantly enhanced convergence of regulatory and supervisory practices between the member states. In addition, the CRR lays down a single set of rules concerning general prudential requirements across the EU. As a regulation, the CRR applies directly to every member state, thus leaving no scope for arbitrary interpretation and ensuring certainty as to the law for all EU single market players.

A second strand of regulatory innovations applicable to all member states includes two proposed directives on Bank Recovery and Resolution and on the revision of Directive 2009/14/EC on Deposit Insurance Schemes. The first reviews bank resolution and restructuring regimes to help member states intervene to manage banks in difficulty and to allow for an orderly winding-down of large complex cross-border banks which have been considered 'too big to fail' (European Commission, 2013b).

In light of repeated bailouts of banks which have increased public debt and imposed a heavy burden on taxpayers, in principle the aim of a pan-European resolution framework is to give national resolution authorities common tools to prevent crises from emerging and should they arise, to address them at early stage. Eventually, if the crisis worsens, national authorities have a single toolkit and roadmap to manage the failure of banks in an orderly fashion. A 'bail-in' mechanism allows authorities to call on shareholders and creditors to cover the losses of failed banks following a pre-determined order. Shareholders and other creditors who invest in bank capital (such as holders of convertible bonds and junior bonds) bear losses first. In particular, creditors are charged an eight per cent minimum loss on total bank passive investment. As the banks' capital represents three per cent of total active investment, this means that a buffer is introduced at the expense of banks' creditors equal to

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more than double the patrimonial one (Onado, 2013). The aim of the mechanism is to stabilize a failing bank so that it can continue to provide essential services and replace the bail-out mechanism by public funds, which has been in place so far. Recapitalization through the write-down of liabilities and/or their conversion to equity would allow the bank to continue as a going concern, reducing the risk of contagion, and give authorities time to reorganize it or wind down parts of its business in an orderly manner.

The proposal also encourages the creation of national resolution funds paid for by the banks to support bail-in and other resolution tools for the restructuring and closing down of banks. If a national resolution fund would not have sufficient resources to pay for restructuring, the proposal asks member states to impose an extra levy on its banking sector before calling on the option to borrow from the national resolution funds of other EU member states. In fact, this mechanism would be replaced by the Single Bank Resolution Fund (SRF), which would be funded by contributions from the European banking sector as a whole. However, the SRF comes into play only after the bail-in mechanism.

As a final regulatory corpus, in July 2010, the Commission proposed to strengthen existing rules on deposit guarantee scheme. The draft and the other regulatory changes to the schemes are addressed and discussed in Chapter 3.

The inner circle

The inner circle includes the regulation on the Single Supervisory Mechanism and the proposals for the Single Resolution Mechanism and the Single Bank Resolution Fund, which is the most advanced stage of the overall European banking union project. These topics are covered in the next chapter because of the strict link between the resolution framework for banking crisis and the coverage offered by national deposit guarantee schemes to depositors in the case of bank failure.

1.4 Conclusion

This chapter briefly describes the key initiatives towards the establishment of a common European framework for the financial industry, giving some background on the long process ultimately resulting in the

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banking union. The harmonization of rules across countries is not linear, but the laborious procedures involved in the approximation of laws lead to tighter economic integration and have proved to be beneficial for member states.

Having set the background, the next chapter investigates the transition from national supervision to a European banking union, which is of foremost importance for deposit guarantee schemes. Indeed, a common scheme to protect depositors is one of the three pillars of the banking union and constitutes a considerable step towards integration for the European banking sector.

Notes

1 Article 4 of Directive 77/780/EEC states that '1. Member States may make the commencement of business in their territory by branches of credit institutions covered by this Directive which have their head office in another Member State subject to authorization according to the law and procedure applicable to credit institutions established on their territory.' Article 6.1 of Directive 89/646/EEC states that: 'Host Member States may no longer require authorization, as provided for in Article 4 of Directive 77/780/EEC, or endowment capital for branches of credit institutions authorized in other Member States. The establishment and supervision of such branches shall be effected as prescribed in Articles 13, 19 and 21 of this Directive.' In Title V, which includes provisions relating to the freedom of establishment and the freedom to provide services, Article 18.1 states that 'the Member States shall provide that the activities listed in the Annex may be carried on within their territories, in accordance with Articles 19 to 21, either by the establishment of a branch or by way of the provision of services, by any credit institution authorized and supervised by the competent authorities of another Member State, in accordance with this Directive, provided that such activities are covered by the authorization'.

2 According to the Commission recommendation of 22 December 1986 on monitoring and controlling large exposures of credit institutions (87/62/EEC), an exposure of a credit institution to a client or group of connected clients is considered to be a 'large exposure' when its value reaches or exceeds 15 per cent of own funds. The recommendation sets limits on large exposures: credit institutions may not incur an exposure to a client or group of connected clients when its percentage value exceeds 40 per cent of own funds and may not incur large exposures which in the aggregate exceed 800 per cent of own funds.

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3 The Directive included a so-called safeguard clause, allowing member states to take protective measures when short-term capital movements of exceptional size negatively affected the conduct of monetary policy. Such measures, however, only applied in a limited number of cases and could not last for more than six months. No member state ever made use of this possibility. It also allowed for some countries to maintain temporary restrictions, mainly on short-term movements, but only for a specific period. In Ireland, Portugal and Spain restrictions were in place until 31 December 1992 and in Greece until 30 June 1994.

4 On 1 January 1999, with irrevocably fixed exchange rates, the financial and interbank markets adopted the euro currency, whereas the retail market continued to operate in the national currency. Euro notes and coins were introduced in January 2002. The European Monetary Unification initially involved 11 members which joined the euro in 1999: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. Greece adopted the new currency in 2001, Slovenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011 and Latvia in 2014. Lithuania has proposed a target date for the adoption of the euro of 1 January 2015. The following countries are members of the EU which have not adopted the euro: Bulgaria, the Czech Republic, Denmark, Croatia, Lithuania, Hungary, Poland, Romania, Sweden and the UK. Of the member states outside the euro area, Denmark and the UK have opt-outs from joining laid down in Protocols annexed to the Treaty, although they can join in the future if they so wish. Sweden has not yet qualified to be part of the euro area. The remaining non-euro area member states are among those which acceded to the Union in 2004 and 2007, after the euro was launched. At the time of their accession, they did not meet the necessary conditions for entry to the euro area, but have committed to joining as and when they meet them. They are member states with derogation, such as Sweden (European Commission website: http://ec.europa.eu/economy_finance/euro/adoption/index_en.htm).

5 More information on the FSAP implementation can be found at: http://ec.europa.eu/internal_market/finances/actionplan/index_en.htm.

6 Strong migration efforts have been carried out and the end-date for migration to credit transfers and direct debits based on SEPA standards was initially set at 1 February 2014 then postponed to 1 August 2014 (Council of the European Union, 2014b). This enabled a temporary extension of the use of existing standards alongside SEPA schemes so as to allow the rate of migration to be raised to the required level while keeping disruptions to a minimum.

7 Regulation (EU) 1092/2010 refers to EU macro-prudential oversight of the financial system and establishes a European Systemic Risk Board; Regulation (EU) 1093/2010 establishes a European Supervisory Authority (European Banking Authority); Regulation (EU) 1094/2010 establishes a European

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Supervisory Authority (European Insurance and Occupational Pensions Authority); Regulation (EU) 1095/2010 establishes a European Supervisory Authority (European Securities and Markets Authority); Regulation (EU) 1096/2010 confers specific tasks upon the European Central Bank concerning the functioning of the European Systemic Risk Board. EIOPA and ESMA powers have been amended by the European Commission (2011a).

8 In 2011, following the launch of the new supervisory authorities, the European Commission adopted legislative proposals further clarifying the powers of the new authorities, particularly in the insurance sector (COM/2011/0008 final; COD 2011/0006).

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2
The European Banking Union

Abstract: *This chapter describes the process of establishing a European banking union, based on a common supervisory framework, a unique resolution mechanism and some sort of harmonization in deposit guarantee schemes. Despite the positive achievements towards integration, described in the previous chapter and finalized in the banking union, the industry is still fragmented, as the financial crisis clearly showed. To investigate this issue, a number of indicators are remarked on in the last section.*

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2.1 Introduction

The financial crisis has highlighted the shortcomings of fragmentation in the European banking industry and the need for better regulation and supervision of the financial sector. Since the crisis first hit, the European Commission has proposed nearly 30 sets of rules to ensure all financial intermediaries, products and markets are appropriately regulated and efficiently supervised. These rules are the basic framework for all 28 member states and underpin a properly functioning single market for financial services.

However, the road towards harmonization is particularly difficult. National interests and diverse priorities represent a serious threat for the establishment of a common framework and for it to work consistently in the long term. This became apparent when the financial crisis turned into a euro area debt crisis. The euro zone debt crisis pointed out the adverse loop linking banks, public finance and macro-performance and highlighted the need for a better governed and closer economic and monetary union.

Chapter 2 describes the difficult process towards harmonization and the establishment of a European banking union, with the aim of putting into context the reforms of deposit guarantee schemes, which will be discussed in the next chapter. The stabilization of the banking sector, thus preventing future banking crises, is to be achieved through the creation of a banking union, but the framework will not be complete without restoring depositors' confidence through a common guarantee on deposits. Indeed, despite convergence among EU countries, most empirical evidence suggests that significant barriers to integration in retail banking markets still exist. If that is the case, as shown in Section 2.1, there is a need for a unique framework on guarantee schemes because it helps to level the playing field and to enhance depositors' trust.

2.2 From national supervision to the European banking union

While by mid-2010, most advanced economies were showing signs of returning to growth, the euro area departed from other countries, and the process to achieve a single, safe and sound financial system in Europe

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suffered a strong setback. According to Draghi (2014b), this divergence happened because of two reasons:

I. the sequencing of policy responses after the first bail-out for Greece aggravated concerns about bank and sovereign debt sustainability, and
II. these concerns interacted with an incomplete institutional framework.

As for the first issue, the sequence of actions adopted in the euro area was almost the reverse one could have legitimately expected, that is, agreeing on a common backstop for dealing with sovereign and banking sector problems, performing a stress test, recapitalizing banks where necessary, then building a framework for dealing with sovereigns with excessive debt, and finally applying it to countries that needed it.

However, the Deauville agreement on private sector involvement and the Greek debt restructuring were announced while an effective backstop for solvent governments was still under negotiations. In addition, the initial stress testing of banks and the capital raising exercise were conducted in 2011 without any clear backstop for solvent banks.

As a consequence, many banks and some governments found increasingly difficult to access financial markets. Thus, instead of acting as a shock absorber, they began to act procyclically.

The second issue is the negative interaction with two features of the euro area's institutional structure, that is the incomplete financial integration, and the fiscal framework, which was not strictly enforced.

At that time, due to the deterioration of the crisis, the need to complete the euro area's institutional architecture was finally acknowledged. The banking union had to be the initial stage because it was necessary to consolidate the single currency and because it was an opportunity to 'reboot' the euro area banking system, a pre-condition for the recovery.

The adverse loop between the banking industry and public finance

Many banks and types of business models have been affected in the crisis. The main EU bank failures have been attributed to an overreliance on short-term wholesale funding, excessive leverage, excessive trading, derivatives, market activity, poor lending decisions due to aggressive

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credit growth and weak corporate governance (European Commission, 2012e). The current EU financial system is characterized by relatively few large, interconnected and diversified banking groups. Whereas several large EU banking groups have survived the crisis well, the EU financial system as a whole would have faced a severe downturn due to systemic banking failures without the extraordinary and on-going taxpayer, government and central bank support (European Commission, 2011b; European Commission, 2012f). This link between sovereign and bank risk reflected the perception that the ultimate guarantor of deposits in the banking system is the state.

Taxpayer support has undermined the solidity of some member states' public finances, contributing to turning a banking crisis into a sovereign crisis (European Commission, 2011b; European Commission, 2012f). This has had the effect of further increasing the fragility of the banking system as banks hold large volumes of sovereign bonds on their balance sheets and hence where perceptions of sovereign creditworthiness diverged, so did confidence in their respective banking systems.

In fact, the euro area did not have a truly single banking system but only a combination of national banking systems, which is why they fragmented so easily. In addition, banking supervision has been ineffective and subject to national bias, bank crisis management has been incoherent, and the sharing of the burden has not been transparent.

For that circle to be broken, a more robust financial sector is not enough. In particular for countries which share a currency, the only realistic option is to bring together those national systems into one single system, and this is where the banking union comes in. This is especially true because European banks have achieved a significant size in terms of their home country GDPs, as explained below.

The size of the European banking industry

According to the final report by the high-level expert group headed by Liikanen (2012), the total assets of Deutsche Bank represented approximately 85 per cent of national GDP at the end of 2011, Santander accounted for 118 per cent of GDP, ING for 161 per cent of GDP and Nordea for 197 per cent of GDP. The size of these banks is naturally much smaller if measured against the EU GDP. Deutsche Bank would thus appear to be the largest with 17.4 per cent of EU GDP in total assets. At the same time, the total assets of the EU banking system represented

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roughly €42 trillion, approximately 350 per cent of EU GDP (Liikanen et al., 2012).

This is a risk factor that cannot be ignored, although it also reflects the greater dependence of the European economy on bank financing than elsewhere. For example, the US banking sector accounted for only 78 per cent of US GDP, whereas that of Japan accounted for 174 per cent of GDP in 2011. Another specific feature of the European banking system is the relative size of its top ten banks. At the end of 2011, they held assets worth €15 trillion. Once again, there are differences in accounting standards (e.g. with respect to the netting of derivatives) that make EU banks appear relatively larger compared to their US counterparts than they actually are, but the magnitude is significant. The top ten EU banks held assets worth 122 per cent of EU GDP, as opposed to 44 per cent in the case of the US. Thus, without adequate corrective measures, EU national authorities potentially have to backstop very large financial institutions, sometimes larger than their own national GDP.

The banking sector restructuring process

Prior to the crisis, banks relied too much on debt to finance their lending, and that debt depended more on wholesale market funding than on deposits. This model was only able to develop because of the perception of an implicit state guarantee for bank debt, a perception that reinforced the link between sovereign and bank risks described above. The deterioration of sovereign credit and the clarification of the rules regarding bail-in of bank debt have both helped to bring to an end a funding model that was neither desirable nor sustainable and to start a process of restructuring and deleveraging (Draghi, 2014b).

Nevertheless, banking sector restructuring has been slow, with few bank liquidations since the beginning of the crisis. The Commission (2012f) summarizes the overall volume of aid received by banks between October 2008 and December 2012 and used for capital support (recapitalization and asset relief measures), which amounts to €591.9 billion (4.6 per cent of EU GDP in 2012). Guarantees and other form of liquidity supports reached their peak in 2009 with an outstanding amount of €906 billion (7.7 per cent of EU GDP in 2012). The intensity of the crisis has gradually weakened in many EU countries since then and in 2012, the outstanding amount of liquidity support dropped to €534.5 billion (4.14 per cent of EU GDP in 2012). Such an amount of aid and liquidity would probably have worked better in a single and coordinated framework.

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The adverse loop between banks and public finance, the relative size of the European banking system compared to national GDP and the slow restructuring process of the industry are just three of the pitfalls that can be addressed better at the European level through the establishment of a banking union.

2.3 The banking union

The banking union is based on three pillars: (1) a single supervisory framework that minimizes equally the risk that a euro area bank takes excessive risk and runs into failure; (2) a single resolution framework, so that if a bank does still fail, it can be resolved in the same way, with limited use of taxpayer money, irrespective of where the bank is located or the fiscal strength of its government; and (3) a system of deposit protection that provides depositors with equal confidence that their deposits are safe, regardless of jurisdiction (Figure 2.1) (Coeuré, 2014; Draghi, 2014b).

The banking union provides the conditions for lasting reintegration of the single financial market being a pre-requisite for the recovery. To achieve a full recovery, the single supervisory mechanism plays a central role in cleaning up the banking system but it cannot survive

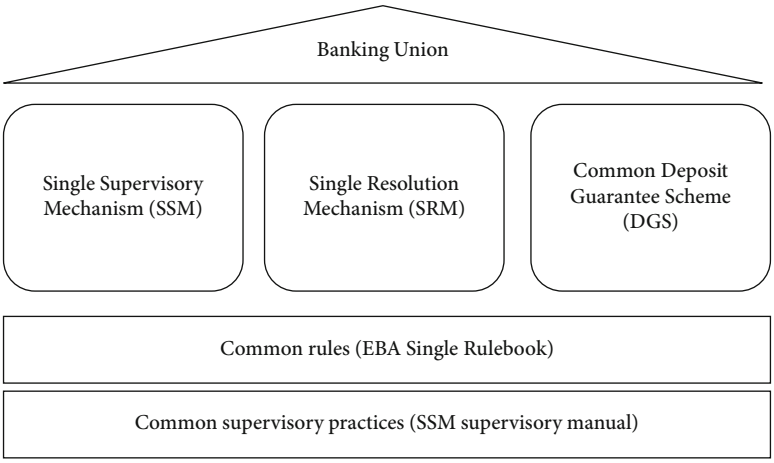

FIGURE 2.1 *The banking union*
Source: author's elaboration.

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without the single resolution mechanism and common deposit insurance scheme.

Furthermore, the banking union is based on a comprehensive and detailed single rulebook for financial services (CRD IV/CRR). The European Banking Authority has the competence to develop the single rulebook further and monitor its implementation. In addition, the European Central Bank has released the SSM supervisory manual, which covers the general principles, processes and procedures as well as the methodology for the supervision of significant and less significant banks, and describes the procedures for cooperation within the SSM and with authorities outside the SSM (European Central Bank, 2014).[1]

As described in Chapter 1, the EU reform process has adopted a two-speed approach. With the only exception of deposit guarantee schemes, the banking union belongs to the inner circle, which includes regulations applicable in the euro area countries and to those countries willing to apply them on a voluntary basis. The SSM and the SRM, together with the proposed Single Bank Resolution Fund, complement the outer circle of regulatory systems previously described.

The Single Supervisory Mechanism (SSM)

The SSM, which covers all banks in the euro area, is the first pillar of the banking union. It was established by the Council Regulation 1024/2013, conferring specific tasks on the European Central Bank concerning the prudential supervision of credit institutions. The timeline of the process leading to the regulation is summarized in Figure 2.2.

The institutional scope of the framework includes large banks of systemic importance, but recent experience shows that relatively smaller

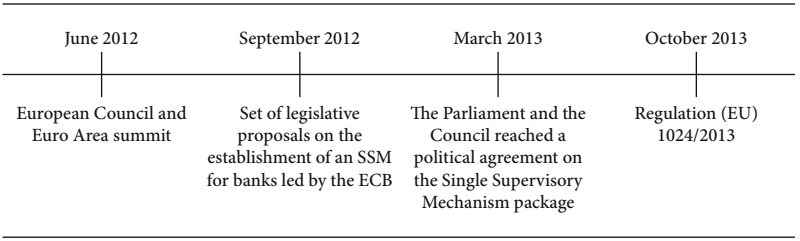

FIGURE 2.2 *The Single Supervisory Mechanism timeline*

Source: author's elaboration.

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banks can also pose a threat to financial stability. Thus the supervisory tasks conferred on the ECB can be exercised over all banks in the euro area regardless of their size. However the degree of direct supervision by the ECB on a daily basis and the role played by national supervisors vary according to the size of banks. The ECB, in particular, has responsibility for direct supervision of banks with assets of more than €30 billion or constituting at least 20 per cent of their home country's GDP, or the three most significant credit institutions in each of the participating member states, or those that have requested or received direct public financial assistance from the European Financial Stability Facility (EFSF) or the European Stability Mechanism (ESM).[2] National supervisors are responsible for the day-to-day supervision of smaller banks. However, the ECB may decide to supervise one or more banks directly to ensure consistent application of supervisory standards (European Commission, 2013c).

At the time of the Treaty on European Union (1992), conflicting views on banking supervision coexisted:

I. a first view considered banking supervision as a complement to monetary policy, hence to be centralized;
II. the second approach assumed that supervision has to be hardwired to national politics, hence decentralized.

The Treaty on European Union provides that banking supervision remains at the national level, but the ECB may be assigned 'specific' prudential supervisory tasks by unanimous Council decision (article 127.6). This is the legislative rationale for choosing the ECB as the authority that carries out banking supervision. In addition, the ECB can ensure a single European supervision mechanism that is not prone to the protection of national interests and which would weaken the link between domestic banks and national authorities.

The functional scope of the SSM includes both classic micro- and macro-prudential tools. Micro-prudential tools comprise, for example, the authorization of banking activity, of mergers and acquisitions, the safeguarding of prudential requirements relating to leverage and disclosure, internal governance and controls, supervisory reviews and stress tests. In order to execute these tasks, the ECB has supervisory and investigatory powers. Supervisory powers allow the ECB to request banks to strengthen their governance or improve their capital situation. The ECB's investigatory powers include, for example, the power to

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request information, to conduct investigations and to carry out on-site inspections.

Against this background, national supervisors have an important and long-established expertise in the supervision of credit institutions within their territories and therefore continue to play a pivotal role in banking supervision in the member states under the SSM. First, in accordance with Treaty rules, the ECB can be assigned only specific tasks, not overall responsibility for supervision. As a consequence, all tasks not spelt out in the regulation remain the competence of national supervisory authorities. The macro-prudential tools, particularly the macro-prudential requirements (for example, the loan-to-value ratio), are among them. However, when instruments are prescribed by EU legislation (e.g. countercyclical policies and buffers for systemically important financial institutions), national authorities have to notify the intended decision to the ECB, which can apply more stringent macro-prudential measures if needed. The supervision over non-banks, anti-fraud rules, consumer protection, notifications from credit institutions on the right of establishment and the free provision of services, the supervision of payment services and the prevention of money laundering and terrorist financing remain at the national level. Second, national supervisors are responsible for the day-to-day supervision of smaller and less significant banks. Third, even for the tasks conferred on the ECB, most day-to-day verifications and other supervisory activities necessary to prepare and implement the ECB acts could be exercised by national supervisors operating as an integral part of the SSM because of their knowledge of national, regional and local banking markets, as well as language considerations.[3]

2.4 The Single Resolution Mechanism (SRM)

The SRM, the second pillar of the banking union, was established to centralize key competences and resources for managing the failure of banks in the euro zone. The resolution regime helps to limit the social costs of failure, that is, the costs carried by tax-payers, reduces uncertainty over rights and obligations, the bargaining for economic rents, moral hazard, the temptation for forbearance and bail-outs, and allows international neutrality and burden sharing among the euro area countries (Llewellyn, 2014).

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Even if the benefits of a common resolution framework are apparent, the deal was reached only after months of intense discussions and following a final marathon negotiation (Council of the European Union, 2013). The agreement establishes a single regime for winding down banks involving a complex decision-making process which is triggered by the ECB as the supervisory authority and a common fund (Single Resolution Fund) worth €55 billion provided by banks to cover some of the potential resolution costs, but only after bank shareholders, junior and senior bondholders, as well as large banks' savers and institutional investors have been obliged to cover the losses of a failing bank (bail-in).

The SRM complements the establishment of a single supervisory mechanism and mirrors its structure: key decisions are taken by a Single Resolution Board (SRB) involving permanent members as well as the Commission, the Council, the ECB and national resolution authorities. Two of the main features of the SRM, that is how the procedure is triggered and the Single Bank Resolution Fund (SRF), are now presented.

Triggering the SRM

A bank would be placed into resolution when it is failing or likely to fail, when no private sector arrangement could avoid failure and when resolution is in the public interest because the bank's failure would damage financial stability. The ECB supervisor triggers the whole process, being responsible for deciding whether a bank has to be resolved. The role of EU governments and national resolution authorities is reduced with respect to bank resolutions involving less than €5 billion from the SRF. In such cases, a resolution scheme prepared by the Commission, setting out how resolution tools and funds are used, is adopted by a smaller group of Board members. This streamlined procedure is supposed to speed up the process, reducing political interference.

The whole Board meets in plenary session only if it is deciding on a bank resolution involving more than €5 billion in a single decision. In such cases, the largest EU countries (such as Germany and France) have almost enough votes to veto a decision. A resolution scheme has to be approved within a weekend, from the closing of the US markets to the opening of markets in Asia.

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The Single Bank Resolution Fund (SRF)

The SRF is set up under the control of the SRB to ensure the availability of medium-term funding support while the bank is restructured. The SRF provides funding only if resolution financing via shareholders and creditors is insufficient (bail-in mechanism). The general rule that shareholders and creditors of the bank are first in line to absorb losses in resolution has to be reflected in the resolution process. Otherwise, access to the fund is taken for granted, which does not give the right incentives for structuring banks in such a way that their own resources will be sufficient for their resolution (European Central Bank, 2013e).[4]

The €55 billion in the SRF, which amounts to one per cent of covered deposits, is fully capitalized within eight years rather than the ten originally envisaged and replaces the national resolution funds of the euro area member states and of member states participating in the banking union, as set up by the draft Bank Recovery and Resolution Directive. The SRF initially consists of national compartments which have to be mutualized rapidly: 40 per cent is to be mutualized in the first year, 20 per cent in the second year and the rest equally over a further six years. The national funds would thus pool 60 per cent of all their resources by year two.

The fund can also borrow on the markets if the Board decides to do this at a plenary session. This allows the fund's firepower to be strengthened in the early years when it has not yet accumulated the full €55 billion.

Unresolved issues

Despite the improvements relative to the original proposal and the benefits of a single resolution framework, the system remains highly complex and doubts persist concerning whether the SRM is enough in practice and whether it ultimately breaks the link between banks and sovereigns.

Some unresolved issues and doubts are listed below:

- The €55 billion foreseen for the SRF is a rather small amount considering that potential losses in the European banking sector might be much greater. This deficit is aggravated by the fact the fund is not allowed to use the European Stability Mechanism (ESM) as a final backstop, which de facto means that primary responsibility

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for winding down banks may, at the end of the day, still remain with and burden their home countries. The fact that the SRM regime does not include the 'appropriate and effective backstop arrangement' called for in previous European Council Conclusions could undermine the credibility of the new system and fail to break the negative feedback loop between banks and sovereigns.

- Although it has been streamlined, the SRM decision-making process still remains very cumbersome, complicated and subject to potential vetoes and political interference, which in practice could make it difficult to reach agreement on a resolution scheme within the 48 hours required if a decision to shut down a bank had to be taken over a weekend.
- There is not yet an agreement on how the SRF should be filled by banks and how the contributions are to be organized in concrete terms.
- The established banking union does not include a single European deposit insurance scheme (the 'third pillar') and thus the system in place is still limited.

However, the intergovernmental agreement on the SRF includes a 'repatriation clause' stating that the substance of the agreement should be integrated into the legal framework of the EU within 10 years, at most, of its entry into force. This might provide a chance to reform the EU Treaties and move from a 'limited' to a 'full' banking union in the foreseeable future.

Indeed, the new regulatory framework carries significant opportunities. It breaks bank-fiscal interactions and national supervisory silos, which lead to home biases; it reduces the fragmentation of the supervisory framework, improving the single market and helping to stabilize the euro. It poses interesting challenges too, for instance in the development of a proper crisis management mechanism and in the exploitation of potential synergies between national authorities, which have information and experience pertaining to the domestic banking system, and the ECB, which pursues a level-playing field and the common interest to prevail on the national authorities. In addition, particular attention has to be paid to the transition period, which is quite long. Early mistakes can lead to reputational loss which could be hardly regained.

Additional legislation complementing the banking union is described in Box 2.1.

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BOX 2.1 *Additional legislation*

To complement the key pillars of the single framework described above, the Commission has tabled legislation on various aspects to make the financial sector as a whole more robust. Among them, stricter rules on hedge funds and on short selling and credit default swaps (Regulation (EU) 236/2012), a comprehensive set of rules for derivatives (European Commission, 2012b) and a framework for reliable high quality credit ratings (Directive 2013/14/EU; Regulation (EU) 462/2013) are now in force. Proposals have also been made for a reform of the audit sector (European Commission, 2011e), for measures addressing insider dealing and market manipulation, including criminal sanctions (European Commission, 2011c, 2012c), and for a revision of current rules on markets in financial instruments (European Commission, 2011d) and investment funds (European Commission, 2010b). Further proposals on the review of the structure of the banking sector through the work of the high-level expert group headed by Liikanen (European Commission, 2012e), on shadow banking (European Commission, 2012a) and on the revision of the governance of market benchmarks, such as Euribor and Libor (European Central Bank, 2013c; European Commission, 2012d) are under consideration to finalize the framework.

As a final remark, it clearly emerged from the financial crisis that although banking union is a necessary step towards a viable monetary union, it is not sufficient. Attention has to be paid to avoid the risk of over-regulation and excessive complexity.

2.5 The European banking system: towards integration

The established banking union does not include a common deposit guarantee scheme and is therefore incomplete. Although it could be argued that once a proper resolution mechanism is in place and banks are subject to single supervision, there will be no further need for harmonization of national guarantee schemes, the completion of the framework is nonetheless important. From the supervisor's point of

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view, a unique scheme can easily be coordinated with the SRF, enlarging the set of possible solutions for distressed banks. From the depositors' perspective, a common scheme would represent a more effective guarantee than several national schemes in case of large cross-border bank failure.

Both financial integration and convergence among EU countries are important overall to assess the efficient functioning of the financial system and the relevance of common safeguarding tools, such as the resolution mechanism and the guarantee scheme. Financial integration fosters a smooth and balanced transmission of monetary policy throughout the euro area and is a key aspect in the completion of the EU single market (European Central Bank, 2012). It is also relevant for financial stability as financial integration increases portfolio diversification (Draghi, 2014a; Ferguson et al., 2009). As banks and other investors increase cross-border diversification within the euro area, they could reduce their exposure to domestic shocks and this would be reflected in greater income and consumption risk-sharing (Demyanyk et al., 2008). In addition, financial integration improves allocative efficiency as large cross-border banks in Europe could improve their overall economic performance by making sure that productive capital is channelled towards the most efficient firms (Giannetti & Ongena, 2009).

Nevertheless, financial integration could also have destabilizing effects, particularly in the form of risk-taking and contagion. Asymmetric information problems associated with cross-border lending could lead to misaligned incentives and increased risk-taking (Draghi, 2014a). Furthermore, if negative shocks occur, contagion could quickly spread through the interbank market, also affecting cross-border lending to the real sector (Popov & Udell, 2012).

As financial integration deepens, the stabilizing effects would counterbalance the destabilizing ones, with the welfare benefits of better diversification and improved allocative efficiency offsetting the welfare costs of occasionally higher risk-taking and contagion effects (Fecht et al., 2007).

Despite positive achievements towards integration, the European banking industry is still fragmented and this fragmentation can negatively affect depositors' protection, as discussed in the next chapter. The integration of financial markets is now discussed, together with the structural changes that affect the euro area member states and their banking industry.

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Financial market integration

Several studies suggest that the regulatory changes at the EU level have contributed to the integration of European banking and financial markets (Dermine, 2006; Goddard et al., 2007). Nevertheless, the current degree of financial integration in Europe varies between market segments (European Central Bank, 2012; European Central Bank, 2013a; Vajanne, 2007). The money market, which has been considered almost fully integrated since the introduction of the euro, has become increasingly impaired due to the intensification of the sovereign euro area bond market crisis, especially across borders (Baele et al., 2004; European Central Bank, 2012; Guiso et al., 2004; Hartmann et al., 2003). Also the repo market and government and corporate bond markets, usually seen as highly integrated, have suffered a clear setback since 2007. The pricing of risk in the repo market has become more dependent on the geographic origin of both the counterparty and the collateral, in particular when these are from the same country, which has contributed to additional money market segmentation and fuelled country and financial risks. Euro area sovereign bond markets have experienced significant tensions, giving rise to concerns of a systemic nature. Investors are now aware of sovereign credit risks and price them accordingly. In the most intense phases of the sovereign debt crisis, euro area sovereign yields diverged significantly due to a partial under- or over-estimation of risk regarding some euro area sovereigns (Di Cesare et al., 2012). Corporate bond markets have also experienced severe tensions, in both the financial and non-financial sector. Country-level effects have become more important in driving yield developments, reflecting the differences in the fiscal situation and economic outlook of euro area sovereigns.

Considering the equity markets, where the impact of the crisis has been limited, progress has been made in the integration of the euro area. Cross-border holdings are not displaying significant discrimination with regard to the country of origin. Also, national stock price indices seem to be reacting without an overwhelming country-specific influence (European Central Bank, 2012).

Structural changes in the euro area

Against this background, many structural changes have affected the euro area member states (EU18) and their banking industry in the past

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15 years. In Tables 2.1, 2.2 and 2.3 below, structural indicators for the 18 euro area countries are reported. Between 1997 and 2012, the average population increases (+5.8 per cent) as well as EU18 GDP (+60 per cent), reaching €9.5 trillion. The four biggest countries in the EU18 (France, Germany, Italy and Spain, hereinafter the 'big four') accounted for 76 per cent of the total population of the euro area and produced 77 per cent of EU18 GDP.

In the same period, the total number of banks operating in the EU18 fell by 30 per cent from more than 8,600 to approximately 6,000. In the big four, the total number of banks decreased even more significantly, by more than 40 per cent. The euro area has been characterized by a significant reduction in the number of banks due to the consolidation process evident in the industry from the Nineties (Cabral et al., 2002; Dermine, 2006; European Central Bank, 2000; Goddard et al., 2007). The pace at which bank consolidation has evolved has been very fast, as described by Ferguson (2001), mainly driven by bank mergers and acquisitions (M&As), both within the banking sector and across other financial sectors.

The total assets of the banking sectors of EU18 have increased significantly, from approximately €13 trillion to almost €33 trillion, with a percentage increase equal to 145 per cent. The ratio of banking assets-to-GDP has more than doubled over the past 15 years, peaking at 59 per cent in the big four. The increase in the average size of bank M&A transactions after 1999 indicates that banks were indeed concerned with becoming large players, with a view to effective participation in the EU18 wholesale and capital markets and as a strategy for internationalization in the retail segment (Cabral et al., 2002; Ferguson, 2001). This process led to the establishment of banks of a considerable size, but with an almost constant workforce (-4 per cent) of about 2.1 million in 2012. Notable exceptions are Cyprus, Latvia and Luxembourg, which report employment growth by more than 30 per cent in the past 15 years. In general, the increased sophistication of banking services, with a greater demand for advice, has tended to maintain the level of bank employees despite the consolidation process and technological improvements (European Central Bank, 2000).

The reduction in the total number of banks in the euro area is mirrored by a decrease in the number of bank branches (-7 per cent) between 1997 and 2012. The largest reductions in bank branches have taken place in the countries with the greatest increases in concentration due to M&As, such as the Netherlands and Belgium (Cabral et al., 2002). In the Netherlands,

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TABLE 2.1 *Structural indicators for euro area member states (EU18)*

	Average population – total (millions)				Gross domestic product at market prices (billions of euro)				Total assets of banks to gross domestic product			
EU18	2012	2007	2002	1997	2012	2007	2002	1997	2012	2007	2002	1997
Austria	8.4	8.3	8.1	8.0	307.0	274.0	220.5	183.5	318%	323%	251%	224%
Belgium	11.1	10.6	10.3	10.2	375.9	335.8	268.6	220.4	289%	388%	289%	301%
Cyprus	0.9	0.8	0.7	0.7	17.9	15.9	11.1	7.8	716%	584%		
Estonia	1.3	1.3	1.4	1.4	17.4	16.1	7.8	4.5	113%	128%	67%	58%
Finland	5.4	5.3	5.2	5.1	192.4	179.8	143.6	108.6	312%	170%	119%	97%
France	65.5	63.8	61.6	59.8	2,032.3	1,886.8	1,542.9	1,254.7	397%	377%	270%	254%
Germany	80.4	82.3	82.5	82.0	2,666.4	2,428.5	2,132.2	1,904.3	309%	313%	301%	252%
Greece	11.1	11.2	11.0	10.8	193.7	223.2	156.6	107.1	228%	175%	136%	
Ireland	4.6	4.4	3.9	3.7	163.9	189.7	130.7	71.7	714%	877%	471%	258%
Italy	59.5	59.4	57.2	56.9	1,567.0	1,554.2	1,301.9	1,058.1	269%	219%	159%	152%
Latvia	2.0	2.2	2.3	2.4	22.3	21.0	9.8	5.5	129%	148%	74%	47%
Luxembourg	0.5	0.5	0.4	0.4	42.9	37.5	24.0	16.3	2,241%	3,118%	3,258%	3,389%
Malta	0.4	0.4	0.4	0.4	6.9	5.6	4.7	3.3	781%	678%	349%	
Netherlands	16.8	16.4	16.1	15.6	599.3	571.8	465.2	341.1	415%	379%	292%	225%
Portugal	10.5	10.5	10.4	10.1	165.1	169.3	140.6	102.1	337%	260%	221%	185%
Slovakia	5.4	5.4	5.4	5.4	71.1	54.8	26.0	18.9	71%	79%	76%	58%
Slovenia	2.1	2.0	2.0	2.0	35.3	34.6	24.6	18.0	169%	168%	98%	112%
Spain	46.8	45.2	41.4	39.6	1,029.0	1,053.2	729.3	505.4	348%	285%	191%	174%

Source: Central bank reports (various); Thomson Reuters Datastream; Eurostat database at: http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

TABLE 2.2 *Structural indicators for euro area member states (EU18) banking sectors*

	Total number of banks				Total assets (billions of euro)				Number of employees (in thousands)			
EU18	2012	2007	2002	1997	2012	2007	2002	1997	2012	2007	2002	1997
Austria	751	803	823	928	974.9	884.7	554.5	411.5	77	78	74	74
Belgium	103	110	111	131	1,085.3	1,301.9	776.0	662.9	60	67	75	77
Cyprus	137	215	408	–	128.1	92.9	–	–	13	11	11	9
Estonia	16	15	7	–	19.7	20.5	5.2	2.6	6	6	4	–
Finland	313	360	369	348	600.3	306.5	170.8	105.2	23	25	27	27
France	639	808	989	1,258	8,075.9	7,120.4	4,161.7	3,189.6	416	425	383	392
Germany	1869	2,026	2,363	3,420	8,226.6	7,592.4	6,408.9	4,789.9	659	691	754	766
Greece	52	63	61	55	442.2	391.5	212.4	–	57	65	60	57
Ireland	472	81	85	71	1,170.0	1,663.5	615.9	184.8	32	42	37	–
Italy	714	821	821	909	4,220.5	3,407.4	2,066.1	1,606.6	310	340	340	344
Latvia	63	56	48	36	28.80	31.2	7.25	2.58	11	13	8	8
Luxembourg	141	155	184	215	961.9	1,169.1	781.3	553.8	27	26	23	19
Malta	28	22	15	–	53.5	37.8	16.2**	–	4	4	3	–
Netherlands	266	341	539	648	2,487.0	2,168.3	1,356.4	769.0	103	114	126	111
Portugal	152	175	202	238	557.1	439.8	311.0	188.6	57	61	56	65
Slovenia	23	27	50	–	50.8	43.5	19.7	10.9	19	20	21	–
Slovakia	28	26	20	29	59.7	58.1	24.1*	20.2	11	12	12	11
Spain	314	357	359	416	3,581.1	3,005.3	1,395.9	881.2	234	276	243	246

Note: *Total assets are computed for 19 banks instead of 20 because of administrative reasons.
**Deposit money bank and international banking institutions are included.

Source: Central bank reports (various); Thomson Reuters Datastream; ECB statistical data warehouse available at: http://sdw.ecb.europa.eu/ home.do

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TABLE 2.3 *Structural indicators for euro area member states (EU18) banking sectors (continued)*

	Number of branches				Concentration (CR5*) (per cent)				Concentration (HHI**) (per cent)			
EU18	2012	2007	2002	1997	2012	2007	2002	1997	2012	2007	2002	1997
Austria	4,460	4,266	4,466	4,691	36.5	42.8	45.6	43.9	0.0395	0.0527	0.0618	0.0515
Belgium	3,820	4,425	5,550	7,358	66.3	83.4	82.0	53.9	0.1061	0.2079	0.1905	0.0699
Cyprus	866	921	993	1,028	62.5	64.9	57.8	65.0	0.0996	0.1089	0.0938	0.1221
Estonia	176	266	198	–	89.6	95.7	99.1	–	0.2493	0.3410	0.4028	–
Finland	1,404	1,693	1,572	1,645	79.0	81.2	78.6	87.9	0.3010	0.2540	0.2050	0.2150
France	38,359	39,175	25,421	25,990	44.6	51.8	44.6	39.5	0.0545	0.0679	0.0551	0.0449
Germany	36,239	39,777	50,868	63,186	33.0	22.0	20.5	16.7	0.0307	0.0183	0.0163	0.0114
Greece	3,629	3,850	3,263	2,510	79.5	67.7	67.4	56.0	0.1487	0.1096	0.1164	0.0885
Ireland	1,064	1,158	926	942	56.9	50.4	46.1	–	0.1000	0.0700	0.0600	0.0500
Italy	32,528	33,230	29,948	25,265	39.7	33.1	30.5	–	0.0410	0.0328	0.0270	0.0200
Latvia	400	682	567	921	64.1	67.2	65.3	53.0	0.1027	0.1158	0.1144	0.0772
Luxembourg	203	229	207	240	33.1	30.6	30.3	22.9	0.0345	0.0316	0.0296	0.0210
Malta	107	105	99	–	74.5	70.2	82.4	–	0.1314	0.1177	0.1806	–
Netherlands	2,466	3,604	4,269	6,800	82.1	86.3	82.7	79.4	0.2026	0.1928	0.1788	0.1654
Portugal	6,258	6,055	5,348	4,746	70.0	67.8	60.5	45.6	0.1191	0.1098	0.0963	0.0577
Slovenia	1,061	1,169	1,020	–	70.7	68.2	66.4	63.3	0.1221	0.1082	0.1252	0.1223
Slovakia	695	711	721	736	58.4	59.5	68.4	65.7	0.1115	0.1282	0.1602	0.1135
Spain	38,142	45,500	39,009	38,047	51.4	41.0	43.5	31.4	0.0654	0.0459	0.0513	0.0277

Note: *CR5 = shares of the five largest banks in total assets.
**HHI = Herfindahl Hirschman index for banks' total assets.

Source: Central bank reports (various); ECB statistical data warehouse available at: http://sdw.ecb.europa.eu/home.do

total branches decreased by 64 per cent, from 6.8 thousand to 2.5 thousand, and in Belgium by 48 per cent, from 7.4 thousand to 3.8 thousand. Again, the euro area does not provide a uniform picture. France and Greece show quite an opposite trend compared to the euro area average over the same period: the number of bank branches increased by 48 per cent and by 45 per cent, respectively.

As expected, the reduction in the number of banks has created a significant increase in concentration in several countries. The CR5 ratio (the five-firm concentration ratio for total assets) has expanded since 1997, especially in Germany (+97.8 per cent), Portugal (+53.4 per cent) and Spain (+63.7 per cent). Evidence of excess capacity in the EU banking sector has been found (Davis & Salo, 1998).

However, some EU18 countries experienced the opposite trend, such as Austria and Slovakia. Similar conclusions can be drawn by looking at the Herfindahl-Hirshman index (HHI). Overall, it is difficult to assess any consistent trend in banking sector concentration at the euro area level as it increased in some countries but fell in others. A similar result was found by Goddard et al. (2007) and can be explained by the structural changes which affected the European banking system in the recent past and can be considerably more complex than the raw data are capable of representing (Amel et al., 2004; Berger et al., 1999; Carbò & Fernandez, 2005; Maudos & Fernandez de Guevara, 2004).

Retail banking market fragmentation

With regard to integration in European retail banking markets, most empirical evidence suggests that significant barriers to integration still exist (Berger, 2003; Berger et al., 2003). Barriers may arise from national economic conditions, culture, language and differences in fiscal and legal systems (Berger et al., 2003; Buch & Heinrich, 2002). Some of these appear to be particularly burdensome, such as issues of consumer trust and confidence, causing depositors to prefer local or national banks to foreign banks, or local banks' access to private information concerning borrowers' creditworthiness, which creates a rent that is unavailable to competing foreign banks.

The EU financial system is characterized by the presence of three major alternative business models: retail banks which, closer to the traditional banking model, use deposits as the primary source of funding and provide predominantly customer loans; investment banks that perform

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substantial trading and derivatives activity; and wholesale banks, active in wholesale and interbank markets with a focus on domestic business (Ayadi et al., 2011). Prior to the crisis, EU banking groups rapidly increased in size, scope and complexity.

According to Draghi (2014a), financial integration before the crisis was incomplete. In particular retail banking remained fragmented, thus leading to a situation in which banks used short-term and debt-based funding to increase lending to favoured domestic sectors, such as real estate. However, according to Ayadi et al. (2011), retail banks have being affected by the crisis less than the other two models, especially in comparison with the wholesale bank model. The performance of retail banks has in general been superior to the other two models and they were also less prone to the need for state support during the crisis.

In the pre-crisis literature, tests on convergence in banking often analysed a number of aggregate and micro-level indicators, finding mixed results on retail banking integration (Affinito & Farabullini, 2006; De Graeve et al., 2007; Gropp et al., 2007; Martin-Oliver et al., 2005, 2007). Alternatively, convergence in banks' profits or costs can be investigated by means of data envelopment analysis (DEA). More recently, Casu and Girardone (2010) found evidence of convergence towards a European average.

While quantification of the extent to which European banking markets have achieved integration, in the sense of the complete elimination of barriers to cross-border activity, remains difficult, additional useful indicators are available. Dermine (2003, 2006) analyses three dimensions of international integration: (i) the extent to which the law of one price is applicable in retail banking markets; (ii) the volume of cross-border banking business; (iii) foreign direct investment and the market share of foreign banks. According to the author, even if the law of one price does not fully hold in the retail market, European banking integration was under way before the crisis, in terms of cross-border flows, the market share of foreign banks in several domestic countries and cross-border M&As of considerable size.

However, M&A activity in the euro area has been on a declining trend since 2008, both in terms of the number of transactions and total value (European Central Bank, 2013d). After 2010, the downward trend intensified. More conservative expansion strategies, the uncertainties related to economic prospects, vulnerabilities in the banking sector and the efforts to strengthen capital positions and a focus on risks have

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contributed to this decline. As a result, after being relevant for a decade, the consolidation process has slowed down.

Table 2.4 reports pre- (2007) and post-crisis (2012) data on market share and on the number of foreign banks in the euro area banking system. The financial crisis has indeed slowed not only the integration of bond and money markets, but also the ongoing process of convergence in the euro area retail banking system (Table 2.5).

The market share of foreign banks varies significantly from very high figures in the small and new accession countries of Estonia, Luxembourg and Slovakia (respectively, 96.4 per cent, 87.8 per cent and 88.4 per cent) to figures all below 10 per cent in France, Germany, Italy and Spain. Indeed, the market share of foreign banks in the big four is only one-third of the EU18 average. Between 2007 and 2012, the euro

TABLE 2.4 *Market share and number of foreign-controlled subsidiaries and branches*

	Market share of foreign-controlled subsidiaries and branches (% of total assets)		Number of foreign-controlled subsidiaries and branches		
Country	**2012**	**2007**	**2012**	**2007**	**Change (in %)**
Austria	27.2%	26.8%	66	51	29.4%
Belgium	50.4%	13.8%	6	5	20.0%
Cyprus	33.4%	29.5%	34	33	3.0%
Estonia	96.4%	100.0%	13	11	18.2%
Finland	75.2%	66.1%	29	32	−9.4%
France	3.3%	8.5%	3	3	0.0%
Germany	4.1%	0.0%	80	65	23.1%
Greece	15.4%	21.8%	27	29	−6.9%
Ireland	64.8%	56.6%	25	34	−26.5%
Italy	8.7%	9.9%	9	9	0.0%
Latvia	61.3%	63.6%	16	14	14.3%
Luxembourg	87.8%	89.2%	126	143	−11.9%
Malta	78.4%	82.1%	16	14	14.3%
Netherlands	10.2%	34.7%	62	64	−3.1%
Portugal	22.5%	23.3%	56	59	−5.1%
Slovakia	88.4%	91.8%	22	21	4.8%
Slovenia	29.5%	25.5%	10	11	−9.1%
Spain	7.4%	10.0%	124	119	4.2%
EU18	15%	17%	724	717	1.0%
Big four	5%	6%	216	196	10.2%

Source: ECB statistical data warehouse available at: http://sdw.ecb.europa.eu/browse.do?node= 1478

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TABLE 2.5 *Long-term government bond spread versus euro area benchmark (Germany) in basis points (daily observations – yearly average)*

Country	2006	2007	2008	2009	2010	2011	2012	2013
Austria	3.8	8.1	37.4	71.4	48.2	71.1	87.8	44.0
Belgium	5.2	11.2	43.3	67.9	71.9	162.5	150.5	84.0
Cyprus	37.2	25.8	61.6	137.8	185.7	317.9	550.5	493.0
Finland	2.1	7.7	30.6	51.6	26.7	39.8	39.1	29.2
France	3.4	8.7	25.0	42.8	37.5	71.2	104.2	63.4
Greece	30.8	28.3	81.8	195.2	634.8	1314.1	2100.3	848.4
Ireland	0.3	8.9	54.2	200.3	299.6	699.3	467.7	222.0
Italy	28.4	27.0	69.7	109.1	129.2	281.6	399.8	274.7
Latvia	37.1	106.6	244.8	913.5	759.4	329.9	307.0	177.0
Luxembourg	–45.9	24.3	62.3	100.7	42.6	31.5	32.7	17.4
Malta	55.6	50.8	82.3	131.9	144.4	188.1	263.1	179.3
Netherlands	1.8	7.0	24.2	46.4	24.8	38.1	43.8	39.2
Portugal	15.3	20.8	53.5	98.9	265.3	763.3	905.3	472.4
Slovakia	64.9	27.4	73.9	148.3	112.8	183.9	305.8	161.8
Slovenia	9.1	31.2	62.2	115.3	108.9	236.3	431.3	424.2
Spain	2.3	9.1	38.2	75.7	150.8	283.3	435.1	299.2

Note: There are no Estonian sovereign debt securities that comply with the definition of long-term interest rates for convergence purposes. No suitable proxy indicator has been identified by the ECB.

Source: European Central Bank data available at http://www.ecb.europa.eu/stats/money/long/html/ index.en.html

area average market share decreased by two per cent. This trend can be explained by the retrenching within domestic borders of many national players, because of the challenges posed by the crisis. The opposite trend is however observed in some countries, such as Belgium, Cyprus and Ireland, where the banking system was sustained by foreign players' acquisitions of national banks.

Looking at the number of foreign banks in domestic markets, the picture is mixed.[5] In the big four, where foreign banks do not hold a very large market share, the number of foreign banks increased by more than 10 per cent. The average of the euro area member states is much lower, showing a stable framework (+1 per cent over the period). Again, differences among countries are considerable. In Austria, Belgium and Germany, the number of foreign banks increased by more than 20 per cent (29.4 per cent, 20.0 per cent and 23.1 per cent, respectively). Ireland and Luxembourg show the opposite tendency, with a decrease in the number of foreign banks by 26 per cent and 11 per cent respectively. In 8 out of 18 countries, the reduction in the number of foreign banks is mirrored by a reduction in the market share these banks hold and vice versa. However, in the remaining ten countries, when the number of foreign banks increases the market share decreases and vice versa. Small and large EU18 countries, which have been less and more affected by the crisis, new entrants and founder member states are present in both groups without any consistent trend. This situation can be explained by the fragmentation still in place in retail markets because of the issues of trust and asymmetric information which have been enhanced by the crisis. The sovereign debt crisis has generated mistrust among banks and caused an effective breakdown of cross-border bank investment flows as they keep capital at home.

However, this trend could be inverted. Among other factors, the ECB's asset quality review, an assessment of the balance sheets of the 128 most relevant euro area banks, should bring transparency to the quality of banks' loans and other assets.[6] This could again boost bank investments, also in the form of mergers, initially within single countries as weaker companies restructure and accept effective takeovers by domestic competitors, but then spreading to a pan-European level.

Country risk

As a final remark, indicators referring to the different levels of risk attached to euro area member states are taken into consideration. Table 2.6 shows the spread between the euro area long-term government

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TABLE 2.6 *Euro area selected countries' sovereign CDS spread (2008–2011) in basis points (daily observations)*

	2008		2009		2010		2011	
Country	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Austria	30.46	41.58	107.86	50.97	70.72	13.43	79.53	37.36
Belgium	31.18	21.36	65.56	34.29	98.45	32.39	168.22	61.56
Finland	17.19	16.15	37.84	19.47	27.09	4.03	41.25	19.09
France	18.62	15.81	40.87	19.96	63.55	15.06	93.91	40.35
Germany	13.78	12.79	37.33	18.72	35.65	7.98	45.55	15.41
Greece	75.09	58.99	171.67	55.88	663.15	227.92	3,109.56	2,578.53
Ireland	53.81	56.78	197.15	65.08	280.66	134.18	677.11	131.06
Italy	58.23	42.97	107.77	40.40	148.30	31.22	242.46	134.51
Netherlands	20.34	23.11	55.59	31.68	39.43	7.08	53.15	28.22
Portugal	46.94	23.43	79.53	27.81	268.26	93.10	787.16	291.08
Spain	46.67	25.18	92.72	26.96	184.35	51.89	248.85	68.55

Note: Luxembourg is excluded due to lack of data.

Source: Bloomberg.

bond yields and the German ones from the pre-crisis period to the end of 2013.[7] There is a considerable time variation in the pricing of risks. There was a reduced pricing of several risk factors in the years preceding the financial crisis, as can be seen for instance from the growth of the average spread between German and Irish or Spanish government bond yields from 2006 (0.3 and 2.3 basis points, respectively) to 2013 (222 and 299 basis points).

Figure 2.3 shows the trend of long-term government bond yields in the euro area from January 2006 to January 2014. Until 2008, the trend is similar among all member states except Greece. Ireland, Italy, Portugal and Spain could raise long-term capital at about the same price as the less risky MS7 (Austria, Belgium, Finland, France, Germany, Luxembourg

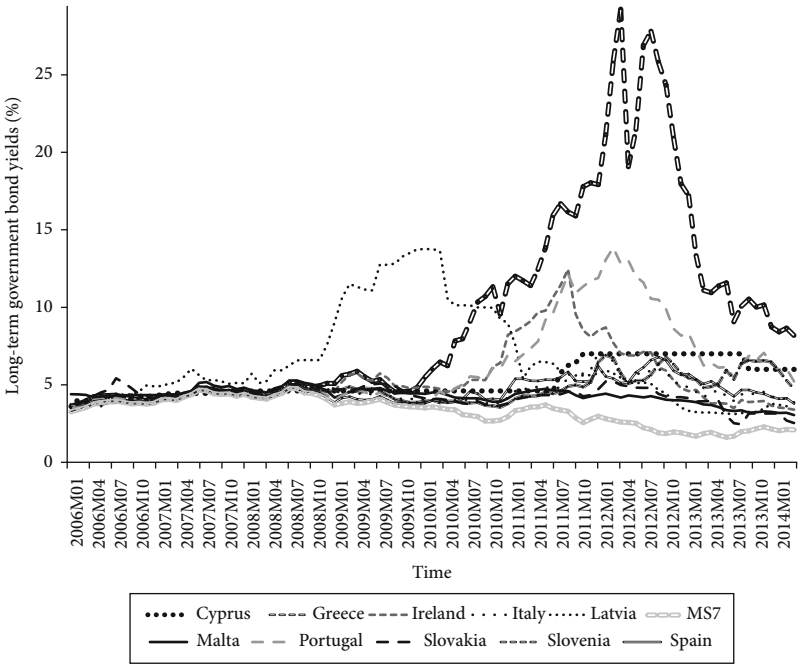

FIGURE 2.3 *Euro area long-term government bond yields (2006–2014, %)*

Note: MS7 is the monthly average yield of the seven less risky member states (Austria, Belgium, Finland, France, Germany, Luxembourg and Germany), which have been grouped for the sake of clarity in the figure.

Source: European Central Bank data available at http://www.ecb.europa.eu/stats/money/long/html/index.en.html

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and Germany). This could be explained by the generally strong economic growth, limited fiscal deficits and the modest rise in public debt levels in most euro area countries (D'Agostino & Ehrmann, 2013). Nevertheless, until 2008 financial markets tended to price sovereign risk within the euro area in a similar way, irrespective of differences across countries' fundamentals.

Financial markets started to discriminate on the basis of fundamentals more strongly during the crisis. This is what the literature has referred to as 'wake-up call' contagion or fundamentals contagion (Bekaert et al., 2010; Goldstein, 1998). This 'wake-up call' led markets to price the risk of redenomination, that is, the risk that the euro would break up. In addition, sovereign risk may have been affected by cross-country contagion, that is, the transmission of a negative sovereign shock in countries such as Greece may have raised the price of sovereign risk in other related countries. This phenomenon led to an over-pricing of risk of euro area bonds (D'Agostino & Ehrmann, 2013). The level of the spread reached at the peak of the European sovereign debt crisis, for example in Ireland (699 basis points in 2011) and in Spain (435 basis points in 2012), confirms this view.

Similar conclusions can be drawn looking at the euro area sovereign credit default swap (CDS) spreads (Table 2.6).[8] From 2008, sovereign CDS spreads, which were negligible until then, started to grow and the cost of protection rose, reaching a peak in 2011. For instance, Irish and Portuguese CDS spreads widened by more than ten times in three years, while in 2011, the Greek spread was 40 times greater than in 2008. Germany, which is generally considered a safe investment in troubled times and its debt usually benefits from a flight to quality, faced a greater cost of protection. Indeed, the CDS market did not replicate the bond market in these times of distress and may have diverged because of concerns about the German economy (Markit, 2012). Germany is an export-led economy, which is not immune to the turmoil faced by other euro area member states.

In addition, as the countries became less creditworthy, the volatility of their CDS spreads also increased. For example, the standard deviation of the CDS spread was less than 20 basis points for the most creditworthy country and 2,578 basis points for Greece, the least creditworthy.

Alter and Beyer (2013) find strong evidence of growing interdependencies between banks and sovereigns that represent a potential source of systemic risk. Euro area sovereign creditworthiness influences financial

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markets, with a group of sovereigns that can potentially produce negative externalities to the financial system. Among policy interventions to mitigate the impact of spillovers between banks and sovereigns, the creation of a single banking union with the harmonization of deposit guarantee schemes plays a key role, promoting bank soundness and stability, thus increasing market confidence in the European banking system as a whole.

2.6 Conclusion

The European banking union is an ambitious integration process that has been put forward to respond to the financial crisis. A single supervisory framework has been established to coordinate supervision of systemically important institutions at the central level. The single resolution mechanism is a powerful tool to resolve failing banks in an ordinarily manner, without having recourse to taxpayers' money but rather establishing a €55 billion shared fund to cover costs, paid for by banks. However, the banking union will not be complete without a common deposit guarantee scheme. Despite positive achievements towards integration in the money, bond and equity markets, structural indicators show significant differences among euro zone member states, fragmentation in the retail banking industry and a different pricing of country risk.

A single framework to protect small depositors in the case of a bank failure is indeed relevant to restore trust and level the playing field in the banking industry. However, the current deposit guarantee scheme framework, discussed in the next chapter, is highly fragmented, complex and not easy to coordinate with the other two pillars of the banking union.

Notes

1 http://www.ecb.europa.eu/ssm/establish/html/index.en.html.
2 Article 6(4) of Regulation 1024/2013.
3 It should be noted that the ECB carries out supervisory tasks, which are currently implemented by national supervisors in the euro area, not by the EBA. The ECB cooperates with the EBA within the framework of the European System of Financial Supervision. The role of EBA in developing the

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single rulebook applicable to all 28 member states and enhancing convergence of supervisory practices across the whole Union is preserved.

4 The SRM enters into force on 1 January 2015, while the bail-in and resolution functions would apply from 1 January 2016.

5 Extra-EU branches or subsidiaries are not considered. Table 1.6 refers to foreign branches and subsidiaries of European Union banks which operate cross-border business.

6 The assessment involves 128 credit institutions (including 124 banking groups) in 18 member states, covering approximately 85% of euro area bank assets and involving 24 national competent authorities (European Central Bank, 2013b; http://www.ecb.europa.eu/ssm/assessment/html/index.en.html).

7 Long-term government bond yields are calculated as monthly averages (non-seasonally adjusted data). They refer to central government bond yields on the secondary market, gross of tax, with a residual maturity of around 10 years. The bond or the bonds of the basket have to be replaced regularly to avoid any maturity drift. This definition is used in the convergence criteria of the Economic and Monetary Union for long-term interest rates, as required under Article 121 of the Treaty of Amsterdam and the Protocol on the convergence criteria (European Central Bank data warehouse).

8 Typically, CDS spreads have been considered a useful alternative to government bond spreads for measuring sovereign risk, with smaller spreads indicating a lower risk of sovereign default and larger spreads suggesting a higher event risk (Weltman, 2012). However, CDS spreads are not as reliable as bond spreads as investors may speculate on a default in the CDS market by adopting naked short positions on government bonds that were not purchased and profiting from the widening spreads. To limit this practice, Regulation (EU) 236/2012 requires that investors can purchase a sovereign CDS contract only if they simultaneously own the underlying asset and bans short selling (http://www.esma.europa.eu/page/Short-selling).

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3
Deposit Guarantee Schemes

Abstract: *This chapter reviews the current system of deposit guarantee schemes in the EU and in the US, documenting the recent changes in legislation. Deposit guarantee schemes reimburse a defined amount of deposits to depositors whose bank has failed. From the depositors' point of view, deposit guarantee schemes protect a part of their financial portfolio from bank failure. From a financial stability perspective, the schemes prevent bank runs, thus preventing severe economic and social consequences. This chapter, then, investigates the design of deposit guarantee schemes in the 28 member states. The last section is devoted to the insurance of deposits in the US.*

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3.1 Introduction

The financial crisis has stimulated much debate on prudential policy and bank safety nets. Deposit guarantee schemes (DGSs) reimburse a defined amount of deposits to depositors whose bank has failed. The topic is currently under the spotlight because of changes in European legislation. Deposit guarantee can be an important tool in dealing with concerns about bank runs or about protecting depositors from losses resulting from bank failures. If properly handled, guarantee schemes also contribute to safeguarding the viability of the payments system.

Chapter 3 reviews the current system of DGSs in Europe, documents the recent changes in the legislation and the road to a pan-European system. The financial crisis illustrated once more how banks are susceptible to the risk of bank runs and the need for coordinated supervision at the European level. DGSs help to reduce the risk of bank runs, promoting bank soundness and stability. When the financial crisis hit in 2008, some quick-fix amendments were made to DGSs, notably to increase the coverage level to €100,000 and to abandon the possibility of putting coinsurance in place, to reduce banks' moral hazard and transfers of deposits from one member state to another.

Even if most improvements are currently coming into effect and would apply in all EU member states, as well as in the countries belonging to the European Economic Area (Norway, Iceland and Liechtenstein), safety nets are still fragmented and there are almost 40 DGSs in the EU. According to the Commission's estimates, a single pan-European scheme would save administrative costs of approximately €40 million per year. Nevertheless, some legal issues should be investigated further and thus the single scheme is longer-term project.

To document differences in DGSs across Europe, the chapter first describes the evolution of the legal framework for DGSs up to the Commission's recent legislative proposal, already revised by the Council, for a thorough revision of the directive on DGSs currently in force.

The chapter then provides a European cross-country investigation with comprehensive information on the main features of DGSs and the design features installed. Finally, the Federal Deposit Insurance Corporation, the US organization dedicated to insuring the deposits of banks and savings associations, is described in comparison to the EU framework and the differences between the two frameworks are investigated.

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3.2 Deposit guarantee schemes (DGSs) in the EU: the legal framework

Deposit-taking banks are by construction vulnerable to runs. When a confidence crisis occurs and depositors withdraw their funds, banks are forced to liquidate assets at a loss (Diamond & Dybvig, 1983). The main purposes of deposit guarantee are to provide a safety net for depositors and to enhance financial stability. As an element of a country's overall financial safety net, which in addition includes supervision, provision of emergency liquidity and a resolution and insolvency framework, deposit guarantee protects depositors from loss of deposit values up to a pre-specified level in the event of bank failure, thus safeguarding the bulk of the financial portfolio of bank clients. It also strengthens overall financial sector stability by removing incentives for bank runs by depositors who are uncertain about the condition of their bank and thus should limit financial contagion and prevent the development of a negative spiral between the financial sector and the real economy (European Commission, 2013a).

Public safety nets currently exist in more than 90 countries worldwide and have important advantages and disadvantages. DGSs offer advantages in connection with the maintenance of financial stability, especially in comparison with implicit guarantees which often offer a 'blank cheque' to all creditors of financial institutions (Van Nieuwenhuyze & Zachary, 2010). They avoid self-fulfilling confidence crises and various forms of contagion, prevent wide-scale collapse of the intermediation services of the banking sector and facilitate the ability of banks to engage in effective maturity transformation (liabilities can be short-term in the presence of deposit guarantee, whereas assets can be long-term in the presence of emergency liquidity assistance). Furthermore, they create a level playing field between large and small banks.

However, public safety nets may also induce banks to expand their balance sheets and take excessive risks with the funds made available to them, thus creating a moral hazard problem (European Commission, 2013a). If the guarantees are too ample, they may enhance risk-taking behaviour both by depositors and by financial institutions, achieving the exact opposite of what was intended. In the absence of adequate supervision and regulation, safety nets indirectly allow banks to increase their leverage more easily than would otherwise be possible. High leverage enhances banks' risk-taking behaviour because upside gains are kept

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by banks, while losses may end up being transferred to taxpayers (Dam & Koetter, 2012). In addition, safety nets reduce incentives for depositors and/or bank creditors to monitor bank business (Bryant, 1980; Dewatripont & Tirole, 1994; Keeley, 1990). However, DGSs still provide incentives for the monitoring of risks by the market as they exclude a number of players, such as institutional investors and public authorities, from protection. Furthermore, moral hazard has to be avoided using resolution framework and bailing shareholders and bondholders in.

To reduce the excessive risk-taking of banks that may result from the existence of public safety nets, banking activities have always been heavily regulated and supervised.

Directive 94/19/EC

From 1994, Directive 94/19/EC ensured that all member states had a safety net in place for bank account holders. If a bank was closed down, national DGSs were to reimburse account holders of the bank up to a certain coverage level. Following the UK system, the coverage per depositor was set to a minimum of €20,000, with a franchise of a maximum 10 per cent.[1] Some kinds of deposits, such as deposits by financial institutions, government and administrative authorities, collective investment undertakings, pension funds and large companies, were excluded from protection.[2] The directive did not provide a boundary indication on funding and thus the level of the insurance premium was chosen at the national level.

Differences existed when national banks opened branches or subsidiaries in foreign member states. When a bank opened branches in a foreign country, the deposits of the branch were covered by the deposit guarantee system of the home country. In this case, if the host country's deposit guarantee coverage was higher than that of the home country, the bank could obtain complementary coverage from the host state (deposit guarantee top-up). When a bank opened a subsidiary in a foreign country, deposits were covered by the deposit guarantee system of the host country.

In 2005, the European Commission started to review the 1994 directive, focusing on the €20,000 minimum guarantee threshold with a view to assessing whether any changes to the guarantee level might be necessary and eventually to coming up with a proposal for revision by mid-2006. The Commission pointed out the difficulties in gathering

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homogeneous data on deposits and explained that the average level of guarantee in Europe increased and converged over time because of the end of transitional regimes and upward adjustments (especially in the UK). In fact, inflation eroded the guarantee levels in real terms. Furthermore, not only could the proportion of deposits which were guaranteed be very different in the various member states, but also the proportion of insured deposits compared to insurable deposits generally fell over time. With regard to the 1994 directive's objective 'not to leave too great a proportion of deposits without protection', the Commission's report concluded that wide disparities were still in place (European Commission, 2005a; European Commission, 2005b).

Co-insurance

A further issue raised by the 1994 directive is related to co-insurance, which negatively affects depositors' protection. For instance, in August 2007, the UK experienced its first bank run since Overend and Gurney in 1866 (Llewellyn, 2009). In three days, approximately £3 billion of deposits were withdrawn from Northern Rock, amounting to around 11 per cent of the bank's total retail deposits (European Commission, 2013a; Shin, 2009). The depositor run itself was partially triggered by the design of the UK DGS, which is part of the Financial Services Compensation Scheme (FSCS). The introduction of co-insurance induced depositors to run in order not to lose even a small share of their deposits. Indeed, depositors were fully insured up to £2,000 only, and up to 90 per cent for amounts if between £2,000 and £35,000 (Llewellyn, 2009). Northern Rock ended up being nationalized, because of the inadequate level of protection, being a true 'wake up call' for the system.

Different protection across member states

The lack of harmonization of the 1994 directive meant that the level of protection for depositors differed among member states, affecting the competition among banks. Problems with the non-level playing field also arose when banks competed against foreign branches active in the same market but with a different level of protection. Overall, this situation was confusing for depositors as there could be many different protection levels within the same member state if there were foreign branches there from other member states (Swedish Bankers' Association, 2006). A relevant example is the case of Icesave, a high interest savings account

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brand owned by Landsbanki, an Icelandic private bank operating in the UK and in the Netherlands via foreign branches. Following the collapse of the three main banks in Iceland in October 2008, accounting for 85 per cent of the banking system, Landsbanki went bankrupt. As a consequence, the guarantee fund of Iceland's depositors and investors was obliged to pay out the minimum guarantee per depositor in accordance with Directive 94/19/EC. However, no such payments were made because the fund did not have enough resources. At the time of the collapse in 2008, the depositor claims on Landsbanki in the UK and the Netherlands amounted to 44 per cent of Iceland's GDP, 138 per cent of government revenue in that year and 160 per cent of the currency reserves held by the Central Bank of Iceland at the end of October 2008 (Icelandic Ministry for Foreign Affairs, 2013).

The relative size of Landsbanki compared to the Icelandic economy was one of the main difficulties in managing the bank's failure. In addition, inequalities in the treatment of depositors emerged. Specifically, Icesave depositors in the UK and the Netherlands were not treated the same as Icelandic depositors. To respond to the crisis, Iceland restructured its banking system by establishing new banks to assume the failed banks' obligations, preventing a full-scale run on the Icelandic branches of the failed banks. The situation was different for the Icesave deposits in the UK and the Netherlands branches. Iceland did not restructure the UK and the Netherlands branches of Landsbanki, affirming that the run on them was already under way and the Icelandic authorities had no resources to stop or even slow the run on deposits (Icelandic Ministry for Foreign Affairs, 2013). Icesave depositors were compensated by the UK and Dutch DGSs, which have only partially recovered these sums from the estate of Landsbanki. The UK government arranged for the payout of all retail depositors in full, while the Dutch government arranged for the compensation of all depositors to a maximum of €100,000 (Treanor & Bowers, 2014).

Iceland, the UK and the Netherlands entered into negotiations on repayments, and the matter has been ruled on by the European Free Trade Association (EFTA) Court, which established that the 1994 directive imposed no obligation on the member state to use its own funds to guarantee the payout of a DGS in the event that 'all else fails'. The obligations incumbent upon the state were deemed to be limited to ensuring the proper establishment, recognition and certain supervision of the scheme. The Court rejected the claim that Iceland had breached the 1994

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directive or had discriminated against depositors, contrary to European Economic Area (EEA) law (Icelandic Ministry for Foreign Affairs, 2013).

Revision of Directive 94/19/EC

The European Commission adopted a Communication proposing its approach to changing the EU legislation on DGSs (European Commission, 2006). The Communication proposed a number of improvements that the EU banking industry could introduce by self-regulatory means, including fine tuning 'topping up' arrangements (where a bank branch in another member state voluntarily joins the host country's DGS), thus shortening the time it takes for schemes to pay out to depositors after a bank failure, and improving exchange of information between schemes. Nevertheless, the Communication concluded that there was no need to change the minimum guarantee level of €20,000.

Prior to changing the 1994 directive, the Commission stressed that further investigations on some crucial topics were needed to understand whether differences among DGSs with regard to funding mechanisms, coverage levels and rules for paying out to depositors, especially in the case of cross-border situations, may undermine fast and efficient crisis resolution. Thus, in 2007, the Commission investigated the cost associated with the harmonization of the funding mechanisms of DGSs (European Commission, 2007). Directive 94/19/EC left the member states free to choose the way in which schemes were financed. As a result, funding mechanisms among countries were very heterogeneous, ranging from schemes with regular contributions (ex ante) to schemes which raise contributions only in the case of a crisis (ex post). The harmonization of financing mechanisms is indeed difficult to achieve as it could create more costs than benefits. The results of the Commission report highlighted that a harmonized funding system with a medium coverage ratio would raise the contributions in most of the member states by as much as up to nine times the real contributions, depending on the scenario considered. Nevertheless, the report failed to investigate the effectiveness of the systems in the event of a banking crisis eventually involving cross-border exposure. The estimation of the overall costs of such a crisis would have shown whether the systems could face it and what costs would be encountered in the 'doing nothing option'.

In 2008, further Commission reports investigated the efficiency of the reimbursement process and the risk-based models and monitoring

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systems applied across member states (European Commission, 2008a; European Commission, 2008b). The financial crisis shifted priorities to restoring depositors' confidence in the financial safety net and proper functioning of the financial sector. In its meeting of 7 October 2008, the Council agreed to take all necessary measures to protect the deposits of individual savers and welcomed the intention of the Commission to bring forward urgently a proposal to promote convergence of DGSs. As described above, Directive 94/19/EC already provided for basic coverage for depositors, but the financial turmoil pushed towards an improvement in that coverage. The proposal was finalized in Directive 2009/14/EC, which, among various features, addresses the harmonization of protected deposits, a faster payout and an improved financing of schemes.

3.3 Changes in deposit guarantee schemes (DGSs): Directive 2009/14/EC

Between December 2008 and February 2009, the European Parliament and the Council approved the Commission's proposal to amend the 1994 directive. One of the main changes in Directive 2009/14/EC was an increase in the minimum coverage level from €20,000 to €50,000 by the end of June 2009 and to €100,000 by 31 December 2010. Indeed, the minimum coverage provided by the 1994 directive proved not to be adequate for a large number of deposits in the EU during the financial crisis. The minimum coverage level was thus increased to maintain depositor confidence, to avoid distortions of competition between member states and to achieve greater stability in the financial markets.

A second issue addressed by the 2009 directive is the payout delay, which was previously set at three months and could be extended up to nine months. Such a long payout delay undermines depositors' confidence, disrupting everyday business and activity. For instance, the US Federal Deposit Insurance Corporation (FDIC) reimburses depositors within two business days.[3] The 2009 directive shortened the payout delay to a period of 20 working days that could be extended only under exceptional circumstances and after approval by the competent authorities.

Furthermore, the 2009 directive abolished co-insurance and the possibility of member states limiting coverage to a specified percentage. When co-insurance was in place, bank account holders were not fully repaid, but had to bear a certain percentage of their loss, even when the amount lost

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would be lower than the coverage limit.[4] However, because of the financial crisis, the need for rapid negotiations precluded addressing all the open issues. Therefore, the 2009 directive was only an emergency measure to maintain depositors' confidence and contained a clause providing for a broad review of all aspects of DGSs (European Commission, 2010c).

As a first step, later in 2009, the Commission prepared a report on possible models for risk-based contributions to DGSs (European Commission, 2009a; European Banking Committee, 2009) and in 2010 analysed almost every aspect of DGSs in Europe, particularly the harmonization of the funding mechanism and the benefits and costs of such harmonization, effectiveness and delays in payout procedures to assess whether a further reduction of the period to ten working days would be appropriate, the link between DGSs and alternative means of reimbursing depositors (i.e. emergency payout mechanisms) and the feasibility of a pan-European scheme (European Commission, 2010f).

Proposal for a new directive

On July 2010, the European Commission advanced a proposal for a new directive amending the existing European rules on DGSs to improve protection for bank account holders (European Commission, 2010c). There were approximately 40 DGSs in the EU, covering different groups of depositors and deposits up to different coverage levels, thus imposing different financial obligations on banks and limiting the benefits of the internal market for banks and depositors. Harmonization is needed because of the significant differences still in place between national schemes and the lack of clarity affecting customers of cross-border institutions (Van Nieuwenhuyze & Zachary, 2010). Moreover, schemes have proved to be underfinanced in times of financial stress. The aim of the proposal is primarily to harmonize the schemes, both with regard to the guarantees offered and the way in which they are financed, in order to create a level playing field between the member states, promoting financial integration in the EU.

Following the 2009 directive, the proposal confirms that regardless of the institution which depositors have chosen in the EU, their total deposits per institution are covered by a guarantee of €100,000 and the money must be paid out within seven days after the default. Indeed, it is important for depositors to have access to their funds as fast as possible to avoid a run on the banks. The Commission also enhances the

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efficiency and credibility of the schemes by simplifying their administrative rules and strengthening financing, notably through ex ante funding of DGSs (a target level of at least 1.5 per cent of eligible deposits to be reached over ten years). All banks must join a DGS, without exception. Finally, the proposal limits risk-seeking behaviour that could result from the guarantees offered by making banks pay a contribution to the fund based partly on their risk profile.

The Commission issued a report accompanying the proposal to amend Directive 94/19/EC, which covers those topics not (fully) dealt with by the proposal itself (European Commission, 2010d). The report first investigates whether the fixed coverage level of €100,000 is appropriate in terms of effectiveness and cost-efficiency, establishing that such coverage would substantially improve deposit protection without disproportionately increasing the costs for banks and depositors. In comparison with the coverage levels applicable in member states before the financial crisis, it would increase the amount of deposits covered from 61 per cent to 72 per cent of eligible deposits and the number of fully covered deposits from 89 to 95 per cent of eligible deposits (European Commission, 2010d).[5] In addition, the report suggests extending coverage to all companies regardless of their size, whereas local authorities should be excluded.

The Commission then investigates emergency payout mechanisms, that is, fast payment of a certain amount before the usual payout period. For example, depositors can receive €10,000 in three days while the payout period in force is applied to amounts above that threshold. Such a mechanism is not considered a viable solution as it would imply higher costs of payouts, both in terms of human and technical resources.

A third issue raised by the report is whether a single pan-European DGS would be an economically effective solution to overcome the problem of fragmentation among schemes. According to the Commission's estimates, a single scheme saves administrative costs of approximately €40 million per year. Nevertheless, some legal issues should be investigated further, thus confining the idea to longer-term projects, subject to further review.[6] However, a network of existing schemes would be relatively easy to establish at it would not require changes to the legal set-up of national schemes and would be a first step in establishing a single pan-EU scheme in the future. Moreover, depositor confidence would be strengthened if there were a mutual borrowing facility between schemes, making the risk of government intervention less likely.[7] A pan-European scheme should comprise all banks, whatever structure it takes,

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because any other option would be potentially distortive and affect the level playing field once again.

A single pan-European scheme should also be coordinated and remain adaptable to the developments in the resolution framework. Indeed, the alternative to triggering a DGS and liquidating a bank would be its resolution, which implies orderly failure and the continuity of banking services so that depositors have continued access to their funds. In particular, the resolution mechanism may provide for deposits to be transferred to another bank. However, as a good solution, the cost of transferring deposits as a resolution measure should not exceed the cost of reimbursing depositors.

The Cypriot banking crisis revitalized the debate on a pan-European scheme. The Cypriot authorities requested international financial assistance in June 2012 due to the financial crisis that occurred in the over-expanded domestic banking sector, which was too big to be rescued by national authorities. In Cyprus, total banking assets were approximately eight times GDP and the size of the two main banks, Bank of Cyprus and Laiki Bank, in comparison to the economy was twice the country's GDP (Central Bank of Cyprus, 2013). An oversized banking sector represents a contingent liability of the state, which cannot really be supported as it creates an unsustainable fiscal situation. In the case of Cyprus, serious losses were suffered by domestic financial institutions, partly because of overexposure to Greek government bonds and domestic lending without adequate risk management.

The Cypriot authorities, in conjunction with the European Central Bank, the European Commission and the International Monetary Fund (IMF), have begun to implement a comprehensive action plan to recapitalize the banking system. However, the capital needs of the Bank of Cyprus and Laiki Bank were very significant relative to the size of the Cypriot economy (€7.8 billion or 45 per cent of GDP). The recapitalization of these banks through taxpayers' money was therefore not feasible because it would have made Cypriot government debt unsustainable.

In March 2013, the Cypriot government proposed an unprecedented tax on bank deposits equal to 6.75 per cent on deposits of less than €100,000, which is the amount covered by the DGS according to Directive 2009/14/EC and 9.9 per cent above that ceiling (Worstall, 2013). Such a solution would actually breach the deposit insurance provision as insured deposits would have to bear losses as uninsured funds, even if by a lower amount. In fact, the Cypriot parliament rejected the bill aimed

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at charging contributions on bank-insured deposits and consultations started with the president on finding another solution to the crisis.

As a consequence, the two banks were put into resolution. The Bank of Cyprus was recapitalized through the full contribution of the shareholders and bondholders and through the partial conversion of uninsured deposits into equity. Laiki Bank could not survive as an independent bank and was incorporated into the Bank of Cyprus. The Bank of Cyprus absorbed the 'good' bank, including insured depositors and assets and took on the emergency liquidity assistance that had been given to Laiki by the Central Bank of Cyprus. The uninsured depositors of Laiki Bank were compensated through the liquidation of the assets, which also included shares in the Bank of Cyprus equal to 18.1 per cent of shares in the combined group (Central Bank of Cyprus, 2013).

The Cypriot crisis, as well as the Icelandic crisis, showed how national DGS solvency is closely related to the solvency of the member state. If a crisis leads to the collapse of large banks or of the entire banking system, domestic guarantee schemes could not have enough funds to pay out all insured deposits. Thus, to provide credible deposit insurance schemes, the EU should move towards a single-funded pan-European scheme.

The report and the proposal are part of a package on guarantee schemes in the financial sector, which also comprises a review of investor compensation schemes (Directive 97/9/EC) and a White Paper on insurance guarantee schemes (European Commission, 2010e).

Difficult road towards a new directive

In June 2011, the Council agreed the general approach on the proposed changes of rules on DGSs (Council of the European Union, 2014b). The presidency subsequently started negotiations with the Parliament, which were put on hold when the latter voted on the first reading in February 2012. Talks resumed in July 2013, following agreement in the Council on a general approach for a proposed directive on bank recovery and resolution, which is linked to the DGS directive in relation to the fund issue. Political agreement between the parties on the DGS directive was reached on 17 December 2013 and approved by the Council in February 2014 (Council of the European Union, 2014a).

After more than two years, while confirming legislation currently in place on covering deposits up to €100,000, the Council has introduced

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changes in terms of simplification and harmonization. These changes may not seem relevant, considering that five years have passed since the previous directive, but they are significant and illustrate difficulties in integrating national frameworks and managing political powers within the Union. In particular, the changes relate to coverage and payout arrangements; the reduction of the time limit for paying out depositors from the current 20 working days to seven working days by 2024 has been confirmed; ex ante financing arrangements have been introduced, with a minimum target level for ex ante funds set at 0.8 per cent of covered deposits to be reached within a ten-year period, collected from banks' contributions; better access for depositors to information about the protection of their deposits and for DGSs about member banks has been granted; borrowing between DGSs on a voluntary basis is now allowed (Council of the European Union, 2014a).

According to the revised proposal, for the transitional period until 31 December 2023, the reduction in the payout period to seven days may be established by the member states according to the following repayment periods: up to 20 working days until 31 December 2018, 15 working days from 1 January 2019 to 31 December 2020, and 10 working days from 1 January 2021 to 31 December 2023 (Council of the European Union, 2014c). In addition, depositors must be able, on request, to access an appropriate amount of their covered deposits to cover their cost of living. Such an amount should be determined by the respective member state in view of the different costs of living (Council of the European Union, 2014d).

Where the financing capacity of the scheme falls below the target level, the payment of contributions is resumed at least until the target level is again reached. When setting annual contributions, the phase of the business cycle and the procyclical impact of contributions have to be taken into account. Furthermore, if the available funds of a DGS are insufficient to repay depositors when deposits become unavailable, its members have to pay extraordinary contributions not exceeding 0.5 per cent of their covered deposits per calendar year. DGSs may, in exceptional circumstances and with the consent of the competent authority, require higher contributions (Council of the European Union, 2014c).

Under the agreed directive, DGSs must be supervised on an ongoing basis, depositors' eligibility for repayment is further simplified and harmonized and they will no longer have to submit an application for repayment if their deposits become unavailable. Table 3.1 summarizes the various reforms of DGSs in the EU.

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TABLE 3.1 *Deposit guarantee scheme framework*

Year	Reference	Minimum coverage (euro)	Co-insurance	Funding	Payout delay
1994	Directive 94/19/EC	20,000	10% maximum	Chosen at national level	three to nine months
2005	Report on minimum guarantee level of DGSs Directive 94/19/EC	Proportion of insured deposits has fallen over time; wide disparities among MS			
2006	Communication concerning the review of Directive 94/19/EC on DGSs	20,000	Self-regulatory approach	Harmonization costs too high, further assessment needed	Self-regulatory approach to shorten the delay
2007	Scenario analysis: estimating the effects of changing the funding mechanisms of EU DGSs			High costs associated with harmonization under different scenarios	
2008	Report investigating the efficiency of EU DGSs				Shortcomings in the reimbursement process
2008	Report on risk-based contributions in EU DGSs			Description of systems with risk-based funding	

Continued

TABLE 3.1 *Continued*

Year	Reference	Minimum coverage (euro)	Co-insurance	Funding	Payout delay
2009	Directive 2009/14/EC	50,000 by 2009; 100,000 by 2010	Abolished		Four to six weeks
2009	Report on possible models for risk-based contributions to EU DGSs			Scenario analysis on risk-based funding	
2010	JRC Report under Article 12 of Directive 94/19/EC as amended by Directive 2009/14/EC	100,000		Proposals on harmonization	Proposal to shorten the period to 10 working days
2010	COM(2010)368 final, 2010/0207 (COD)	100,000		Over 10-year period: ex ante financing (1.5% of eligible deposits); extraordinary (ex post) contributions of up to 0.5% of eligible deposits if necessary; mutual borrowing facility among DGSs in the EU; alternative funding arrangements. Risk-based contributions	Seven days
2014	DGS: Council agreement with European Parliament	100,000		Ex ante financing (0.8 per cent eligible deposits over 10-year period)	Seven days payout by 2024

Source: author's elaboration with data from Directive 94/19/EC, European Commission (2005b, 2006, 2007, 2008a, 2008b, 2009a, 2010c, 2010f), Directive 2009/14/EC, Council of the European Union (2014a).

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3.4 A cross-country comparison of European DGSs

Deposit insurance in the European Union is provided by a variety of national DGSs. Despite the fact that membership, coverage and depositor reimbursement have uniformly been established by the 2009 directive, national schemes still vary greatly in their number and organizational and funding arrangements. Usually, each country has one single DGS the members of which are all banks in the member states. However, more than a single DGS can be established according to various provisions, for example in relation to bank specialization. This first criterion implies the establishment of a separate fund for each category of bank, such as for commercial, savings and/or cooperative banks. The rationale behind this choice is that specialization in various businesses implies different size, geographic scope and risks. Funds are thus established according to these different features.

Second, even if DGSs are mandatory (statutory funds) in the EU, additional funds could be established on a voluntary basis to complement statutory ones. The main features of statutory funds are usually established by national law, adapting the EU directive. Voluntary funds are generally established by national bank associations which also design the main features of the scheme. The full coverage for depositors is granted by both funds to varying extents.

Third, funds can be public or private. Public schemes are funded by governments or national authorities, whereas private funds are financed via bank contributions. This second arrangement reduces banks' moral hazard as banks have to pay regular premiums to the DGS, which can be raised if the fund is depleted. A mixed system can also be in place if banks pay contributions to the scheme but funds are transferred to the national government, which will repay depositors in case of bank failure.

Finally, DGSs can be used only for deposit protection or may also be used for other purposes, such as bank resolution. In the latter case, the funds raised by the scheme can be used to resolve distressed institutions if this arrangement is less costly than paying out deposits.

The funding of the schemes deserves specific consideration. First, DGSs can be funded ex ante, before the trigger event, usually through a yearly contribution, or ex post. Ex post funding implies that banks have to pay contributions to the fund only upon request, usually when a bank is failing or likely to fail. Ex post contributions are not the optimal

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solution because banks are asked to pay when their financial situation could already be at jeopardy.

A second consideration is the contribution base, which is alternatively defined as of eligible, covered or total deposits. Member states can decide which categories of deposits are not excluded from protection (eligible deposits) among a list provided in the directive; covered deposits by definition are eligible deposits not exceeding the coverage level set at €100,000. As far as risk is concerned, contributions can be risk-adjusted or not. Risk-adjusted contributions allow some element of differentiation between banks by asking riskier banks to pay higher fees. This mechanism also reduces bank moral hazard as the higher risk a bank takes the higher the contribution it has to pay.

If the scheme becomes depleted, additional funding must be raised. A first solution implies extraordinary contributions imposed on banks. DGSs could also be backed up by national governments, which top up the scheme if needed, thus providing an actual state guarantee. Alternatively, the scheme can borrow money on the market or from the central bank or supervisory authority, paying back the money at a later stage.

Table A.3 in the Appendix lists for each member state the number of existing DGSs together with the names of the DGSs providing the national legal framework. The main features of European DGSs according to the above mentioned criteria are now investigated.

Number and organizational arrangements

While most countries have a single guarantee scheme, some member states have more than one, for instance Austria (five schemes), the Czech Republic and Spain (three schemes), Italy, Cyprus and Portugal (two schemes). Austria has five private guarantee schemes, organized by sub-sector and supplemented by a government guarantee that was introduced after the 2008 global financial crisis (International Monetary Fund, 2014). Private schemes cover deposits up to €50,000, whereas the government guarantee covers deposits that exceed €50,000 and up to €100,000 (both per depositor per bank). Both the private and the government guarantees are ex post funded. Ex post contributions of the member institutions are to be calculated according to their respective shares of covered deposits in relation to the total deposits covered. Each private scheme is administered by the respective bank association in the sector (Art. 93 of the Bankwesengesetz – BWG).

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Credit institutions are assigned to the five bank associations, namely the Austrian Bankers' Association (Fachverband der Banken und Bankiers), the Regional Mortgage Banks Association (Fachverband der Landes-Hypothekenbanken), the Rural Credit Cooperatives Association (Fachverband der Raiffeisenbanken), the Savings Banks Association (Fachverband der Sparkassen) and the Credit Cooperatives' Association, according to the Schulze-Delitzsch system (Fachverband der Kreditgenossenschaften nach dem System Schulze-Delitzsch). The protection schemes must generally ensure that the deposits are paid out at the depositor's request. The obligation to pay contributions applies in the first instance only to institutions belonging to the protection scheme of the relevant bank association. In cases in which the protection scheme in question is unable to pay out the guaranteed deposits in full, the protection schemes of the other bank associations are obliged to make proportional contributions immediately in order to cover the shortfall. In cases in which the protection schemes as a whole are unable to pay out guaranteed deposits, the original protection scheme concerned must take up loans or issue debt securities in order to meet the remaining payment obligations. The system has shortcomings as privately operated schemes generally do not have adequate emergency back-up funding if the fund is depleted, like, for example, a line of credit with the Federal Ministry of Finance. Only by special legal authorization may the Federal Minister of Finance assume liability for these obligations on behalf of the federal government. In addition DGSs need adequate and advance information on distressed banks for prompt pay out. Because of the apparent conflict of interest, supervisors generally do not share information with private DGSs about which banks are in distress. The International Monetary Fund (2014) suggests that Austria take the opportunity of the new directive on DGSs to merge its five funds and to change additional DGS features.[8] Specifically, an ex ante funded and publicly administered national DGS would improve risk pooling, transparency and fund management, and prompt payout. A similar problem affects the French deposit guarantee fund, which is a privately owned institution funded by the participating credit institutions. Should the funds be exhausted, the scheme may require extraordinary contributions from its participant banks. It may also raise funds in the financial markets. However, no contingency credit lines from the government are in place, thus questioning the adequateness of back-up funding (International Monetary Fund, 2013c).

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Alternatively, another design can be adopted, as in the case of Belgium, with a fund based on a two-tier system. A protection fund for deposits and financial instruments (PF) was established in 1998 as an autonomous public institution with legal personality, protecting clients of credit institutions and investment firms in the case of an institution's default. Participation is mandatory for credit institutions and investment firms established in Belgium and the fund is prefunded. The special protection fund for deposits, life insurance policies and the capital of approved cooperative corporations (SF) was established in 2008 in the wake of the financial crisis to cover deposits, bank bonds, debentures, cash deposits held on behalf of securities investors, life insurance contracts and shares issued by cooperative corporations. Participation is mandatory for credit institutions and investment firms governed by Belgian Law and for Belgian branches of third country institutions if no similar protection is foreseen under the law of the third country. Belgian branches of member state banks are not obliged to participate in the Belgian DGS (International Monetary Fund, 2013d).

The peculiarity of the Belgian system is that even if two funds coexist, as of 2010 the SF is the sole recipient of contributions from the banks and processes any payout for both funds, first using the contributions of the PF, second those of the SF and third using additional resources from the Caisse de Depots et de Consignations of the Administration of the Belgian Treasury. Problems arise from the transfer of contributions to the general government budget. PF resources are held by the national Bank of Belgium or the administration of the Treasury and can alternatively be invested in government bonds or certificates. The SF is organized as part of the administration of the Belgian Treasury and operates under the responsibility of the Minister of Finance. While such a design is not precluded by European law, the ability of the scheme to ensure prompt payouts in the case of a default is critically dependent on the government's ability to mobilize, without delay, the necessary resources, including in distressed circumstances. An alternative design, consisting of a separate fund that is financed with ex ante industry contributions and with robust arrangements for backup funding, similar to the original PF, would increase transparency and better safeguard the interests of depositors (International Monetary Fund, 2013d).

Even when DGSs are administered at the national level, conflicts of interest may arise. For example, the Polish bank guarantee fund council includes two representatives of the Polish bankers association, which

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creates the potential for conflicts of interest when deciding on a bank in distress (International Monetary Fund, 2013b).

In some cases, mandatory schemes are supplemented by voluntary schemes. For example, in Germany, statutory, voluntary and institutional protection schemes coexist. Statutory protection schemes cover private and public commercial banks by means of two separate funds. Voluntary protection schemes supplement the statutorily required protection for commercial banks, providing insurance of up to 30 per cent of bank capital per depositor, essentially offering unlimited coverage for most depositors (International Monetary Fund, 2013a). Both bank associations govern the respective statutory deposit funds and the voluntary deposit funds, but statutory and voluntary funds are kept legally separate. Institutional protection schemes insure savings banks and cooperative banks and are designed to prevent the institutions themselves from experiencing difficulties in making payments. The system providing an institutional guarantee implies the mutualization of liabilities among participating banks. Claims of depositors, in particular from savings deposits, time deposits and sight deposits, as well as claims evidenced by certificates, are therefore fully covered. As institution protection schemes are equivalent to statutory systems within the meaning of the EU directive, the savings banks and cooperative banks are excluded from statutory deposit protection (World Bank, 2012).

As a final remark on DGS organizational arrangements, in some member states the scheme may also be used for purposes other than deposit protection. For example, in the Netherlands the DGS is created within the Dutch national bank. The scheme is not directly involved in the resolution process, but the Dutch national bank may decide to use DGS funds to finance the transfer of a distressed bank to another private bank (Moretti et al., 2014). Similar arrangements are in place in the UK, where the Financial Services Compensation Scheme not only pays out depositors in the case of bank default, temporarily borrowing money from the government if needed, but can also be used for resolution funding purposes if the cost of resolution is lower than the cost of payout (House of Lords, 2012; Moretti et al., 2014). In Spain, the DGS may adopt measures to support the resolution of credit institutions. The scheme may fund bank resolution, eventually raising additional money from the Fondo De Reestructuracìon Ordenada Bancaria (Fondo de Garantía de Depósitos de Entidades de Crédito, 2014).

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Funding arrangements

The current lack of common EU funding standards is reflected in the access to limited prepaid funds in relation to the total amount of deposits covered. Many national DGSs have limited prefunding or rely on ex post funding mechanisms, which could have procyclical effects. As reported in Table 3.2, seven countries out of 28, such as Austria, Italy and the United Kingdom, rely exclusively on ex post funding, whereas 21 countries (75 per cent) apply ex ante funding systems.

Eligible deposits are assessed as the basis of contribution in 18 countries out of 28. Ireland uses total deposits as the basis for computing contributions, whereas in the Netherlands the Central Bank decides which items of banks' balance sheet should be included in calculations, performed by dividing the aggregate amount of these items for each member bank by the aggregate amount of these items for all participating banks (Central Bank of Ireland, 2014; Staatsblad van het Koninkrijk der Nederlanden, 1998).

Contributions are adjusted to bank risk in eight countries out of 28, but the percentage of the contribution base to be paid in by banks varies among member states. For instance, in Bulgaria the amount of contribution member banks have to pay to the scheme is 0.5 per cent of the contribution base and in Poland the maximum rate is 0.55 per cent (Bankowy Fundusz Gwarancyjny, 2013; Bulgarian Law on Bank Deposit Guarantee, 1998 as amended). In Germany, the annual contribution is set to 0.016 per cent of the contribution base and a minimum amount of €15,000 has to be paid (Regulation on Contributions to the Compensation Scheme of German Banks, 2009). The compensation scheme is entitled to cover the funds needed for a compensation event by way of special contributions. The special contributions and special payments collected in one accounting year may not, in total, exceed five times the last annual contribution payable by an institution. If the funds needed by the compensation scheme cannot be covered in good time to meet obligations by collecting special contributions, it must take out a loan. A similar ratio for statutory annual payment can be found in Hungary, where the upper limit to be paid by members is 0.02 per cent of the contribution base (Act CXII, 1996, on Credit Institutions and Financial Enterprises – Part IV; National Deposit Insurance Fund of Hungary, 2012). In addition to the regular yearly payment obligations, the National Deposit Insurance Fund of Hungary (NDIF) may set

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TABLE 3.2 *Funding mechanism of European DGSs*

Country	Type of funding	Contribution base	Contribution adjusted to risk (Yes/No)
Austria	ex post	covered	No
Belgium	ex ante	eligible	Yes
Bulgaria	ex ante	eligible	No
Croatia	ex ante	covered	No
Cyprus	ex ante	eligible	No
Czech Republic	ex ante	eligible	No
Denmark	ex ante	covered	No
Estonia	ex ante	eligible	No
Finland	ex ante	covered	Yes
France	ex ante	eligible	Yes
Germany*	ex ante	eligible	No
Greece	ex ante	eligible	Yes
Hungary	ex ante	eligible	No(1)
Ireland	ex ante	total	No
Italy**	ex post	covered	Yes
Latvia	ex ante	eligible	No(2)
Lithuania	ex ante	eligible	No
Luxembourg	ex post	eligible	No
Malta	ex ante	eligible	No
Netherlands	ex post	decided by the Dutch National Bank	No(3)
Poland	ex post	covered	Yes(4)
Portugal***	ex ante	eligible	Yes
Romania	ex ante	eligible	No(5)
Slovakia	ex ante	eligible	No
Slovenia	ex post	covered	No
Spain	ex ante	eligible	No
Sweden	ex ante	covered	Yes
United Kingdom	ex post	eligible	No

Notes: *statutory guarantee scheme; **non-cooperative banks fund; ***non-mutual agricultural credit institutions fund;

(1) an increased contribution can be charged if a member institution does not comply with the prescribed solvency ratio, or carries out particularly risky activities;

(2) the fund shall specify the adjusted rate of contribution for relevant deposit takers. In determining the applicable adjusted rate, the fund shall take into account capital adequacy, liquidity ratio and large exposure ratios of the deposit taker as well as the quality of the deposit taker loan portfolio in the previous calendar year;

(3) the Netherlands will adopt regulation to transform its ex post DGS into an ex ante funded scheme with risk-based contribution to come into effect on 1 July 2015;

(4) although the system is flat-rate, the risk-weighted contribution base used for the calculation of annual premiums takes the risk of the members into consideration;

(5) however, the fund is authorized to increase the annual contribution to be paid by a member if this member has engaged in risky and unsound policies.

Source: International Monetary Fund (2013a); national DGS websites.

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increased and preferential rates. For 2012, the NDIF set a rate of 0.06 per cent of the contribution base. An increased contribution can be charged if a member institution does not comply with the prescribed solvency ratio or carries out particularly risky activities (upper limit of increased rates 0.03 per cent). Preferential contributions are granted to member institutions that are members of voluntary deposit protection or institution protection funds licensed by the Supervisory Authority. The NDIF may also prescribe extraordinary contributions for the member institutions on the basis of uniform principles with an upper limit of 0.02 per cent of the contribution base. Furthermore, within the same country, a different rate can be applied to different categories of banks, as in Lithuania for example, where commercial banks pay 0.45 per cent of the contribution base, whereas credit union contributions are 0.2 per cent of the contribution base (Law on Insurance of Deposits and Liabilities to Investors, IX-975, 2002 as amended).

In addition, in countries where the resolution and the deposit guarantee mechanisms are managed by the same authority, funding resources might not be sufficient, even if the scheme is prefunded. For example, in Poland the coexistence of many individual funds (e.g. for stability, the deposit guarantee, resolution and for restructuring banks and cooperative banks) within the same bank guarantee fund should be reviewed to ensure adequate funding and capacity (International Monetary Fund, 2013b). In France, the deposit guarantee fund, which is defined as a loss-minimizing organization, operates both as a pay-box and as a scheme to ensure orderly resolution (International Monetary Fund, 2013c). This provides a degree of flexibility and would likely facilitate the handling of distressed banks. The procedure implies first a bail-in and eventually the use of the scheme's own funds. Although prepaid, the fund is limited in relation to the total amount of covered deposits because it is considered that the resolution of a systemically important French bank would not lead to payout to depositors, but rather to resolution measures, for instance facilitating a sale of some assets and liabilities such as deposits to another institution, following the purchase and assumption method (International Monetary Fund, 2013c). The cost of such measures would likely be lower than for a payout; however, for systemically important banks, it could be significantly higher than the size of the fund.

As a final remark, depositor reimbursement is usually triggered by banking supervisor decision. If the DGS is exhausted, banks are usually required to add extraordinary contributions to the fund. For instance,

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in France an exceptional contribution, amounting to €270 million, was decided in September 2010 to cope with the increase of up to €100,000 of the coverage level and to prevent the DGS from being depleted due to payouts and other costs (International Monetary Fund, 2013c). The amount has been paid in three yearly instalments.

Slovenia has no separation of the deposit insurance scheme from the Bank of Slovenia, the national supervisory authority. The scheme is designed as an ex post system, which means that the banks do not pay contributions to the scheme and there is no dedicated fund for this purpose. Although the banks do not provide money in advance, constant readiness is prescribed for them in the form of special investments in highly liquid securities that the banks would be able to sell as necessary, using the proceeds to pay their liabilities. In the event of a bank in a specific case being unable to provide sufficient money on time for the payment of guaranteed deposits, the law envisages the money being temporarily supplied by the state (Banka Slovenije, 2014).

In Latvia, the financial and capital market commission (the supervisory authority of the financial and capital market participants, including banks) ensures the accumulation of funds with the deposit guarantee fund, the management of the DGF and the payment of guaranteed compensation. Initially, in 1998, the fund was made up of a single payment from the government budget totalling 0.5 million lats and a single payment by the Bank of Latvia of the same amount. To date, the funds have been accumulated from quarterly payments by deposit taker institutions, as well as proceedings from the management of the scheme. By national law, if the scheme does not have enough resources to pay out the guaranteed compensations, such payments are to be made from the government budget (Financial and Capital Market Commission, 2014).

Other arrangements include government interventions, as mentioned above, and/or the possibility of borrowing money on the market or from the national central bank. In the Czech Republic, if the scheme is not able to raise funds on the financial market to pay depositors' compensation, it may be provided with a subsidy or repayable financial assistance in the necessary amount from the state budget.[9] Ireland has a similar design. Banks are required to make up the shortfall but this is limited in any one year to the annual contribution. Any initial shortfall beyond this would be covered by the government but then recouped from the banks in subsequent years. The State Agency for deposit insurance and bank rehabilitation is established by the Republic of Croatia, which

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guarantees the commitments and liabilities of the agency itself, thus offering a guarantee backed up by national financial resources (Dab, 2014). Under exceptional circumstances and conditions provided by law, the Portuguese DGS can borrow money from the central bank. On this issue, in contrast to the EU, it is important to note that the Federal Deposit Insurance Corporation (FDIC) has a significant line of credit with the US Treasury Department. In addition, in order to replenish the deposit insurance fund, the FDIC can order special assessments of insured banks in addition to their regular assessments (World Bank, 2012).

Final remarks

Such a variety of arrangements concerning DGSs clearly illustrates the difficulties encountered at the European level in relation to harmonizing the framework and agreeing on common principles. These difficulties pose a serious threat to the credibility of current deposit guarantee arrangements based on the home-country principle. Current national funds would generally not be capable of coping with the failure of even one of their own largest banks as the Icelandic case clearly proved (Gros & Schoenmaker, 2012). When the major banks in Iceland failed, the national authorities covered only domestic deposits and failed to repay deposits in foreign branches.

Many relevant steps have been taken towards harmonization, such as uniform membership, coverage and depositor payout periods. Other issues have been addressed in the Commission's proposal, in particular on the type of funding, contribution base and risk adjustment of contributions, all improving the safety and soundness of the framework. Some countries are better positioned in the transition process because their current system is closer to that proposed. For instance, Belgium, Finland and France already apply an ex ante funding system with some correction for risk. They would have to pay higher contributions to the schemes because of the higher contribution rate and the different risk adjustment procedure, which is set by the Commission's proposal, but they are better placed than countries like Austria or Italy where the deposit scheme is still ex post funded. The next chapter deals specifically with this topic, empirically assessing the change in contribution that each country faces.

The funding mechanism is not the only issue affecting the transition process. The choice between a single fund and various funds coexisting

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in the same country is also a relevant difference among the schemes of member states and this is not easy to harmonize. In addition, while national deposit guarantee schemes seem able to cope with a single bank failure, it is doubtful that they could adequately address a systemic crisis.

A pan-European scheme, or at least a network of existing schemes, seems better suited to manage the failure of large, significant, cross-border banks. Nevertheless, achieving general consensus on a common DGS now seems to be in question. Not only policymakers but also some researchers have started to argue that a common fund is not necessary at this point (Pisani-Ferry & Wolff, 2012). The reason given is that a deposit scheme protects depositors against the failure of a single, small financial institution, but not against the failure of the European financial system. In addition, once the single supervisory and resolution framework is in place, a common deposit guarantee scheme will no more be a top priority on the agenda.

In contrast, a European-level framework for deposit guarantee and bank resolution is critical. A uniform fund would reinforce the notion that banks should be resolved at the European level and an integrated approach to the three functions of banking supervision, deposit insurance and resolution has to be pursued to enable rapid and effective intervention in distressed banks, reducing uncertainty and strengthening market discipline (Allen et al., 2011; Beck, 2012; Carmassi et al., 2012; Gros & Schoenmaker, 2012). Depositor confidence is still weak and would benefit from a gradual phasing in of a credible European deposit guarantee fund.

Furthermore, a system under which the deposit guarantee function remains domestic, whereas the supervision and resolution functions move to a central supervisor, would lead to serious coordination problems. As Hellwig et al. (2012) point out, it is not necessary for the two functions to be combined in one institution, although there are synergy effects and cost savings with a single institution, but they should at least be at the same level. Clear rules on how the common resolution authority and the national institutions in charge of deposit insurance deal with each other in terms of practical procedures are difficult to establish.

3.5 The US Federal Deposit Insurance Corporation

At this point, an analysis of the role played by the deposit insurance scheme in the US is relevant because of the diversity of the model in

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respect to the EU, where deposit insurance and resolution are in principle separate functions. For instance, the German Bank Restructuring Act of 2010 establishes a state-run bank restructuring fund that is separate from the DGSs that are provided by the different bank associations. In the US, they have been combined and the insurance scheme is a central player as its official responsibilities include insuring deposits, regulating the US branches and agencies of foreign member banks, supervising member banks according to agreements with their primary regulators, and acting as receiver and liquidator of failed banks. The US model seems to function very well as no depositor has ever experienced a loss on an insured deposit due to bank failure. The scheme is uniform and backed up by fiscal budget, thus being able to cope with systemic failures.

The US organization in charge of these tasks is the Federal Deposit Insurance Corporation, an ex ante mechanism covering only the depositors of banks and thrifts. The quarterly risk-based contributions are collected and managed in advance and utilized, if necessary, by the FDIC, which is usually appointed as receiver by the competent authority. The FDIC's primary objectives are to maintain public confidence and stability, to prevent excessive risk taking by members and to resolve bank failures while minimizing the costs to taxpayers (European Commission, 2008a).

The FDIC was created by Congress in the Banking Act of 1933 in response to the financial crises of the 1920s and early 1930s. The statute provided a Federal Government guarantee of deposits so that depositors' funds, within certain limits, would be safe and available to them in the event of a bank failure. In addition to its role as insurer, the FDIC is the primary federal regulator of federally insured state-chartered banks that are not members of the Federal Reserve System. The FDIC thus works on three major programmes: insurance, supervision and receivership management.

The insurance programme covers the management of the deposit insurance fund (DIF). When an institution fails, the FDIC facilitates the transfer of the institution's insured deposits to an assuming institution or pays insured depositors directly. The FDIC's goal is to provide customers with access to their insured deposits within one to two business days.

The Federal Deposit Insurance Corporation Improvement Act of 1991 required that the FDIC establish a risk-based assessment system. To implement this requirement, the FDIC adopted a system that places institutions into risk categories based on two criteria, that is, capital

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levels and supervisory ratings. The Federal Deposit Insurance Reform Act of 2005 allowed the FDIC to refine risk categories the better to assess bank contributions. The FDIC established the reserve ratio (the ratio of the DIF to estimated insured deposits) within a range between 1.15 and 1.50 per cent, thus providing more flexibility for the fund to grow under favourable economic conditions and diminish under adverse conditions. For instance, recent bank failures significantly increased the DIF's losses, resulting in a decline in the reserve ratio. When the DIF reserve ratio falls below 1.15 per cent, or is expected to do so within six months, a restoration plan is adopted providing for the reserve ratio to increase to at least 1.15 per cent no later than five years after the plan's establishment. The Reform Act also implemented an indexing mechanism to ensure that coverage levels keep pace with inflation beginning in January 2011. In 2010 and 2011, the FDIC developed a comprehensive, long-term management plan designed to reduce the effects of cyclicality and achieve moderate, steady assessment rates throughout economic and credit cycles, while also maintaining a positive fund balance even during a banking crisis. The plan is designed to ensure that the reserve ratio will reach 1.35 per cent by 2020, as required by the Dodd-Frank Act (Federal Deposit Insurance Corporation, 2013).

The Emergency Economic Stabilization Act of 2008 temporarily raised the basic limit on federal deposit insurance coverage from $100,000 to $250,000 per depositor per insured bank for each account ownership category. The legislation provided that the basic deposit insurance limit would return to $100,000 after 31 December 2009, but the new limit has been maintained.

The supervision programme promotes safe and sound operations and compliance with fair lending and consumer protection, and applies regulations to insured institutions for which the FDIC is the primary federal regulator (in cooperation with state banking agencies). The FDIC also has back-up supervisory responsibility for other insured institutions for which the Board of Governors of the Federal Reserve System (FRB), the Office of the Comptroller of the Currency (OCC) and the Office of Thrift Supervision (OTS) are the primary federal regulators.

Although the FDIC is the insurer for all insured depository institutions in the US, it is the primary federal supervisor only for state non-member banks. Nonetheless, the FDIC's roles as an insurer and primary supervisor are complementary and many activities undertaken by the FDIC support both the insurance and supervision programmes. Through

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review of examination reports, off-site monitoring tools, participation in examinations conducted by other federal regulators and where appropriate, special (backup) examination activities, the FDIC regularly monitors the potential risks of all insured institutions, including those for which it is not the primary federal supervisor.

The receivership management programme was introduced by the Federal Deposit Insurance Corporation Improvement Act of 1991 after the banking crisis of the 1980s, with the aim of appointing and regulating the role of the FDIC as receiver for failed members (European Commission, 2008a). Joining the insurer and the receiver in a single entity simplifies the procedures. Giving the responsibility of asset liquidation to the largest creditor is an incentive to maximize possible returns and to resolve failed institutions in the manner least costly to the DIF. Upon the closure of an institution, the FDIC, which is responsible for resolving the failed institution, uses a variety of business practices. These practices are typically associated with either the resolution process or the receivership process. Depending on the characteristics of the institution, the FDIC may recommend several of these methods to ensure the prompt and smooth payment of deposit insurance to insured depositors, to minimize the impact on the DIF and to speed up dividend payments to uninsured depositors and other creditors of the failed institution (Federal Deposit Insurance Corporation, 2013). The resolution process involves evaluating and marketing a failing institution, soliciting and accepting bids for the sale of the institution, determining which bid is least costly to the DIF and working with the acquiring institution through the closing process.

There are three basic resolution methods used by the FDIC: purchase and assumption (P&A) transactions, deposit payoffs and deposit insurance national bank assumptions. The P&A transaction is the most common resolution method. In a P&A transaction, a healthy institution purchases certain assets and assumes certain liabilities of the failed institution. A variety of P&A transactions can be used. As each failing bank situation is different, P&A transactions provide flexibility to structure deals that result in the highest value for the failed institution. For each possible P&A transaction, the acquirer may either acquire all or only the insured portion of the deposits. Loss sharing may be offered by the receiver in connection with a P&A transaction. In a loss-share transaction, the FDIC as receiver agrees to share losses on certain assets with the acquirer. The FDIC usually agrees to absorb a significant portion (for example, 80 per cent) of future losses on assets that have been designated

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as 'shared loss assets' for a specific period of time (for example, five to ten years). The economic rationale for these transactions is that keeping shared loss assets in the banking sector can produce a better net recovery than would the FDIC's immediate liquidation of these assets. Deposit payoffs are executed only if a bid for a P&A transaction does not meet the least-cost test or if no bids are received, in which case the FDIC ensures that the customers of the failed institution receive the full amount of their insured deposits.

The Banking Act of 1933 authorizes the FDIC to establish a deposit insurance national bank (DINB) to assume the insured deposits of a failed bank. A deposit insurance national bank is a new national bank with limited life and powers that allows failed-bank customers a brief period of time to move their deposit accounts to other insured institutions. Although infrequently used, a DINB allows a failed bank to be liquidated in an orderly fashion, minimizing disruption to local communities and financial markets.

On top of this, the receivership process involves performing the closing functions at the failed institution, liquidating any remaining failed institution assets and distributing any proceeds of the liquidation to the FDIC and other creditors of the receivership. In its role as receiver, the FDIC has used a wide variety of strategies and tools to manage and sell retained assets. These include, but are not limited to, asset sale and/or management agreements, structured transactions and securitizations. The FDIC makes every effort to sell as many assets as possible to an assuming institution. Assets that are retained by the receivership are evaluated. For 95 per cent of the failed institutions, at least 90 per cent of the book value of marketable assets is marketed for sale within 90 days of an institution's failure for cash sales and within 120 days for structured sales (Federal Deposit Insurance Corporation, 2013).

The FDIC, as receiver, manages failed banks and their subsidiaries with the goal of expeditiously winding up their affairs. The oversight and prompt termination of receiverships help to preserve value for the uninsured depositors and other creditors by reducing overheads and other holding costs. Once the assets of a failed institution have been sold and the final distribution of any proceeds is made, the FDIC terminates the receivership. The FDIC's ability to attract healthy institutions to assume deposits and purchase assets of failed banks and savings associations at the time of failure minimizes the disruption to customers and allows assets to be returned to the private sector immediately. Assets remaining

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after resolution are liquidated by the FDIC in an orderly manner and the proceeds are used to pay creditors in accordance with the priorities set by law. Creditors may include secured creditors, unsecured creditors (including general trade creditors), subordinate debt holders, the shareholders of the institution, uninsured depositors and the DIF (as subrogee). The FDIC is often the largest creditor of the receivership. Table 3.3 shows the number of banks the failure of which has been managed by the FDIC, their total assets and total deposits, from 2001 to date.

As can be seen from Figure 3.1, the number of bank failures per year was negligible from 2001 to 2007. Whereas the number of bank failures reached a peak in 2010 (157 failed banks), the total assets and total deposits of failed banks were higher in 2012 ($1.195 and $1.165 billion respectively), in 2008 ($373.59 and $213.51 billion) and in 2009 ($170.88 and $137.43 billion).

This can be explained by the failure of Tennessee Commerce Bank, closed in January 2012 by the Tennessee Department of Financial Institutions, which appointed the FDIC as receiver. According to the FDIC website, to protect the depositors, the FDIC entered into a P&A agreement with the Republic Bank and Trust Company, a Kentucky bank, to assume all

TABLE 3.3 *Bank failures managed by the FDIC (2001–2014)*

Year	Number of failed banks	Total assets (US$ billion)	Total deposits (US$ billion)
2014*	5	0.74	0.72
2013	24	6.10	5.12
2012	51	1,195.60(1)	1,165.95(1)
2011	92	36.01	32.05
2010	157	96.70	81.01
2009	140	170.88(2)	137.43(2)
2008	25	373.59	213.51
2007	3	2.60	2.39
2006	0	0	0
2005	0	0	0
2004	4	0.16	0.15
2003	3	0.96	0.90
2002	11	2.71	2.33
2001	4	2.36	1.65

Notes: * As of 28 February; (1) FDIC report data on 50 banks; (2) FDIC report data on 135 banks.
Source: author's elaboration with data from http://www.fdic.gov/bank/historical/bank/2001/ index.html

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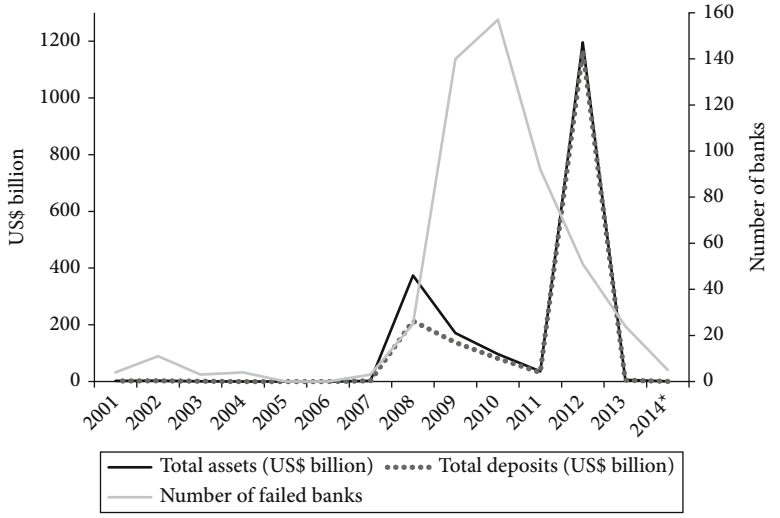

FIGURE 3.1 *Bank failures managed by the FDIC (2001–2014)*
**As of 28 February.*

Source: author's elaboration with data from http://www.fdic.gov/bank/historical/bank/2001/index.html

of the deposits of Tennessee Commerce Bank. Customers of Tennessee Commerce Bank continued to use their existing branch until they received notice from the Republic Bank and Trust Company that it had completed systems changes to allow other branches to process accounts as well. Depositors could also access their money by writing cheques or using ATM or debit cards. Tennessee Commerce Bank had approximately $1.185 billion in total assets and $1.156 billion in total deposits. In addition to assuming all of the deposits of the failed bank, the Republic Bank and Trust Company agreed to purchase approximately $203.9 million of the failed bank's assets. The FDIC retained most of the assets for later disposition, estimating that the cost to the deposit insurance fund would be $416.8 million. Compared to other alternatives, the Republic Bank and Trust Company's acquisition was the least costly resolution for the FDIC's DIF.

In 2008, the major failure in terms of bank total assets and deposits was Washington Mutual Bank, which was acquired by JP Morgan Chase in September. The transaction, facilitated by the FDIC, implied full protection for all depositors and no cost to the deposit insurance fund. JP Morgan Chase acquired the assets, assumed the qualified

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financial contracts and made a payment of $1.9 billion. Claims by equity, subordinated and senior debt holders were not acquired. Washington Mutual Bank also had a subsidiary, Washington Mutual FSB, Park City, Utah with combined assets of $307 billion and total deposits of $188 billion.

Another relevant failure in terms of bank size was Colonial Bank in 2009. The FDIC entered into a P&A agreement with Branch Banking and Trust (BB&T) to assume all of the deposits of Colonial Bank, which had total assets of $25 billion and total deposits of approximately $20 billion. BB&T purchased approximately $22 billion in assets of Colonial Bank, whereas the remaining assets were retained by the FDIC for later disposition. In addition, the FDIC and BB&T entered into a loss-share transaction for approximately $15 billion of Colonial Bank's assets. BB&T shared in the losses on the asset pools covered under the loss-share agreement. The loss-sharing arrangement maximizes returns on the assets covered by keeping them in the private sector, minimizing disruptions for loan customers. The cost to the deposit insurance fund was approximately $2.8 billion.

After the turmoil, the situation started to improve in 2013, with 24 failed institutions totalling $6.10 billion in assets. The first two months of 2014 apparently follow this tendency, with only five failed banks totalling $0.74 billion in assets and $0.72 billion in deposits.

3.6 Conclusion

DGSs can be an important tool in dealing with concerns about bank runs or about protecting depositors from losses in bank failures. The relevance of these schemes has once more been revealed by the financial crisis. The lack of harmonization among DGSs in Europe results in different treatment of member states depositors and limits the benefits of the internal market for banks. In the case of large, cross-border bank failures, the capacity of domestic funds is in question.

Various attempts have been made to harmonize the current framework and some common features have been established. However, the launch of a pan-European DGS seems now to be low on the agenda. This is unfortunate as a coordinated supervisory and resolution framework should be completed by the establishment of a single DGS to enhance the management of failing banks and establish a full banking union.

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Notes

1 Co-insurance is the mechanism by which depositors are insured not for the whole amounts of their deposits up to the guarantee level, but only for a certain percentage of them. There is a ten per cent ceiling in the 1994 directive on the percentage of the amount of deposits outside the protection of DGS. In particular, co-insurance took place in the Czech Republic, Hungary, Estonia, Ireland, Malta (90% guarantee and up to the guarantee level), Poland (100 per cent guarantee up to €1,000, and 90 per cent guarantee for sums between €1,000 and €22,500) and the UK (depositors are fully insured up to £2,000 only and up to 90 per cent for amounts of between £2,000 and £35,000); co-insurance has subsequently been abolished by Directive 2009/14/EC (European Commission, 2005b; Llewellyn, 2009).

2 Large companies are defined as companies of such a size that their balance sheet exceeds the limits of two of the three following criteria: balance sheet total €1,000,000; net turnover €2,000,000; average number of employees during the financial year equal to 50.

3 Federal law requires the FDIC to make payments of insured deposits 'as soon as possible' upon the failure of an insured institution. According to standard policies and procedures that the FDIC follows in making deposit insurance payments, the FDIC's goal is to make deposit insurance payments within two business days of the failure of the insured institution (http://www.fdic.gov/consumers/banking/facts/payment.html).

4 The Commission adjusts the coverage level according to inflation in the EU on the basis of changes in the harmonized index of consumer prices published by the Commission itself.

5 According to the Commission's report, the benefits of adopting a higher coverage level are very limited. For example, the level of €200,000 would increase the number of fully covered deposits by less than two per cent and thus the additional costs do not seem justified (European Commission, 2010d).

6 According to the UK House of Lords (2012), 'if that is what you understand by a banking union then Germany does not believe in one. It believes, and has just about conceded, that you can transfer responsibility for supervising systemic banks, particularly in the euro zone. However, it does not believe in a common deposit protection scheme or a common resolution authority, or in having a common fiscal backstop to the euro zone. The question then is: is Germany going to get its way or, as has been the case to some extent for the past two years, is it going to have to give way on some of these issues over an extended timescale?'

7 It should be noted that the introduction of a pan-EU scheme implies a full harmonization of national deposit guarantee schemes and could therefore

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only enter into force after the target level for their funds of 1.5 per cent of eligible deposits has been reached (European Commission, 2010d).

8 In the US, the FDIC successfully merged its two funds. As part of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), the savings association insurance fund (SAIF) was created. Ever since its creation, however, it has been considered vulnerable, partly because of its small size and partly because of its geographic concentration. SAIF-member institutions constitute a much smaller proportion of US banking organizations than bank insurance fund (BIF) member institutions (Oshinsky, 1999). In addition, SAIF-member institutions are geographically concentrated, unlike BIF-member institutions. Section 2102(a) of the Federal Deposit Insurance Reform Act of 2005 required that the FDIC merge the BIF and the SAIF to form the Deposit Insurance Fund no later than 1 July 2006. The FDIC effected the merger of the BIF and the SAIF as of 31 March 2006. As a result of the merger of the funds, the BIF and the SAIF were abolished (Federal Deposit Insurance Corporation, 2006). Fund merger strengthened the deposit insurance system by diversifying risks, reducing fund exposure to the largest institutions, eliminating possible inequities arising from premium disparities and reducing the regulatory burden. Before consolidation, the BIF no longer exclusively insured commercial banks holding only BIF-insured deposits and the SAIF no longer uniquely insured savings associations holding only SAIF-insured deposits (Gilleran, 2002). Many banks and thrifts had deposits insured by both funds. The failure of an institution holding both BIF- and SAIF-insured deposits impacted both funds, regardless of the institution's fund membership. Thus, the funds were already co-dependent. Furthermore, industry consolidation had increased both funds' risk concentration, with the chance that one event, or one insured institution, would trigger a significant and disproportionate loss. A merged fund has significantly less concentration risk. A third issue was premium disparity. Institutions with identical risk profiles, but holding deposits insured by different funds, could pay different prices for the same insurance coverage. The BIF-SAIF premium differential that existed in 1995 and 1996 put institutions at a significant competitive disadvantage simply because they were insured by the higher cost fund. Some institutions reacted to the differential by shifting deposits between funds, while others looked for non-deposit funding sources. Fund merger eliminated the possibility of a premium differential. Finally, merging the funds reduced regulatory burdens. Institutions with both BIF- and SAIF-insured deposits were required to make complex calculations to estimate the growth rates of deposits insured by each fund. Merging the funds eliminated the need for these calculations (Gilleran, 2002).

9 Article 41i of the Act No. 21/1992 Coll., on Banks, as amended, passed by the Federal Assembly of the Czech and Slovak Federal Republic states that:

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'Wherever the resources of the Fund are not sufficient for payment of the compensation laid down by law, the Fund shall raise the necessary funds on the market. The Fund shall see to it that the conditions under which the funds are provided to the Fund are as advantageous to it as possible. If the Fund is not able to raise funds on the financial market before the date of commencement of the payment of compensation pursuant to Article 41d, it may be provided at its request with a subsidy or repayable financial assistance of the necessary amount from the state budget' (http://www.fpv.cz/en/legislation.html).

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4

Empirical Investigation on Deposit Guarantee Schemes

Abstract: *This chapter first describes two models that rely on the use of accounting-based indicators to assess the risk profile of banks in European DGSs. The single indicator model uses only one indicator at a time to assess the risk-based components of the schemes. The multiple indicators model applies a set of indicators to compute the relative risk weight of each bank. Then it investigates how current contributions to the DGS will change for a group of member states when the new directive comes into force. The final section analyses the introduction of a pan-European scheme, which presupposes full harmonization of regulation and DGSs across countries.*

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4.1 Introduction

Chapter 4 empirically investigates the possible approaches for calculating contributions on the basis of the risk profile of European banks, with the aim of assessing the risk of banking systems and the potential benefits and costs of establishing a single DGS.

The risk-based models currently adopted in the member states were described in Chapter 3. The ratios applied across countries are quite heterogeneous and the variables taken into account to define them are not identical. However, ratios are usually built using balance sheet data, financial statement data or other types of accounting data. Market information is not included because of the lack of information for the majority of banks that are currently not listed on stock exchanges.

Indicators can be divided into three main groups, each related to one particular aspect of banking activities (European Commission, 2008b). The first group reflects a bank's capital adequacy and solvency profile, the second group relates to asset quality, focusing on loan portfolio quality, and the third group covers bank profitability and efficiency. More recently, because of the relevance of liquidity for banks as highlighted by the financial crisis, a fourth group of indicators on this topic has been included.

First, the two models relying on the use of the aforementioned accounting-based indicators to assess the risk profile of banks are described. The single indicator model uses only one indicator at a time to assess the risk-based components of the schemes. The multiple indicators model applies a set of indicators to compute the relative risk weight of each bank.

Then this chapter investigates how current contributions to the DGS will change for a group of member states when the new directive on DGSs, currently under negotiation, comes into force. By applying Commission's assumptions and enlarging the set of indicators and banks under investigation, the empirical assessment fits into the current debate on the reform of DGSs in the EU.

The third model (default risk model) proposed by the Commission overcomes the backward-looking nature of the accounting-based indicators of the first two models and aims to estimate the probability of default of banks by including forward-looking information, for instance market price information (European Commission, 2009a). However, the lack of market price information for many banks, which

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are not listed on a stock exchange, makes the third model very difficult to implement.

The final section analyses the hypothetical introduction of a pan-European scheme, which presupposes full harmonization of regulation across countries, further developing the empirical assessment. The aim is to understand how contributions would change for member states if national compartments were wound up.

4.2 Theoretical framework on risk-based contributions to DGSs

According to the proposal for a new directive on DGSs by the European Commission (2010c), contributions from banks to such schemes must be calculated on the basis of their risk profiles. As described in Table 3.2, currently in the EU only eight countries out of 28 adopt risk-adjusted contributions (approximately 25 per cent). The possible approaches for calculating contributions on the basis of the risk profile of banks are the single indicator model (SIM), the multiple indicator model (MIM) and the default risk model (DRM) (European Commission, 2009a). The first two models are based on approaches currently applied by some of the DGSs in the EU and rely on the use of accounting-based indicators to assess the risk profile of banks. More precisely, the European Commission proposes indicators that cover four key areas (risk classes) commonly used to evaluate the financial soundness of a bank: capital adequacy, asset quality, profitability and liquidity.

To compute the bank-specific risk factor, the first model (SIM) uses one accounting-based indicator from the above-mentioned risk classes at a time. Contributions are determined as a fixed percentage of a contribution base, which can be computed for different categories of deposits (eligible, fixed or total), as described in Table 3.2. Later in this chapter, further details on the contribution base are provided. The fixed percentage depends, for instance, on the overall amount of contributions the DGS would like to collect. Subsequently, the fixed amount is adjusted by the risk adjustment factor, a ratio used to increase the contributions for risky members and to decrease them for less risky banks. This adjustment can be different depending on the selected indicator. The choice of the indicator thus significantly affects the amount of contributions.

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Unlike the SIM, to choose the adjustment coefficient, the MIM aggregates information from a set of core indicators (mandatory for all member states) and another set of supplementary indicators (selected by member states) both covering bank capital adequacy, asset quality, profitability and liquidity. Even if supplementary indicators can be chosen by countries according to the specific features of their banking systems, the Commission suggests a set among which this choice can be made. Only core and supplementary indicators on liquidity are freely determined by member states.

All indicators are pooled together by means of the mathematical average. Equal weight is assigned to each core and supplementary indicator, but the average core and supplementary scores are then weighted differently. However, different weights can be applied to each core and supplementary indicator, for instance if the DGS covers a particular sector of the banking system, such as cooperative or savings banks.

This model (MIM) is based on the assumption that the total amount of contributions collected by the scheme needs to be decided ex ante, for example by the DGS board or the national government, and then divided among banks according to their risk profiles, as described in the empirical assessment below. The contributions of each bank are calculated by multiplying the total amount of contributions (TC) to be collected by the scheme by a coefficient which is labelled risk share (RS) as it represents the risk weight of each bank relative to the sum of risk weights of all banks belonging to the scheme.

To classify banks into rating classes, the Commission proposal sets absolute thresholds for core indicators, excluding liquidity. For supplementary indicators and for liquidity, the choice is left to member states as pre-specified values for the thresholds have not been established. The Commission suggests that rating classes could be identified using the quantiles of the distributions of the chosen indicators at country level (Table 4.1). This would take into account the potentially different characteristics of the banking sector in different member states, adding flexibility to the framework. The use of quantiles also partially mitigates procyclical effects. By using quantiles, the contribution of a given bank is defined in relative terms with respect to the other banks. Thus, an increase in the risk of a bank during a period of financial stress would have an impact on its contribution only if the risk indicators of all other banks remained unchanged.

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A common drawback of the first two models is the backward-looking nature of accounting-based indicators. In theory, this could be overcome by using the DRM. In order to compute the contribution of a bank, this model estimates the probability of default of banks by including forward-looking information, such as market price information. In practice, the DRM cannot be implemented because of the lack of market price information for approximately 93 per cent of EU banks which are currently unlisted. However, nor is the SIM a viable solution as focusing on a single indicator ignores valuable information on the risk profile of the bank that is captured by other indicators which are not used. The results would be very different depending on the indicator selected, thus affecting model reliability.

For these reasons, the next section focuses on a numerical simulation that applies the MIM, which seems better suited to capturing a bank's overall risk as it takes into account information from different risk classes at the same time. The aim of the experiment is to give a first insight into the impact of MIM application on EU banking systems and to investigate how contributions would change in member states if some risk adjustment were introduced.

A certain number of choices have to be made to perform the analysis. These mainly cover how risk ratings are assigned to banks and how differences in risk profiles should be reflected in terms of contributions. In practice, DGSs adopt a variety of solutions, depending, for instance, on the banking system or on the specific banking sector covered by a scheme. In the Commission's proposal, contributions are proportional to the risk of banks and take into account the risk profiles of the various business models. The proposed calculation formula, specific indicators, risk classes for members, thresholds for risk weights assigned to specific risk classes and other necessary elements, however, are to be revised by the European Banking Authority by one year after the date of entry into force of the directive to ensure consistent application of the new regime (Council of the European Union, 2014c).

The core indicator in the capital adequacy risk class is the ratio of own funds, as defined by Directive 2006/48/EC, to risk-weighted assets.[1] The European Commission (2010c) proposes five different risk levels, ranging from one (very low risk) to five (very high risk). Banks are classified in each risk level according to the value of the indicator. A bank scores a very low risk level if the indicator is greater than 12.3 per cent, a low risk

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level if the indicator is within 12.3 and 9.6 per cent, a medium risk level within 9.6 and 8.2 per cent, a high risk level within 8.2 and 7 per cent and very high risk level if the indicator is below 7 per cent.

The asset quality core indicator is the non-performing loans to gross loans ratio, which can range from less than one per cent (very low risk level) to more than six per cent (very high risk level). The return on assets (ROA), defined as net income to average total assets, is the core indicator in the profitability criteria. If the ROA is greater than 1.2 per cent, the bank has a very low risk level, whereas ratios lower than 0.5 per cent denote a very risky bank. As previously stated, the proposal by the European Commission does not suggest a specific indicator on liquidity; this has to be determined by the member states according to certain rules provided for in the proposal itself. Details on the risk levels for the core indicators are presented in Table 4.1.

To compute the total composite score of a bank, core indicators are weighted ¾ (75 per cent) and supplementary indicators ¼ (25 per cent). Supplementary indicators suggested by the Commission are listed and defined in Table 4.2. As previously mentioned, unlike core indicators, thresholds have not been identified by the Commission with the aim of giving member states some flexibility.

In general, the proposal requires that the total amount of contributions to be collected by the DGS should first be determined in line with the target level for DGS funds. Then the amount should be divided among member banks according to their risk profiles. A differentiation between the levels of contribution paid by the least and most risky banks is introduced, ranging respectively from 75 per cent to 200 per cent of the amount that a bank with an average risk would pay.

The contribution base is the amount of eligible deposits, that is, deposits that are not excluded from protection (Council of the European Union, 2014c). Covered deposits are currently used as the basis of contribution in seven countries out of 28 (25 per cent), whereas eligible deposits are used in 18 member states out of 28 (64 per cent). In addition, member states may decide that credit institutions pay a minimum contribution, irrespective of the amount of their covered deposits.

Although it is more complex than the SIM, the MIM makes it possible to consider many potential sources of risk. The indicators selected provide a picture of the risk that is as complete as possible, smoothing the process towards a risk-based contribution mechanism and assessing a bank's overall risk in a more comprehensive manner.

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TABLE 4.1 *Core indicators and scores reflecting the risk profile of banks*

			Risk level and score				
Risk class	**Indicator**	**Ratio**	**Very low** $\rho = 1$	**Low** $\rho = 2$	**Medium** $\rho = 3$	**High** $\rho = 4$	**Very high** $\rho = 5$
Capital adequacy	Own funds items referred to in Article 57 (a) to (ca) and risk-weighted assets referred to under Article 76 of Directive 2006/48/EC	Own funds/RWA	$x > 12.3\%$	$12.3\% \geq x > 9.6\%$	$9.6\% \geq x > 8.2\%$	$8.2\% \geq x > 7\%$	$x \leq 7\%$
Asset quality	Non-performing loans (NPL)	NPL/ Gross loans	$x \leq 1\%$	$1\% < x \leq 2.1\%$	$2.1\% < x \leq 3.7\%$	$3.7\% < x \leq 6\%$	$x > 6\%$
Profitability	ROA	Net income/ Average total assets	$x > 1.2\%$	$1.2\% \geq x > 0.9\%$	$0.9\% \geq x > 0.7\%$	$0.7\% \geq x > 0.5\%$	$x \leq 0.5\%$
Liquidity	To be determined by member states						

Source: European Commission (2010c).

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TABLE 4.2 *Supplementary indicators*

Risk class	Indicator/ratio	Definition
Capital adequacy	Total capital	Total capital/risk-weighted assets
	Excess capital*	Excess capital/total assets or Excess capital/risk-weighted assets
Asset quality	Loan loss provision	Loan loss provision/net interest revenue or Loan loss provision/operating income
	Risk-weighted assets	Risk-weighted assets/total assets
Profitability	Costs to income	Operating expenses/operating income
	Net margin	Net margin/total capital
Liquidity	To be determined by member states	

Notes: *Excess capital = capital – own funds, both referred to in Article 57 of Directive 2006/48/EC.

Source: European Commission (2010c).

4.3 The multiple indicators model (MIM): empirical assessment

The MIM is here applied to a sample of EU banks to estimate the change in banks' contributions for each member state caused by the application of the new directive. According to Bankscope, a Bureau Van Dijk database that provides bank financial information based on comparable standards, more than 4,000 banks are currently active in the EU. As DGSs cover all banks regardless of their specialization, the sample includes all bank categories provided by Bankscope, namely commercial, savings, cooperative, real estate and mortgage, investment, Islamic banks and bank holdings.[2] The classification of banks in Bankscope is a perfect match to the Commission's proposal.

Starting from Table 3.2, seven countries (Austria, Italy, Luxembourg, the Netherlands, Poland, Slovenia and the UK) are excluded because they apply an ex post funding mechanism, which implies that schemes raise contributions only in the case of a crisis. For these seven countries, it is therefore not possible to estimate actual contributions to the scheme and compare actual contributions to those which should be paid by the same banks in the new framework. As described in the previous chapter,

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in Germany, savings and cooperative banks are covered by a separate DGS and therefore these banks have been dropped from the sample. On a similar note, the Portuguese scheme under investigation does not cover mutual agricultural credit institutions, which have been excluded from the assessment. The final sample comprises 1,273 banks over 21 countries and Tables 4.3, 4.4 and 4.5 show descriptive statistics for various sample features. France and Germany together account for 39 per cent of the sample (283 and 222 banks respectively), whereas Estonia and Latvia comprise one per cent of the sample with 11 banks each. The majority of the sample (52 per cent) is formed by commercial banks, followed by savings and cooperative banks, which amount to 13 per cent of the sample each. Not surprisingly, the largest banks are incorporated in France, Germany and Spain; the smallest banking systems by average total assets are located in Bulgaria, Croatia, Latvia and Malta.

Contributions to DGSs should take into account the degree of risk incurred by banks. This would make it possible to reflect the risk profiles of individual banks, leading to a fair calculation of contributions and providing incentives to operate under a less risky business model. A set of core indicators mandatory for all member states and another set of optional supplementary indicators have been developed and computed for the sample banks.

Core composite score

Following the Commission's proposal, the core indicators for asset quality (AQ1) and for profitability (PR1) have been computed. The first indicator is defined as the ratio of impaired (non-performing) loans to gross loans and measures the amount of total loans which are doubtful. The lower this figure is, the better the asset quality. Finnish and Swedish banks enjoy the best asset quality as far as the quality of loan portfolio is concerned. Greece, Latvia and Romania are at the bottom of the ranking with AQ1 ratios all above 20 per cent. They also show negative performance in terms of return on average assets, which describes the returns generated from bank assets (-7, -3.7 and -1.38 per cent respectively). The capital adequacy core indicator has not been computed because data are not available on Bankscope. As for liquidity, the choice of the core indicator is left to member states. This assessment uses the ratio of liquid assets to customer and short-term funding (LIQ1), which investigates what percentage of customer and short-term funds could be paid off if

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TABLE 4.3 *Size and core indicators – descriptive statistics as at the end of 2012*

Country	No. of banks	Total assets (billion euro)				Non-performing loans/gross loans % (AQ1)				Return on assets (ROA) % (PR1)				Liquid assets/customer and short-term funding % (LIQ1)			
		Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max
Belgium	56	42.06	89.11	0.02	357.21	3.41	2.39	0.59	8.11	0.96	4.39	−6.23	27.12	28.82	28.77	1.18	102.38
Bulgaria	26	1.80	1.76	0.06	6.51	17.98	12.26	0.85	48.09	0.19	1.60	−3.20	4.00	26.61	11.40	4.45	56.53
Croatia	37	1.81	3.61	0.03	15.99	18.91	10.42	6.19	42.37	−0.62	2.02	−5.35	1.38	19.83	9.27	4.21	37.05
Cyprus	30	8.99	12.89	0.39	34.81	11.35	9.14	1.08	23.52	0.49	3.69	−6.49	7.89	81.86	122.73	9.70	402.84
Czech Republic	26	7.65	11.31	0.14	37.28	6.34	4.36	0.30	17.08	0.58	1.70	−5.90	3.06	22.33	18.95	0.13	71.77
Denmark	94	15.18	58.21	0.01	466.72	15.35	15.38	0.10	100.11	−0.04	1.61	−6.95	2.46	46.51	59.48	2.54	523.06
Estonia	11	1.84	3.19	0.06	8.96	14.57	11.67	1.47	29.71	0.25	3.06	−6.76	2.76	39.20	31.10	7.76	101.01
Finland	17	37.19	88.40	0.55	341.95	0.92	0.80	0.03	2.10	0.33	0.30	−0.12	1.11	23.92	24.26	1.34	76.91
France	283	62.36	256.22	0.01	2,008.15	6.21	6.37	0.00	45.46	0.64	2.17	−6.86	25.23	43.63	79.42	0.50	731.94
Germany	222	27.25	155.59	0.00	2,012.33	5.76	7.97	0.11	46.11	0.74	2.86	−9.99	22.27	47.66	86.44	0.00	926.58
Greece	15	26.50	37.59	0.29	104.80	27.50	15.27	12.66	65.12	−6.98	12.36	−34.03	1.29	11.67	7.55	4.45	31.46
Hungary	35	4.07	7.13	0.07	34.69	18.81	11.54	3.13	36.42	0.13	3.74	−8.30	12.45	34.09	29.54	7.72	115.37
Ireland	34	52.50	89.70	1.23	371.74	16.03	17.12	0.00	56.23	−1.04	2.26	−5.58	3.24	37.06	31.95	2.63	89.64
Latvia	20	1.32	1.46	0.01	4.91	23.95	17.82	4.65	74.67	−3.70	11.54	−43.68	2.63	47.72	31.68	6.08	127.51
Lithuania	11	2.08	2.56	0.00	6.73	18.38	10.23	9.93	39.68	2.62	5.43	−0.46	16.98	29.75	23.26	7.38	85.63
Malta	16	1.81	2.42	0.06	7.05	10.58	14.17	3.64	42.55	1.24	1.57	−0.59	5.53	39.34	28.49	7.00	91.89
Portugal	37	22.62	35.51	0.13	116.86	8.47	6.84	0.14	23.34	0.42	1.72	−3.88	4.37	18.84	21.29	0.26	85.99
Romania	29	3.31	4.06	0.18	16.54	24.06	18.17	7.35	70.96	−1.38	4.01	−17.75	2.08	17.54	8.77	1.29	33.45
Slovakia	18	4.26	4.15	0.17	11.78	15.49	29.69	2.34	99.72	1.37	3.09	−2.85	10.83	9.27	6.72	2.46	27.39
Spain	153	34.16	135.83	0.01	1,269.63	8.64	5.79	0.24	22.70	−0.45	3.59	−15.67	27.50	31.80	66.50	2.13	552.87
Sweden	103	21.15	84.74	0.01	668.18	2.03	2.84	0.00	22.58	0.52	2.45	−21.18	3.97	20.80	16.44	1.56	100.00

Source: author's elaboration using data from Bankscope.

TABLE 4.4 *Supplementary indicators – descriptive statistics as at the end of 2012*

	Total capital ratio % (CA1)				Loan loss provisions/net interest revenues % (AQ2)				Cost-to-income ratio % (PR2)			
Country	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max
Belgium	17.10	4.16	10.27	25.00	6.31	52.46	−207.69	167.21	69.42	34.15	13.04	176.01
Bulgaria	16.73	6.63	12.06	40.97	60.07	83.01	−31.94	345.00	79.61	45.62	38.73	202.98
Croatia	17.52	4.96	9.17	34.94	34.00	46.43	−40.45	182.82	102.80	93.78	37.28	565.00
Cyprus	13.59	8.02	0.90	20.48	58.38	78.36	1.00	228.04	55.44	23.37	29.32	96.07
Czech Republic	16.72	7.19	11.40	43.50	13.12	19.53	−43.02	52.31	87.61	153.87	17.93	767.47
Denmark	19.01	5.71	9.40	45.50	46.10	48.41	−2.38	271.71	65.25	22.94	8.21	154.50
Estonia	22.79	4.04	18.37	28.20	34.11	86.04	−19.16	224.13	81.50	48.87	38.86	188.96
Finland	16.01	3.25	9.20	20.20	10.08	11.48	0.34	42.86	67.09	22.04	18.75	98.98
France	14.86	3.87	9.46	25.90	25.06	51.99	−85.29	500.00	65.86	21.66	6.50	168.31
Germany	20.50	13.73	9.22	97.70	9.18	93.02	−700.00	650.00	77.66	47.12	2.52	544.44
Greece	13.17	13.59	−6.10	34.47	224.97	282.51	16.48	996.77	148.89	224.95	51.03	852.84
Hungary	16.69	8.15	9.19	38.00	60.85	101.84	−25.59	432.35	84.74	47.48	31.87	243.22
Ireland	17.47	13.44	8.00	58.85	206.49	242.85	−43.02	746.50	117.41	146.71	7.93	488.54
Latvia	20.78	12.31	6.33	56.98	13.64	153.12	−386.84	341.18	60.39	21.99	36.23	127.31
Lithuania	15.28	3.07	11.57	20.99	10.52	45.94	−76.71	73.80	69.49	18.41	47.13	96.96
Malta	24.76	15.15	8.06	51.07	15.22	7.55	3.62	26.67	43.87	28.72	2.32	88.79
Portugal	14.50	5.40	10.40	32.00	64.37	59.25	0.08	234.42	58.29	36.00	30.10	190.02
Romania	18.75	14.16	10.43	73.88	65.80	48.07	0.20	187.38	80.24	29.39	47.59	157.48
Slovakia	15.78	4.58	12.18	25.96	29.80	48.17	3.70	179.49	61.58	14.76	31.37	83.11
Spain	15.28	13.65	1.23	71.90	79.39	138.42	−175.00	695.68	78.74	65.08	19.47	500.00
Sweden	19.59	33.54	1.80	193.00	10.64	16.17	−66.16	79.94	64.98	96.14	3.51	950.00

Source: author's elaboration using data from Bankscope.

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TABLE 4.5 *Additional supplementary indicators – descriptive statistics as at the end of 2012*

	Net interest margin % (PR3)				Net loans/customer and short-term funding % (LIQ2)				Net loans/total assets % (LIQ3)			
Country	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max	Mean	St. dev.	Min	Max
Belgium	0.84	6.29	−37.04	7.35	72.98	77.80	0.55	474.33	45.78	24.78	0.52	97.42
Bulgaria	3.28	1.92	−1.18	7.59	72.82	23.09	28.41	105.94	59.25	16.46	20.73	80.97
Croatia	3.18	1.50	−1.88	7.53	77.93	18.65	46.45	121.47	59.81	9.92	35.57	73.32
Cyprus	7.42	13.92	0.21	44.36	67.28	46.79	6.50	175.79	48.21	28.08	2.50	78.55
Czech Republic	2.33	1.53	0.39	8.19	86.40	55.08	16.44	256.05	62.68	22.58	15.04	98.31
Denmark	3.37	1.49	0.53	8.05	80.61	52.08	27.47	339.46	56.45	15.68	15.18	92.72
Estonia	3.92	5.08	0.74	16.37	70.39	38.68	18.95	117.04	55.64	29.10	13.99	91.96
Finland	1.30	1.19	0.24	5.01	107.34	73.62	13.18	281.04	63.67	28.93	10.43	95.87
France	4.35	41.71	−8.41	650.00	81.37	60.50	0.00	742.96	58.97	25.82	0.00	99.78
Germany	1.79	1.88	−1.14	18.73	64.75	49.82	0.00	350.00	44.92	29.94	0.00	98.07
Greece	1.00	5.31	−15.69	3.42	87.00	19.31	64.16	133.37	73.33	7.74	63.37	87.98
Hungary	4.38	5.14	−2.77	26.14	83.93	50.08	26.90	232.09	56.86	16.78	25.20	89.75
Ireland	0.75	0.59	0.01	2.11	71.72	44.52	3.79	148.55	47.27	34.13	2.31	94.92
Latvia	1.47	1.74	−4.38	2.98	70.22	91.37	0.01	384.67	35.34	25.25	0.01	77.60
Lithuania	2.44	0.85	1.34	3.97	68.54	24.63	11.17	88.24	59.35	20.92	10.28	76.82
Malta	2.10	1.27	0.57	5.17	57.03	35.28	0.13	107.74	43.19	26.71	0.11	70.33
Portugal	2.54	1.91	0.65	7.68	78.37	36.84	10.17	128.44	56.45	30.13	9.05	96.93
Romania	3.86	1.48	0.26	7.61	73.50	25.33	3.50	118.97	57.75	16.33	3.22	76.13
Slovakia	4.86	5.90	1.54	23.24	80.96	17.92	52.93	121.79	63.87	11.02	46.48	82.37
Spain	1.97	0.79	−0.55	4.56	69.51	31.62	0.00	166.67	53.54	24.37	0.00	96.68
Sweden	3.45	8.31	0.53	80.00	102.18	58.63	33.38	311.65	68.27	14.08	8.21	96.25

Source: author's elaboration using data from Bankscope.

they were withdrawn suddenly (deposit run off ratio). The higher this percentage, the more liquid the bank is and less vulnerable to a bank run. This ratio has been suggested by the Commission in a previous study to assess the risk of bank members of DGSs (European Commission, 2009a). Danish, French, German and Latvian banks show percentages all above 40 per cent. Using the risk level thresholds presented in Table 4.1, banks have been classified according to the level of their asset quality and profitability core indicators.

For the two risk classes, a score (ρ^{AQ_1} and ρ^{PR_1}) has been assigned to each bank, ranging from one (very low risk) to five (very high risk) as shown in Table 4.1. For example, let us take the example of a bank with a non-performing loan ratio equal to 0.88, below the one per cent threshold, its asset quality score will be one and the bank is very low risk. Let us say the same bank has a negative ROA in 2012, which is below the threshold of 0.5 per cent, then the profitability score assigned is five (very high risk).

As previously mentioned, the proposal does not identify thresholds for the core indicator on liquidity, but suggests quantiles to assign scores to banks. Therefore, for each country, banks have been ranked according to the level of the liquidity indicator and thresholds have been identified using quantiles (shown in Table 4.6).

Taking the same bank considered above, the liquidity indicator is equal to 50 per cent. Table 4.7 shows the thresholds, quantiles and scores relative to Belgium, the country in which the bank is incorporated. According to Table 4.7, the bank has a score (ρ^{LIQ_1}) equal to one and a very low liquidity risk.

TABLE 4.6 *Thresholds for the core indicator on liquidity*

			Risk level and scores				
			Very low	Low	Medium	High	Very high
Risk class	**Indicator**	**Ratio (%)**	**ρLIQ1=1**	**ρLIQ1=2**	**ρLIQ1=3**	**ρLIQ1=4**	**ρLIQ1=5**
Liquidity	LIQ1	Liquid assets/ customer and short-term funding	Quantiles 80 to 100	Quantiles 60 to 80	Quantiles 40 to 60	Quantiles 20 to 40	Quantiles 0 to 20

Source: author's elaboration from European Commission (2009a).

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TABLE 4.7 *Thresholds, quantiles and scores for the core indicator on liquidity in Belgium*

	Risk level				
	Very low	**Low**	**Medium**	**High**	**Very high**
Indicator	**ρLIQ1=1**	**ρLIQ1=2**	**ρLIQ1=3**	**ρLIQ1=4**	**ρLIQ1=5**
LIQ1	102.38 <x ≤46.00 Quantiles 80 to 100	46.00 <x ≤27.18 Quantiles 60 to 80	27.18 <x ≤14.48 Quantiles 40 to 60	14.48 <x ≤5.62 Quantiles 20 to 40	5.62 <x≤ 1.18 Quantiles 0 to 20

Source: author's elaboration using data from Bankscope.

The same procedure is followed to compute the liquidity scores for banks incorporated in the other 20 countries under scrutiny.

The core composite score can now be calculated, according to the following formula:

$$\rho^{COR} = 1/3 * (\rho^{AQ_1} + \rho^{PR_1} + \rho^{LIQ_1}) \quad (1)$$

The core composite score ranges from one to five, as for its components. To complete the example of the Belgian bank, its composite score is equal to 2.3, computed as the average of ρ^{AQ_1} equal to one, ρ^{PR_1} equal to five and ρ^{LIQ_1} equal to one. This bank shows a level of core risk between low and medium. The core composite scores have been computed for a reduced sample of 1,034 banks because of lack of data. In addition, the core composite score does not include a ratio assessing bank risk in the capital adequacy class. This risk class has been included in the supplementary indicators, which are discussed below.

Supplementary composite score

The proposal allows member states to determine supplementary indicators for calculating risk-based contributions. Some indicators have been proposed by the Commission, as listed in Table 4.2, and have been computed in the assessment. The total capital ratio (CA1) is the capital adequacy ratio under the Basel Accords. It measures Tier 1 and Tier 2 capital as a percentage of the risk-weighted assets. According to Table 4.4, banks established in Estonia, Germany, Latvia and Malta are the most capitalized, with an average ratio above 20 per cent. However, this figure varies significantly among European banks, with a value below 15 per cent in Cyprus, France, Greece and Portugal.

The supplementary indicator on asset quality is the ratio of loan loss provisions to net interest revenues (AQ2). This should be as low as possible,

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as in a well-run bank if the lending book is higher risk, this should be reflected by higher interest margins. If the ratio deteriorates, risk is not being properly remunerated by margins. Greek and Irish banks show a ratio higher than 200 per cent in 2012 and are followed at a distance by Spanish, Portuguese and Romanian banks (79, 64 and 66 per cent respectively).

Efficiency is measured by cost-to-income ratio (PR2). The overheads of running a bank are measured as a percentage of income generated before provisions. Croatian, Greek and Irish banks demonstrate lower efficiency, with an average ratio higher than 100 per cent.

Some additional indicators have been tested (Table 4.5). In the profitability risk class, the net interest margin (PR3), which is the net interest income expressed as a percentage of earning assets, has been included. The higher this figure, the cheaper the funding, or the higher the margin the bank commands; higher margins are desirable as long as the asset quality is maintained. In Hungary and Slovakia, the net interest margin is above four per cent. Only France has a similar figure among the euro area member states.

For liquidity, two additional indicators are considered with the aim of measuring to what extent a bank can pay obligations falling due and fund new business. The first is the ratio of net loans to customer and short-term funding (LIQ2), which measures liquidity in terms of deposits invested in loans. A source of potential liquidity risk, as well as interest rate risk, for a bank is the maturity mismatch between its assets and its liabilities, for example if long-term loans are granted using short-term deposits. The second ratio is net loans to total assets (LIQ3), which indicates what percentage of the assets of the bank are tied up in loans and cannot be cashed in rapidly and at low cost in the event of a sudden withdrawal of funds.[3] According to both ratios, Finnish, Greek and Swedish banks have lower liquidity, whereas German and Malta banking systems are better placed.

No thresholds have been currently proposed for supplementary indicators. Therefore, for each country and for each indicator, banks have been ranked according to the level of the ratio under scrutiny and quantiles have been used to assign scores, as shown in Table 4.8.

The supplementary composite score is computed according to the following formula:

$$\rho^{SUP} = 1/6 * (\rho^{CA1} + \rho^{AQ2} + \rho^{PR2} + \rho^{PR3} + \rho^{LIQ2} + \rho^{LIQ3}) \quad (2)$$

If no indicator is available, the average is accordingly computed for a lower number of scores. Taking into consideration the Belgian bank

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TABLE 4.8 *Definition, thresholds, quantiles and scores for supplementary indicators*

Risk class	Indicator/ ratio (%)	Definition	Risk level (quantiles)				
			Very low	Low	Medium	High	Very high
			ρ=1	ρ=2	ρ=3	ρ=4	ρ=5
Capital adequacy	Total capital ratio (CA1)	Total capital/ risk-weighted assets	60 to 100	40 to 60	25 to 40	10 to 25	0 to 10
Asset quality	Loan loss provision (AQ2)	Loan loss provision/ net interest revenue	0 to 20	20 to 40	40 to 60	60 to 80	80 to 100
Profitability	Costs to income (PR2)	Operating expenses/ operating income	0 to 20	20 to 40	40 to 60	60 to 80	80 to 100
	Net interest margin (PR3)	Net interest income/ earning assets	80 to 100	60 to 80	40 to 60	20 to 40	0 to 20
Liquidity	LIQ2	Net loans/ customer and short-term funding	0 to 20	20 to 40	40 to 60	60 to 80	80 to 100
	LIQ3	Net loans/ total assets	0 to 20	20 to 40	40 to 60	60 to 80	80 to 100

Source: author's elaboration from European Commission (2009a).

mentioned above, as the supplementary score PR2 cannot be computed, equation (2) becomes:

$$\rho^{SUP} = 1/5^{*} (1 + 1 + 5 + 5 + 2) = 2.8$$

Thus, the bank shows a level of supplementary risk of between low and medium. Because of the lack of data, the supplementary composite score has been computed for a reduced sample formed by 1,031 banks. Figure 4.1 shows the average core and supplementary composite scores per country. All core composite scores are included in the range between very low risk (1.12 in Cyprus) and medium risk (3.33 in Greece). Cyprus, Portugal and Ireland, which have been facing systemic banking crises and failures of large banks, show the lowest core and supplementary

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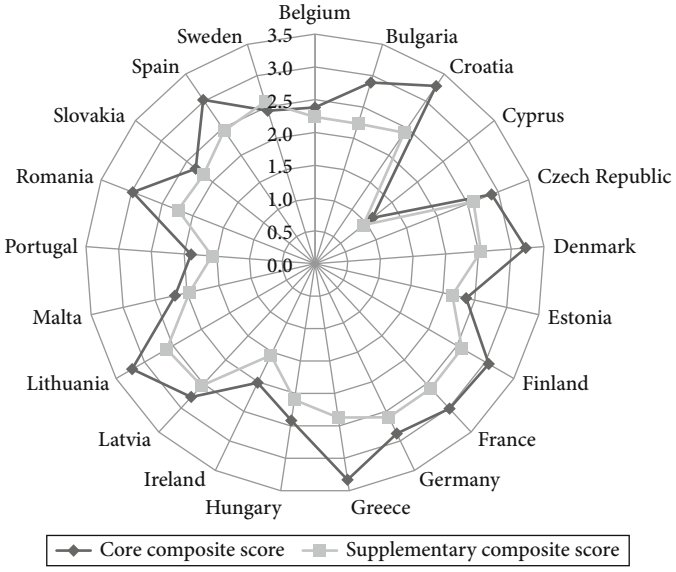

FIGURE 4.1 *Core and supplementary composite scores – average per country*
Source: author's elaboration using data from Bankscope.

composite scores. This can be explained partly by the extensive support those banks received from governments. However, the Greek banking system, which has also been troubled, does not achieve the same result. Considering the supplementary composite score, the range is lower and varies from 0.94 (Cyprus) to 2.61 (Lithuania). France and Germany show high supplementary composite scores.

Total composite score and beta

Core and supplementary composite scores are used to assess the bank's total composite score and to assign the risk-adjusted coefficient (beta) to calculate the bank's contribution to the DGS.

The total composite score is computed according to the following formula:

$$\rho^{TCS} = 3/4 * \rho^{COR} + 1/4 * \rho^{SUP} \quad (3)$$

Table 4.9 lists the risk weights that have been assigned to each bank depending on the composite score. The Belgian bank's total composite score is equal to 2.45, which corresponds to 100 per cent beta. This bank

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TABLE 4.9 *Total composite scores and risk coefficients*

Composite score (ρ^{TCS})	$1 < \rho \leq 1.5$	$1.5 < \rho \leq 2.5$	$2.5 < \rho \leq 3.5$	$3.5 < \rho \leq 4.5$	$4.5 < \rho \leq 5$
Risk-adjusted coefficient (β)	75%	100%	125%	150%	200%

Source: European Commission (2010c).

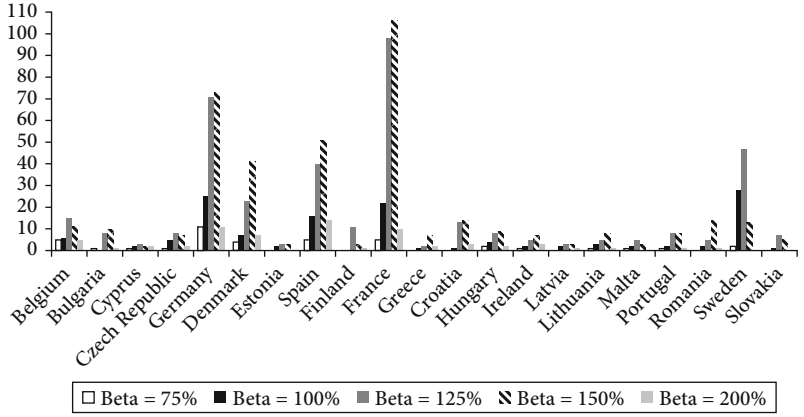

FIGURE 4.2 *Number of banks for each risk-adjusted coefficient (beta) – per country*
Source: author's elaboration using data from Bankscope.

does not have to pay increased contributions to the scheme, but nor does it qualify for a discounted payment (75 per cent risk coefficient).

Beta has been computed for 1,027 banks in 21 member states and follows the distribution in Figure 4.2.

Out of 1,027 banks, 41 institutions (four per cent of the total sample) score a beta equal to 75 per cent, thus having a discount on the amount of contribution they have to pay compared to the standard contribution. Some countries, such as Estonia, Finland, Greece and Croatia, have no banks in this risk class. A beta equal to 125 per cent and 150 per cent has been assigned to the majority of banks in the sample (38 per cent and 39 per cent of banks respectively). Only seven per cent of the banks investigated should pay twice the standard contribution (beta equal to 200 per cent).

It is even more interesting to investigate bank distribution according to total deposits (Figure 4.3).

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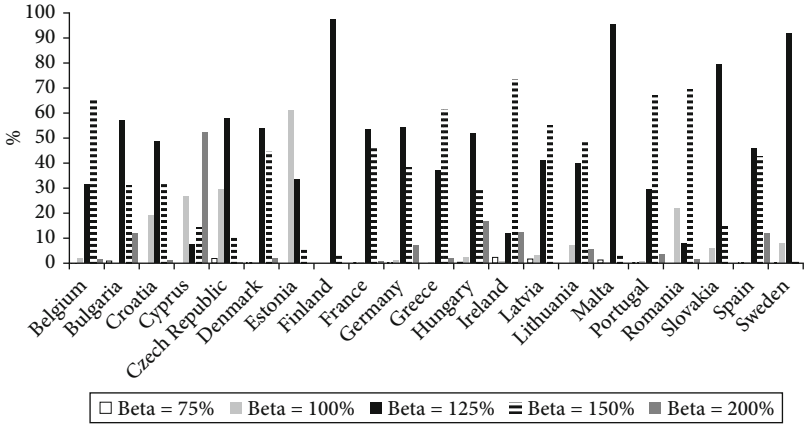

FIGURE 4.3 *Bank total deposits for each risk adjusted coefficient (beta) – per country*

Source: author's elaboration using data from Bankscope.

Fifty per cent of the sample as for total deposits score a beta equal to 125 per cent, and an additional 44 per cent score a beta of 150 per cent. Thus almost the entire sample has to pay higher contributions. Only 0.12 per cent of the sample is entitled to pay lower fees to the schemes, whereas five per cent should double its contributions.

Risk-based contribution

The last part of the assessment aims to establish the change in contribution that should be paid by each bank under the new rules. The risk-weighted amount of contribution of a single bank (RA_i) is computed by multiplying beta by the contribution base (CB) according to the following formula:

$$RA_i = CB * \beta_i \quad (4)$$

The contribution base has been defined as the eligible deposits, that is, deposits which are included in the protection. According to the proposal, all deposits by households and firms are eligible for protection. As discussed in Chapter 3, deposits by large companies were excluded from protection by Directive 1994/19/EC. The 2009 directive did not modify the scope of protection, but a following report by the Commission suggests extending protection to all enterprises regardless of their size.[4]

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Considering the Belgian bank used in the previous examples, as its beta is 100 per cent, the risk-weighted amount of the contribution is equal to the total customer deposits eligible for protection (approximately €8.5 billion).

The risk-based contribution has been estimated for a reduced sample formed by 940 banks (Table 4.10).[5] France, Germany and Spain together comprise 55 per cent of the sample (81 per cent in terms of total deposits). The presence of banks incorporated in Croatia, Czech

TABLE 4.10 *Reduced sample for risk-based contribution*

	Beta (%)					Total number of banks per country	Total deposits of banks (in percentage)
Country	**75**	**100**	**125**	**150**	**200**		
Belgium	1	5	14	11	3	34	6.9%
Bulgaria	1		8	10	1	20	0.1%
Croatia		1	13	14	3	31	0.6%
Cyprus		2	3	2	2	9	0.0%
Czech Republic	1	5	8	7	1	22	18.3%
Denmark	3	7	21	38	7	76	0.3%
Estonia		2	3	3		8	0.1%
Finland			11	2		13	18.9%
France	2	18	90	106	10	226	1.6%
Germany	4	19	62	69	11	165	43.7%
Greece		1	2	7	1	11	1.6%
Hungary	2	2	8	8	2	22	0.0%
Ireland	1	1	5	6	2	15	0.0%
Latvia	1	3	5	8		17	2.2%
Lithuania		1	3	3	1	8	0.0%
Malta	1	2	5	2		10	0.2%
Poland	1	2	7	6	1	17	0.1%
Romania		2	5	14	1	22	2.3%
Slovakia		1	7	4		12	0.1%
Spain	4	14	37	51	14	120	2.3%
Sweden	2	27	41	12		82	0.4%
Total number of banks per risk-adjusted coefficient (beta) *(in percentage)*	24 *(3%)*	115 *(12%)*	358 *(38%)*	383 *(41%)*	60 *(6%)*	940	100%
Total deposits of banks (in percentage)	0.1%	1.0%	50.0%	44.3%	4.6%		

Source: author's elaboration using data from Bankscope.

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Republic, Lithuania and Hungary is almost negligible (less than 0.1 per cent of the total sample as far as total deposits are concerned). The distribution of banks per risk-adjusted coefficient remains largely unchanged.

The risk share of a single bank (RS_i) is computed by the ratio of the risk-weighted amount of contribution of the bank itself to the risk-weighted amount of contribution of all banks in the DGS according to the following equation:

$$RS_j = \frac{RA_j}{\sum_{k=1}^{n} RA_k} \tag{5}$$

The assessment computes the risk share of each bank for the countries under scrutiny, summing up the risk-weighted amounts of contribution of all banks in the country. Coming back to the Belgian bank, its risk share in the Belgian DGS is 0.86 per cent, computed as the ratio of its total customer deposits weighted by the risk coefficient (€8.5 billion, as reported above) to the total risk-weighted amounts of contribution of Belgian banks considered in the assessment (approximately €978 billion).

To compute the amount of risk-based contribution of a member bank (C_i), the risk share (RS_i) for the i^{th} member bank has to be multiplied by the total amount of contributions to be collected by the scheme (TC). This contribution is the fraction of total contribution assigned to each bank according to its risk. The formula is as follows:

$$C_i = TC * RS_i \tag{6}$$

The total contribution has been set by the proposal at 0.8 per cent of covered deposits in each country. Unfortunately, data on covered deposits are not available at the bank level as it would be necessary to know the number of depositors per bank and the amount of deposits not exceeding €100,000. Covered deposits cannot be estimated at the country level as data on covered ratios are not available for all countries. Therefore, in the assessment eligible deposits rather than covered deposits, that is, the total customer deposits of all banks in a country, are used. Eligible deposits can coincide with covered deposits if a depositor has less than €100,000 in a single bank account. Nevertheless, eligible deposits are on average larger than covered deposits as, by definition,

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covered deposits are the fraction of eligible deposits covered by the guarantee. The assessment therefore computes the amount of risk-based contribution of banks on a larger total contribution base, overestimating the contribution the single bank has to pay to the scheme under the new rules.

For instance, the Belgian bank has to pay an annual contribution of more than €47 million, which is 0.86 per cent of the total contribution to be paid by Belgian banks in 2012. The total contribution is computed by multiplying 0.8 per cent times the total customer deposits of Belgian banks considered in the assessment. Because eligible deposits have been used rather than covered deposits, the estimated risk-based contribution of the Belgian bank is overestimated and represents an upper limit for the effective contribution it should pay under the new regime.

Change in contribution

The risk-based contribution estimated for each bank has to be compared to the contribution paid by the same bank under the DGS rules currently in place. Cyprus and France have been excluded because they do not provide sufficient information to compute the amount currently paid by banks. In France for instance, according to the law, the contribution of each member institution is calculated by multiplying the total amount of funds to be collected by the scheme (decided every year by the government) by the share of risk of each member institution, which indicates the relative weight of each member bank in terms of its contribution base, adjusted by risk factors. As publicly available information on how adjustment is performed is incomplete, Cypriot and French banks have been dropped from the sample. The final assessment has been performed on 705 banks in 19 countries (Figure 4.4). The majority of the sample (40 per cent) is now formed by German and Spanish banks. In terms of total deposits the banks incorporated in these two countries account for 67 per cent of the sample. Croatia, Czech Republic, Lithuania and Hungary, as before, have only few banks under investigation, which cover less than 0.1 per cent of the sample total deposits.

As reported in Table 3.2, eight countries among the 19 under scrutiny provide some form of risk adjustment for contributions to be paid in ex ante funded schemes. They account for the 27 per cent of the sample under scrutiny in terms of total deposits. While the flat rate applied to

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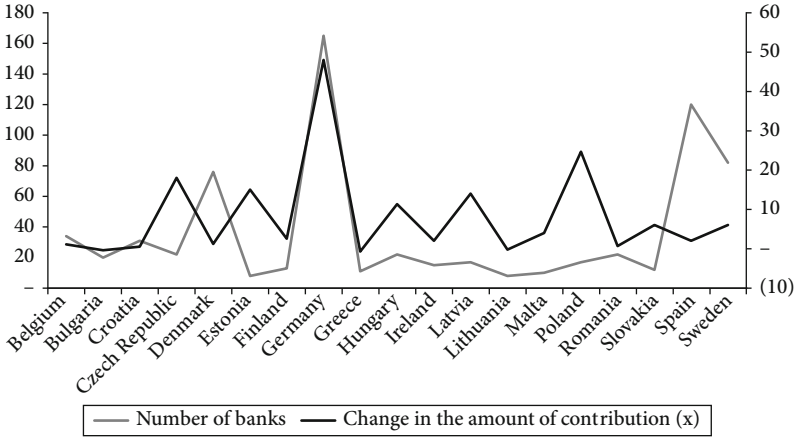

FIGURE 4.4 *Number of banks and change in the amount of contribution (x times) per country*

Source: author's elaboration using data from Bankscope.

compute contributions is generally disclosed in national legislation, information on the indicators used to measure bank risk, or on weights to compute risk adjustments, is not publicly available. Thus, even if some sort of risk adjustment is in place, this experiment assumes a flat rate of contribution regardless of the risk of the bank.

With these caveats in mind, the amount of contribution has been estimated at country level, multiplying the flat rate of contribution disclosed by the national legislation by the contribution base. For all countries but Croatia, Denmark, Finland and Sweden, the contribution base at national level is formed by eligible deposits. In the aforementioned member states, covered deposits are used. In Ireland, total deposits are considered.[6]

As a final step, the change in contribution has been computed by comparing the risk-based contribution, estimated applying the Commission's proposal, to the amount of current contribution (Figure 4.4). In relation to the assumptions made, the results should be read with extreme caution. At the European level, on average, contribution to the scheme will be higher under the new regime (3.44x). This is caused by two factors: the change in the rate applied to compute the amount of contribution member banks have to pay to the scheme and the change from flat rate to risk-adjusted contribution.

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The first factor increases the contributions for all European banks to various extents. Indeed, under the new proposal, the amount of contribution member banks have to pay to the scheme is 0.8 per cent of the contribution base. This rate is higher than that currently applied in the member states under scrutiny. As discussed in the previous chapter, the highest rate is currently 0.55 per cent, but various DGSs apply rates lower than 0.2 per cent. Thus, the situation varies significantly among the 19 countries considered depending on the rules of each DGS. For some countries, such as Germany, Poland, the Czech Republic, Estonia, Latvia and Hungary, the new contribution is more than ten times larger than the current one.

The second element which affects the contributions is risk. Risk adjustment increases the contribution a riskier bank has to pay, up to twice the standard contribution (beta equal to 200 per cent), but reduces contributions for safer banks (beta equal to 75 per cent). This result is captured at bank level. For example, considering the Belgian bank with 100 per cent beta, the annual contribution of more than €47 million under the new regime is 1.17 times the amount currently paid. This difference is only due to the first factor, that is, to the change in the rate applied, as the second factor is equal to the standard contribution.

Nevertheless, at the country level, the overall effect of the risk adjustment factor is neutral. Some banks have to pay higher contributions, but others pay lower fees. Therefore, the total change in contributions due to this factor cannot be properly assessed with this experiment. The next section extends the assessment to a theoretical pan-European scheme, thus addressing the relative impact of the two factors on contributions.

Conclusion

As already outlined, a wide variety of indicators have been considered, tested and applied by EU schemes. These indicators are often based on banks' financial statements. A significant effort has been made to identify the indicators to be applied in the assessment. As a result, additional indicators to those proposed by the Commission have been tested; for each of the key areas that are commonly used to assess the financial soundness of a bank (capital adequacy, asset quality, profitability and liquidity), core and supplementary indicators have been computed.

The assessment is performed on sample of banks built for this purpose, covering a final sample formed by 705 EU credit institutions. In relation

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to the dataset, the results should be read with extreme caution due to the fact that the sample of banks does not cover the entire banking system in each member state, being particularly small in some countries. However, as most DGSs currently do not collect any data on the financial ratios of their members, or this information is not public, the use of this sample is a good proxy to assess the impact of the potential introduction of the new framework.

Focusing on those countries adopting an ex ante system, the estimated contributions currently paid by DGS members are compared to the contributions required under the MIM. The MIM overcomes the main drawbacks of the SIM by considering information from different risk classes. The results vary greatly among countries, with some member states currently underestimating the risk of their banking systems and seeking lower contributions than banks should pay under the new, risk-adjusted framework.

It should be highlighted that the assessment relies on a number of assumptions and choices being made when assigning values to the parameters. The assumptions and choices made mainly cover three aspects: how risk ratings are assigned to banks, that is the choice of the quantiles of the distribution of the accounting ratios; how differences in risk profiles should be reflected in terms of contributions, that is the choice of the corrections/adjustments; the weights assigned to different indicators and to core versus supplementary scores. All these choices can obviously be changed and adjusted to tailor the approach to the specific needs of the domestic banking system.

4.4 A pan-European deposit guarantee scheme

Under the new directive, member states may allow DGSs to lend to other schemes within the EU on a voluntary basis, if the borrowing DGS is not able to fulfil its obligations because of a lack of available financial resources and that the borrowing DGS has made recourse to extraordinary contributions. The total amount lent cannot exceed 0.5 per cent of the covered deposits of the borrowing DGS.

In addition, the borrowing country must repay the loan within five years. Interest, due only at the time of repayment, must be at least equivalent to the marginal lending facility rate of the ECB during the credit period. Member states shall ensure that the contributions levied

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by the borrowing DGS are sufficient to reimburse the amount borrowed and to re-establish the target level as soon as possible.

Such provisions work towards the creation of a network of lending between DGSs in Europe, but are far from leading to the establishment of a single pan-European scheme, funded by and including all banks in the Union to avoid potential distortion. Directive 2009/14/EC recommended investigating the benefits and costs of the possible introduction of a Community DGS. As described in Chapter 3, the European Commission (2010d) estimated that a single scheme would save administrative costs of about €40 million per year. In addition, a pan-European scheme would fit better into the banking union framework and the single resolution mechanism. Nevertheless, the project has been temporarily abandoned because of some legal issues that need further investigation.

Against this background, the empirical assessment is now extended to investigate how contributions change and which countries would benefit in terms of lower payments under the assumption of establishing a single scheme.

Pan-European contribution

The framework discussed in the previous section is now changed to allow for a theoretical pan-European scheme to be investigated. The pan-European scheme would collect contributions from all banks in the member states ex ante and according to their risk level. No changes with respect to the previous assessment are made when computing the asset quality and profitability core indicators. Indeed, the risk level thresholds presented in Table 4.1 are in absolute terms and are used to assign a score to each bank according to the level of the two core indicators, regardless of the DGS to which they contribute.

As far as the liquidity core indicator and supplementary indicators are concerned, no thresholds have yet been proposed. Therefore, all European banks have been ranked according to the level of the indicator under scrutiny and quantiles have been used to assign scores. This assessment uses a uniform distribution for all banks, whereas the previous experiment considered 21 different distributions for each indicator, based on the DGS to which each bank pays its contributions. The quantiles applied are the same as shown in Tables 4.6 and 4.8 and the procedure for computing the total composite score and assigning betas is not changed. However, now beta is the risk weight assigned to a bank

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relative to all banks in the sample (EU level) and not to banks in the same scheme (country/DGS level).

A first consideration is that 210 banks out of 1,027 (20 per cent) change their risk weight if a pan-European scheme is established. Sixty-four per cent of these banks score a higher beta. The majority of banks with an increased beta (46 per cent) are incorporated in Spain and Sweden, whereas more than 20 Danish banks would be assigned a decreased beta if a unique deposit guarantee scheme were established. Germany has a mixed result, with an increased beta for 17 banks and a decreased beta for 12 institutions. Figure 4.5 shows the number of banks which change beta with pan-European risk adjustment compared to risk adjustment at the country level.

Sixty-four per cent of these banks score a higher beta. The majority of banks with increased beta (46 per cent) are incorporated in Spain and Sweden, whereas more than 20 Danish banks would have assigned a decreased beta if a unique deposit guarantee scheme is established. Germany has a mixed result, with increased beta for 17 banks and decreased beta for 12 institutions.

In terms of size, Spanish banks with increased beta account for the highest percentage of total customer deposits (70 per cent) (Figure 4.6). This country is then followed by Greece, Ireland and Portugal, where a wider deposit base is associated to banks with increased beta. On the

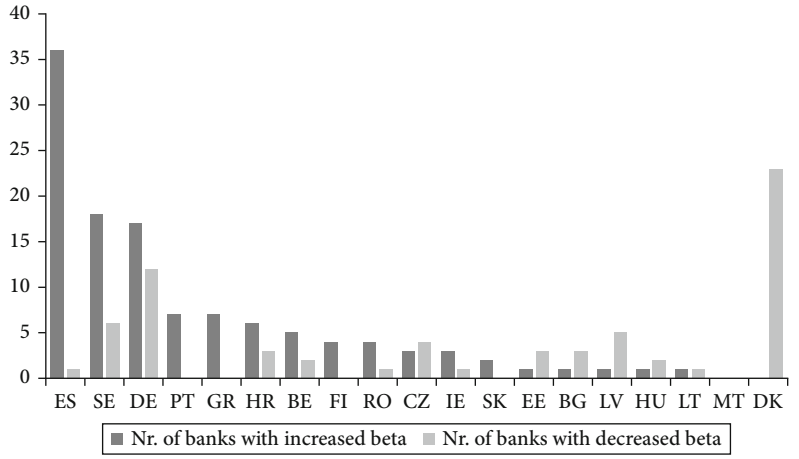

FIGURE 4.5 *Change in beta with pan-European risk adjustment – number of banks*

Source: author's elaboration using data from Bankscope.

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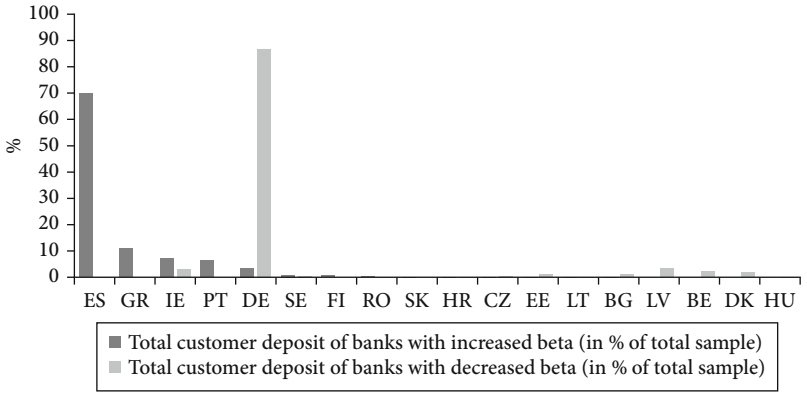

FIGURE 4.6 *Change in beta with pan-European risk adjustment – total customer deposits*

Source: author's elaboration using data from Bankscope.

contrary, 87 per cent of the sample with decreased beta is located in Germany, followed at a distance by Ireland and Latvia (less than four per cent of the sample each).

The new betas have been used to compute the amount of the risk-adjusted contribution that each bank should pay to the pan-European scheme. The same caveats as those described in the assessment at country level apply. In this single framework, as well as in that described in the previous section, contribution to the scheme will be higher than is currently paid by banks. The causes are the same as before: the contribution is higher because of the change in the rate applied to compute this amount and because of the change from flat rate to risk-adjusted contribution. Nevertheless, in the previous experiment, the risk-adjusted element could not be investigated at country level as the higher contributions to be paid by riskier banks were offset by lower contributions due from less risky banks. At the pan-European level, the experiment can disentangle both effects, as shown in Figure 4.7.

The higher contributions that should be paid by all banks in a country are split in two components: the dark grey area shows higher contributions due to the change in the rate applied (0.8 per cent). This area is greater than zero for all countries under scrutiny. The second component, highlighted in pale grey, shows the higher or lower contributions to be paid because of the risk adjustment. Greek, Irish and Spanish banks

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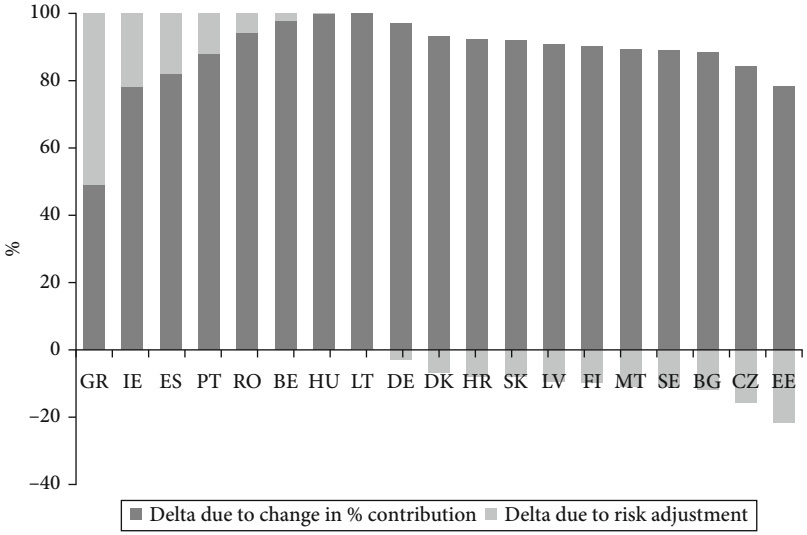

FIGURE 4.7 *Change in contribution with pan-European scheme (in percentage)*
Source: author's elaboration using data from Bankscope.

would pay higher fees to the scheme, not only because the rate applied changes, but also (and foremost in the case of Greece) because they are riskier than their European peers. Germany, which scored the largest change in contributions in absolute terms (larger than 10x), because of the size of its banking system, would be better off if a pan-European scheme were established. Indeed the higher contribution to be paid is exclusively due to the difference between the rates applied. As far as risk is concerned, German banks would actually pay lower fees. In this respect, Estonian banks would get the most out of a common scheme.

As a final remark, the assessment investigates whether the change in the amount of contribution to be paid under a pan-European scheme would be significantly different from that paid under the new framework proposed by the Commission with national DGSs. In fact, the change is similar for all countries, as can be seen in Figure 4.8.

Only seven countries out of 19 (37 per cent of the sample) would pay higher contributions if a single scheme were established. Portuguese banks would be the most negatively affected, followed at some distance by Irish and Spanish institutions. In contrast, in 12 countries the change in contribution with respect to the actual framework is lower, thanks

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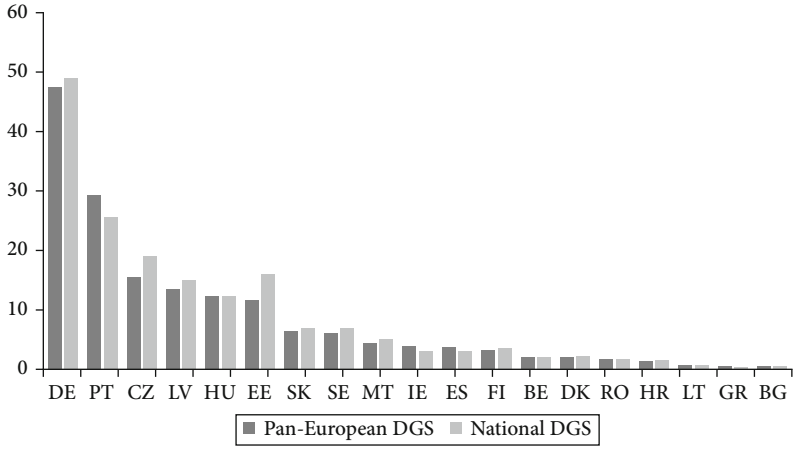

FIGURE 4.8 *Change in contribution (x times) from actual framework: national vs pan-European DGS*

Source: author's elaboration using data from Bankscope.

to risk mitigation now computed at the European level. The Czech Republic, Estonia and Germany are the countries which benefit more from the hypothetical establishment of a common DGS. However, many countries, such as Hungary, Belgium and Latvia, undergo practically no change.

4.5 Conclusion

The establishment of a new framework for DGSs implies a significant change in the amount of contributions European banks have to transfer to the national schemes. At the aggregate level, the new contributions are 3.44 times higher than those currently paid. Some countries would have to pay more than ten times their current contributions. It is important to investigate the drivers of this change in order to disentangle various effects.

The larger amount of transfers is due to the establishment of an ex ante, risk-adjusted framework with a higher annual rate of contribution than that presently applied by the member states. In fact, the change would be even more relevant for those countries where the scheme is ex

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post funded, which have been excluded from the assessment. The change in the rate applied to compute the amount of contribution negatively affects all countries, even if to various extents. The change from flat rate to risk-adjusted contribution mitigates this effect for less risky banks within the same country.

Much resistance has been encountered at the European level to the establishment of a single DGS. However, a common scheme would carry many benefits in terms of lower administrative costs and better coordination with the common resolution framework in the banking union. In addition, the cost sustained by banks assuming the establishment of a pan-EU scheme is almost equal to that paid to the national DGSs under the new framework. In fact, many countries with less risky banking systems would actually pay lower contributions to a common scheme. From a supervisory perspective, a single DGS would provide an incentive for riskier banks to engage in more risk-averse behaviour to pay less in contributions.

Notes

1 Article 57 of Directive 2006/48/EC defines the own funds of credit institutions as consisting of the following items: '(a) capital within the meaning of Article 22 of Directive 86/635/EEC, in so far as it has been paid up, plus share premium accounts but excluding cumulative preferential shares; (b) reserves within the meaning of Article 23 of Directive 86/635/EEC and profits and losses brought forward as a result of the application of the final profit or loss; (c) funds for general banking risks within the meaning of Article 38 of Directive 86/635/EEC; (d) revaluation reserves within the meaning of Article 33 of Directive 78/660/EEC; (e) value adjustments within the meaning of Article 37(2) of Directive 86/635/EEC; (f) other items within the meaning of Article 63; (g) the commitments of the members of credit institutions set up as cooperative societies and the joint and several commitments of the borrowers of certain institutions organised as funds, as referred to in article 64(1); and (h) fixed-term cumulative preferential shares and subordinated loan capital as referred to in Article 64(3)'. According to Article 76 of the above-mentioned directive, risk-weighted assets can be computed applying: 'either the Standardised Approach provided for in Articles 78 to 83 or, if permitted by the competent authorities in accordance with Article 84, the Internal Ratings Based Approach provided for in Articles 84 to 89'.

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2 Non-banking credit institutions, specialized governmental credit institutions, which are public institutions acting on privileged or protected segments, such as national development finance or benefiting from governmental guarantee or sponsoring, central banks, micro-financing institutions, securities firms, asset management companies, investment and trust corporations, finance companies, clearing and custody institutions and group finance companies, are therefore excluded from the assessment.
3 Net loans mainly include residential mortgage and other mortgage loans which are normally medium- to long-term loans.
4 Bankscope provides total customer deposits, which does not include deposits by corporation of any size. Hence, the amount of deposits considered in the assessment is lower than the eligible deposit base proposed by the Commission, but not so distant from the rules currently in force.
5 Data on total customer deposits are not available from Bankscope for the full sample.
6 As previously reported, covered deposits cannot be estimated at the country level; thus, eligible deposits have been used in the computation.

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Conclusion

Abstract: *This book has investigated the new rules on deposit guarantee schemes in the European single supervisory and resolution framework. After investigating the variety of features in place in the member states, an empirical assessment is performed to test the effect of risk-adjusted contributions. Whereas higher contributions should be paid under the new framework, the establishment of some adjustment for risk mitigates this effect for less risky banks. Assuming the establishment of a pan-European scheme, less risky national banking systems pay lower contributions, whereas if national compartments are maintained, the overall effect of introducing risk adjustment is neutral at the country level.*

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Deposit guarantee schemes (DGSs) are currently facing considerable changes in Europe. On the one hand, a single framework to protect depositors, notwithstanding the nationality of the bank in which the deposits are placed, is of utmost importance to guarantee the safety and soundness of the banking systems and to reduce the risk of bank runs. The size of the European banking systems compared to the real economy is significant and the lack of coordinated measures to address banking crises showed the existing weaknesses when the recent crisis hit. On the other hand, the establishment of common rules for guarantee schemes is a difficult process because of the variety of legislation currently applied in the member states and the difficulties national governments have in overcoming domestic interests. In consequence, more than five years have passed in seeking a common agreement. This book investigates the difficult road which is leading to the creation of a single supervisory and resolution framework for banks. Within this framework, the new rules on DGSs are of utmost importance, as can be seen from the recourse to taxpayers' funds to manage large bank failures during the financial crisis.

Analysing the main features of existing DGSs, it is easy to understand why it is so difficult to reach an agreement. In the EU, more than 40 schemes are currently in place; they cover banks specialized in different business, backed up by governments or funded exclusively via bank contributions. Such a heterogeneous framework can be hardly harmonized. Extensive work has been done at the European level to identify the optimal features of DGSs. Most work is related to the change in funding, from ex post to ex ante, and to the introduction of some sort of risk adjustment for the amount of contribution to be paid to the scheme. Risk adjustment would reduce procyclical effects as a bank should pay higher fees only if its risk has increased but other banks' risk has not. In addition, this kind of adjustment would discourage high risk-taking behaviour.

The empirical assessment, performed on a large sample of EU banks, tests various indicators belonging to four main criteria, such as capital adequacy, asset quality, profitability and efficiency, and liquidity. The introduction of a higher contribution rate than currently applied by the member states would obviously lead to the collection of higher bank contributions. However, the establishment of some adjustment for risk mitigates this effect for less risky banks. Indeed, if the banking system is safe, risk adjustment translates into a lower increase in payments at the

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country level. However, under the new framework, national DGSs will still be funded and managed separately, even if some lending between countries is allowed.

The experiment assumes the establishment of a pan-European scheme which would collect contributions from all European banks regardless of the country of incorporation. A uniform scheme has many advantages: first administrative costs are reduced; second, less risky national banking systems pay lower contributions. However, if national compartments are maintained, the overall effect of introducing risk adjustment is neutral at the country level. Virtuous countries would be better off under a single scheme. Finally, once the new higher rate of contribution was applied, the cost sustained by banks in the pan-EU scheme would be almost equal to that paid if national deposit guarantee schemes were kept. As a final remark, a common scheme would fit better within the single resolution framework, granting more effective management of failing banks.

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Appendix

TABLE A.1 *Stages of Economic and Monetary Union*

Stages	Achievements	Starting date
Stage one	Complete freedom for capital transactions Increased co-operation between central banks Free use of the European currency unit (ECU), forerunner of the euro Improvement of economic convergence	1 July 1990
Stage two	Establishment of the European Monetary Institute (EMI) Ban on the granting of central bank credit Increased co-ordination of monetary policies Strengthening of economic convergence Process leading to the independence of the national central banks, to be completed at the latest by the date of establishment of the European System of Central Banks (ESCB) Preparatory work for Stage three	1 January 1994
Stage three	Irrevocable fixing of conversion rates Introduction of the euro Conduct of the single monetary policy by the ESCB Entry into effect of the intra-EU exchange rate mechanism (ERM II) Entry into force of the Stability and Growth Pact	1 January 1999

Source: http://www.ecb.europa.eu/ecb/history/emu/html/index.en.html

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TABLE A.2 *The Financial Services Action Plan*

Action	Directive number	Transposition deadline
Level 1 – Lamfalussy directives		
Directive on market abuse (MAD)	Directive 2003/6/EC	12/10/2004
MAD implementing directive 2003/124	Directive 2003/124/EC	12/10/2004
MAD implementing directive 2003/125	Directive 2003/125/EC	12/10/2004
MAD implementing directive 2004/72	Directive 2004/72/EC	12/10/2004
Directive on prospectuses	Directive 2003/71/EC	01/07/2005
Directive on markets in financial instruments (MiFID)	Directive 2004/39/EC	31/01/2007
MiFID implementing directive 2006/73	Directive 2006/73/EC	31/01/2007
Transparency directive (TD)	Directive 2004/109/EC	20/01/2007
TD implementing directive 2007/14	Directive 2007/14/EC	08/03/2008
Level 2 – Other FSAP directives		
Directive on the taking up, pursuit and prudential supervision of the businesses of electronic money institutions	Directive 2000/46/EC	27/04/2002
Directive amending the insurance directives and the ISD to permit information exchange with third countries	Directive 2000/64/EC	17/11/2002
Directive on the reorganization and winding-up of insurance undertakings	Directive 2001/17/EC	20/04/2003
Directive amending the money laundering directive	Directive 2001/97/EC	15/06/2003
Two directives on UCITS	Directive 2001/107/EC	13/08/2003
	Directive 2001/108/EC	13/08/2003
Directives amending the solvency margin requirements in the insurance directives	Directive 2002/12/EC	20/09/2003
	Directive 2002/13/EC	20/09/2003
Directive on financial collateral arrangements	Directive 2002/47/EC	27/12/2003
Directive amending the 4th and 7th company law directives to allow fair value accounting	Directive 2001/65/EC	01/01/2004

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Directive on the taxation of savings income in the form of interest payments	Directive 2003/48/EC	01/01/2004
Directive on the reorganization and winding-up of banks	Directive 2001/24/EC	05/05/2004
Directive on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate	Directive 2002/87/EC	11/08/2004
Directive on the distance marketing of financial services	Directive 2002/65/EC	09/10/2004
Directive supplementing the statute for a European company with regard to the involvement of employees	Directive 2001/86/EC	10/10/2004
Directive on insider dealing and market manipulation	Directive 2003/6/EC	12/10/2004
Directive modernizing the accounting provisions of the 4th and 7th company law directives	Directive 2003/51/EC	01/01/2005
Directive on insurance mediation	Directive 2002/92/EC	15/01/2005
Directive on the prudential supervision of pension funds	directive 2003/41/EC	23/09/2005
Directive on take-over bids	Directive 2004/25/EC	20/05/2006
Directive on the taking up and pursuit of the business of credit institutions	Directive 2006/48/EC	31/12/2006
Directive on the capital adequacy of investment firms and credit institutions	Directive 2006/49/EC	31/12/2006
Directive on markets in financial instruments (update of ISD)	Directive 2004/39/EC communication COM(2000)729	31/01/2007
Money laundering directive	Directive 2005/60/EC	15/12/2007

Source: http://ec.europa.eu/internal_market/finances/docs/actionplan/index/100825-transposition_en.pdf

TABLE A.3 *EU28 Member States deposit guarantee schemes – legal framework*

EU28 MS (number of DGS)	Name(s) of the DGS	Legal framework
Austria (5)	Einlagensicherung der Banken und Bankiers GmbH; Hypo-Haftungsges m.b.H.; Sparkassen Haftungs Aktiengesellschaft; Schulze-Delitzsch Haftungsgenm reg. Gen.m.b.H.; Raiffeisen-Einlagensicherung reg. Gen. m.b.H.	EU Directive 94/19 of 30 May 1994 on deposit protection schemes; First Amendment to the Austrian Banking Act dated 22 August 1996, implementing EU Directive 94/19. The amendment was published in the Austrian Official Gazette (Bundesgesetzblatt) N. 445/1996, and became effective on 1 August 1996. Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Belgium (1)	Fonds de protection des depots et des instruments financiers	Royal Decree N.175 of 30 June 1935, establishing the Institut de Rèescompte et de Garantie (IRG); Royal Decree N. 185 of 7/9/1935 (Banking Act); Law dated 4 December 1990, establishing the Caisse d'interventions des societés de bourse; Law dated 22 March 1993 on the legal status and supervision of credit institutions; EU Directive 94/19 dated 30 May 1994 on deposit protection schemes; Law dated 23 December 1994 implementing EU Directive 94/19 and establishing a sole deposit protection scheme which superseded all previously existing schemes; EU Directive 97/9 dated 3 March1997 concerning depositor protection schemes; Law of 17 December 1998, which came into effect on 30 April 1999, concerning the liquidation of the IRG and of the Caisse d'interventions des societés de bourse, and establishing a sole fund for the protection of depositors and investors (Fonds de protection des depots et des instruments financiers), thus implementing EU Directive 97/9 of 3 March 1997; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

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Bulgaria (1)	Bulgarian Deposit Insurance Fund	Law on Bank Deposit Guarantee; Law on Credit Institutions; Law on Bank Bankruptcy; Ordinance N. 23 on the Terms and Procedure for Payout of Insured Amounts on Deposits with Banks with Revoked Licenses; Ordinance N. 32 on Reporting Requirements and Assignee's in Bankruptcy Budget; Ordinance N. 33 on the Assignee's in Bankruptcy Remuneration; Ordinance N. 34 on Collecting Information and Conducting Inspections Regarding Assignee's in Bankruptcy Activity; Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit guarantee schemes; Directive 2009/14/EC of the European Parliament and of the Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Czech Republic (2)	Deposit Insurance Fund	Act N. 21/1992 Coll., on Banks, as amended by EU Directive 2009/14/EC.
Cyprus (2)	Deposit Protection Scheme; Deposit Guarantee Scheme for Co-operative Societies	The Banking Law, 1997–2009; Business of Credit Institutions Laws; the Laws on the Establishment and Operation of Deposit Protection and Resolution of Credit and Other Institutions Scheme of 2013; the Establishment and Operation of the Deposit Protection and Resolution of Credit and Other Institutions Scheme Regulations of 2013; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Croatia (1)	State Agency for Deposit Insurance and Bank Rehabilitation	State Agency for Deposit Insurance and Bank Rehabilitation Act; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

Continued

TABLE A.3 *Continued*

EU28 MS (number of DGS)	Name(s) of the DGS	Legal framework
Denmark (1)	The Guarantee Fund for Depositors and Investors	Law N. 850 of 23 December 1987, establishing the depositor guarantee scheme; EC Directive 94/19 of 30 May 1994, on deposit protection schemes and EU Directive 97/9 on Investor Guarantee Schemes; Deposit Guarantee Fund Act N. 367 of 14 June 1995, implementing EU Directive 94/19; Executive Order on the Deposit Guarantee Fund N. 754 of 15 September 1995; Act N. 415 of 26 June 1998, effective from 15 October 1998, establishing a new system for the protection of both depositors and investors, and implementing EU Directive 97/9 of 3 March 1997 on investor guarantee funds; Executive Order on the Guarantee Fund, N. 216 of 9 April 1999 establishing the operative principles of the new protection system; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Estonia (1)	Deposit Guarantee Sectoral Fund	Guarantee Fund Act; Statutes of the Guarantee Fund; Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor compensation schemes; Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit-guarantee schemes; Directive 2009/14/EC of the European Parliament and of the Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Finland (1)	Deposit Guarantee Fund	Act on Credit Institutions of 1 January1970, establishing mandatory membership for all Finnish banks in a deposit protection scheme of the relevant bank association; EU Directive 94/19, concerning deposit protection schemes; Amendment to the Act on Credit Institutions, effective from 1 July 1995, implementing EU Directive 94/19; Amendment N. 1229/97 to the Act on Credit Institutions, issued on 19 December 1997 and effective from 1 January 1998, establishing the new deposit protection scheme which superseded those previously in existence. Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

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France (1)	Fonds de Garantie des Dépôts et de Résolution	Banking Act N. 84–46 of 24 January 1984; EU Directive 94/19, on deposit guarantee systems and transcribed into French law by Act 94–679 of 8 August 1994; Regulation of the Association Française des Banques of 8 February 1994 on the deposit protection scheme (solidarity mechanism), ratified on 27 February 1997; Regulations of the Comité de la réglementation bancaire N. 95–01 of 21 July 1995 (Banking Regulation Committee); Decision by the CRBF of 21 February 1997 notifying the lists of guarantee schemes legally recognized in France and of equivalent systems; Law 99–532 of 25 June 1999 modifying the savings guarantee mechanisms Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay; Loi n 2013-672 du 26 juillet 2013 de séparation et de régulation des activités bancaires
Germany (2*)	Entschädigungseinrichtung deutscher Banken (EdB); Entschädigungseinrichtung Öffentlicher Banken (VÖB)	Banking Act of 5 December 1935, subsequently modified on different occasions; EU Directive 94/19 of 30 May 1994 on deposit guarantee systems; Deposit Guarantee and Investor Protection Act, implementing EU Directives on deposit and investor guarantee schemes; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Greece (1)	Hellenic Deposit Guarantee Fund	Banking Act (Law 1665/1951) and following amendments; EU Directive 94/19 concerning deposit guarantee schemes; Law 2324/95 implementing the EU Directive and establishing the Greek Deposit Guarantee Scheme; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Hungary (1)	National Deposit Insurance Fund of Hungary	Act CXII of 1996 on Credit Institutions and Financial Enterprises; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Ireland (1)	Irish Deposit Protection Scheme	EU Directive of 30 May 1994 on deposit guarantee schemes; The 1995 European Communities (Deposit Guarantee Schemes) Regulations, implementing EU Directive 94/19, effective from 1 July 1995, setting out the terms and conditions governing deposit protection in Ireland; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

Continued

TABLE A.3 *Continued*

EU28 MS (number of DGS)	Name(s) of the DGS	Legal framework
Italy (2)	Credit Cooperative Depositors Guarantee Fund; Interbank Deposit Protection Fund	Legislative Decree dated 1 September 1993, N.385 (Banking Act); EU Directive 94/19 concerning deposit protection systems; Law N. 23 of 6 February 1996, Article 23, putting the Government in charge of the implementation of the said EU Directive; Legislative Decree of 4 December 1996, N. 659, implementing EU Directive 94/19 and partially modifying Legislative Decree 385/93; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Latvia (1)	Deposit Guarantee Fund	Deposit Guarantee Law; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Lithuania (1)	Deposit and Investment Insurance	The Republic of Lithuania Law on Deposit Insurance N. IX-192; The Republic of Lithuania Law on Insurance of Deposits and Liabilities to Investors adopted in 2002; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Luxembourg (1)	Deposit Guarantee Association	Law of May 20, 1983, establishing the 'Institut Monètaire Luxembourgeois' (IML) as auditing authority; EU Directive 94/19 concerning deposit guarantee funds; Law dated 11 June 1997 implementing EU Directive 94/19; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Malta (1)	Depositor Compensation Scheme	Legal Notice 369 of 2003 – Depositor Compensation Scheme Regulations; Directive 94/19 on deposit guarantee schemes, amended by Directive 2009/14/EC; Legal Notice 159 of 2012 – Depositor Compensation Scheme (Amendment) Regulation, 2012 – amending Legal Notice 369 of 2003; Legal Notice 340 of 2012 – Depositor Compensation Scheme (Amendment) Regulation (No. 2) , 2012 – amending Legal Notice 369 of 2003.

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Netherlands (1)	Collective Guarantee Scheme of Credit Institutions for Repayable Funds and Portfolio Investment	The 1978 Act on the Supervision of the Credit System (Staatsblad 1978, 255), effective from 1979, setting the rules for the supervisory activities of the Central Bank (Nederlandese Vereniging van Banken) over the banking system, and establishing the creation of a depositor guarantee scheme; The 1992 Act on the Supervision of the Credit System (Staatsblad 1992,722), effective from 1 January 1993, replacing the above-mentioned Staatsblad 1978, 255; EU Directive 94/19 of 30 May 1994 on deposit protection schemes, and the following implementation acts; EU Directive 97/9 of 3 March 1997, concerning investors' guarantee schemes; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Poland (1**)	Bank Guarantee Fund	Act on the Bank Guarantee Fund of 14 December 1994, as amended by Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Portugal (2)	Deposit Guarantee Fund	Decree-Law 298/92, of 31 December 1992, Legal Framework of Credit Institutions and Financial Companies, which also established the Portuguese deposit protection system, or Fund; EU Directive 94/19 of 30 May 1994; Notice N. 11/94 of 29 December 1994, relating to the method of calculation of the annual contributions to be paid to the Fund by member institutions; Decree-Law 246/95 of 14 September 1995, implementing EU Directive 94/19; Executive orders 285-A and B/95, establishing the Fund's protection limit and approving the regulations governing the Fund; Notice N. 8/95, of 19 September 1995, fixing the value of the initial contributions by member institutions; Notice N. 4/96, establishing that part of the periodic contributions, up to a maximum of 75%, that can be replaced by irrevocable payment commitments collateralized by transferable securities. Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

Continued

TABLE A.3 *Continued*

EU28 MS (number of DGS)	Name(s) of the DGS	Legal framework
Romania (1)	Bank Deposit Guarantee Fund	Extracts from the Government Ordinance N. 1/2012 of 11/01/2012 amending and supplementing certain regulatory acts on credit institutions; Excerpts from Ordinance N. 13/2011 of 24 August 2011 regarding the remuneratory and penalty statutory interest on pecuniary obligations and regulating certain financial-fiscal measures in the banking sector; Government emergency ordinance N. 131/2010 amending and supplementing Government Ordinance N. 39/1996 regarding the setting up and the operation of the Bank Deposit Guarantee Fund; Government ordinance N. 39/1996 regarding the setting up and the operation of the Bank Deposit Guarantee Fund; Law N. 207/2011 on the approval of the Government Emergency Ordinance N. 37/2010 amending and supplementing Government Ordinance N. 10/2004 on the bankruptcy of credit institutions; Ordinance N. 10/2004, on the bankruptcy of credit institutions; Emergency Ordinance N. 99/2006 on credit institutions and capital adequacy, with subsequent amendments and completions. Published in the Official Gazette, Part I, N. 1027 of 27 December 2006; Law N. 85/2006 on insolvency proceedings, with subsequent amendments and completions. Published in the Official Gazette, Part I, N. 359 of 21 April 2006; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
Slovenia (1)	Deposit Guarantee Scheme	Regulation on the Deposit Guarantee Scheme (O.G. of RS, Nos. 97/10, 26/12, 75/12, 29/13); Banking Act (O.G. of RS, N. 99/10-official consolidated version, ZBan-1E); Banking Act (O.G. of RS, N. 35/11, ZBan-1F); Banking Act (O.G. of RS, N. 59/11, ZBan-1G); Banking Act (O.G. of RS, N. 85/11, ZBan-1H); Banking Act (O.G. of RS, N. 48/12, ZBan-1I); Banking Act (O.G. of RS, N. 105/2012, ZBan-1J); Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit-guarantee schemes; Directive 2009/14/EC amending Directive 94/19/EC.
Slovakia (1)	The Deposit Protection Fund	Act of the National Council of Slovak Republic N. 118/1996 Coll. dated 20 March 1996 on the protection of bank deposits and amending certain other laws, as amended by Act N.154/1999 Coll., Act N. 397/2001 Coll., Act N. 492/2001 Coll., Act N. 340/2003 Coll., Act N. 186/2004 Coll., Act N. 554/2004 Coll., Act N. 650/2004 Coll., Act N. 747/2004 Coll., Act N. 578/2005 Coll., Act N. 209/2007 Coll., Act N. 421/2008 Coll., Act N. 659/2007 Coll., Act N. 552/2008 Coll., Act N 276/2009 Coll.,

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		Act N 492/2009 Coll., Act N. 70/2010 Coll., and Act N. 505/2010 Coll.; Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit-guarantee schemes; Directive 2009/14/EC amending Directive 94/19/EC.
Spain (3)	The Deposit Guarantee Fund for Credit Cooperative Banks; The Deposit Guarantee Fund for Savings Banks; The Deposit Guarantee Fund for Banks	Banking Act of 1946 (Ley de Ordenacion Bancaria), of which only some articles are still in effect; Royal Decree 3048/77 of 11 November 1977, establishing the deposit guarantee scheme of commercial banks (Fondo de Garantia de Depositos en Establecimientos Bancarios, FGDEB); Royal Decree – Law N. 4/80 of 28 March 1980, establishing the FGDEB as a juridical entity with its own board of directors; Royal Decree 2860/80 of 4 December 1980, establishing the deposit guarantee system of savings banks (Fondo de Garantia de Depositos en Cajas de Ahorros – FGDCA); Royal Decree – Law N. 18/82 of 24 September 1982, establishing the FGDCA as a juridical entity with its own board of directors and also establishing the deposit protection scheme of the cooperative credit banks (Fondo de Garantia de Depositos en las Copperativas de Credito – FGDCC); Law on the Auditing and Discipline of Credit Institution, N. 26/1988 of 29 July 1988; EU Directive 94/19 of 30 May1994, concerning deposit protection schemes; Royal Decree – Law 12/95 of 28 December 1995, which partially implemented EU Directive 94/19 and also governed the financing of the scheme. This law abolished the annual contribution by the Central Bank, and authorized the Central Bank itself to issue a special loan for the year 1996 in order to cover the FGDEB's deficit following the Banesto case; Royal Decree 2024/95 through which the legislator fixed the maximum limit of reimbursement at the equivalent in pesetas of 15,000 euros until 31 December 1999 and of 20,000 euros thereafter; Royal Decree 2606/96 of 26 December 1996, implementing EU Directive 19/94 in full; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

Continued

TABLE A.3 *Continued*

EU28 MS (number of DGS)	Name(s) of the DGS	Legal framework
Sweden (1)	Swedish Deposit Guarantee Board	EU Directive 94/19 on deposit protection schemes; Act on the Deposit Guarantee Scheme (1995:1571), effective from 1 January 1996, implementing EU Directive 94/19. Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
UK (1)	Financial Services Compensation Scheme	Banking Act of 1979; Banking Act of 1987; EU Directive 94/19, concerning deposit protection schemes; The 1995 Credit Institution (Protection of Deposits) Regulations, implementing EU Directive 94/19, executed from 1 July 1995; The 1998 Bank of England Act, executed from 1 June 1998, which transferred the supervisory functions of the Bank of England to the Financial Services Authority; Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

Note: *Only statutory guarantee schemes are considered

**The Polish DGS specifies that in Poland a second fund exists ('Assistance Fund'), which is not directly involved in depositors' protection as it grants assistance for banks.

Source: National Deposit Insurers websites; Pistelli (1999); European Commission (2005b); World Bank (2012).

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BOX A.1 *European legislation*

Council Directives

- Council Directive 73/183/EEC of 28 June 1973 on the abolition of restrictions on freedom of establishment and freedom to provide services in respect of self-employed activities of banks and other financial institutions (73/183/EEC).
- Council Directive 73/240/EEC of 24 July 1973 abolishing restrictions on freedom of establishment in the business of direct insurance other than life assurance (73/240/EEC).
- First Council Directive 77/780/EEC of 12 December 1977 on the coordination of the laws, regulations and administrative provisions relating to the taking up and pursuit of the business of credit institutions.
- Council Directive 86/566/EEC of 17 November 1986 amending the First Directive of 11 May 1960 for the implementation of Article 67 of the Treaty.
- Council Directive 88/361/EEC of 24 June 1988 for the implementation of Article 67 of the Treaty.
- Council Directive 89/299/EEC of 17 April 1989 on the own funds of credit institutions.
- Council Directive 2001/86/EC of 8 October 2001 supplementing the Statute for a European company with regard to the involvement of employees.
- Council Directive 2003/48/EC of 3 June 2003 on taxation of savings income in the form of interest payments.
- Second Council Directive 89/646/EEC of 15 December 1989 on the coordination of laws, regulations and administrative provisions relating to the taking up and pursuit of the business of credit institutions and amending Directive 77/780/EEC.

Directives of the European Parliament and of the Council

- Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit-guarantee schemes.
- Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor-compensation schemes.

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- Directive 2001/24/EC of the European Parliament and of the Council of 4 April 2001 on the reorganisation and winding up of credit institutions.
- Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse).
- Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending directive 2001/34/EC.
- Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC.
- Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending directive 2001/34/EC.
- Directive 2007/64/EC of the European Parliament and Council of the European Union of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC.
- Directive 2009/14/EC of the European Parliament and Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.
- Directive 2013/14/EU of the European Parliament and of the Council of 21 May 2013 amending Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision, Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) and Directive 2011/61/EU on Alternative Investment Funds Managers in respect of over-reliance on credit ratings.

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- Directive 2013/36/EU of the European Parliament and Council of the European Union of 26 June 2013 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.

Regulations

- Regulation (EC) 2157/2001 of the Council of the European Union of 8 October 2001 on the Statute for a European company.
- Regulation (EC) 1606/2002 of the European Parliament and Council of the European Union of 19 July 2002 on the application of international accounting standards.
- Regulation (EU) 1092/2010 of the European Parliament and Council of the European Union of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board.
- Regulation (EU) 1093/2010 of the European Parliament and Council of the European Union of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC.
- Regulation (EU) 1094/2010 of the European Parliament and Council of the European Union of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision N 716/2009/EC and repealing Commission Decision 2009/79/EC.
- Regulation (EU) 1095/2010 of the European Parliament and Council of the European Union of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC.
- Regulation (EU) 1096/2010 of the Council of the European Union of 17 November 2010 conferring specific tasks upon the European Central Bank concerning the functioning of the European Systemic Risk Board.

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- Regulation (EU) 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps.
- Regulation (EU) 462/2013 of the European Parliament and of the Council of 21 May 2013 amending Regulation (EC) 1060/2009 on credit rating agencies.
- Regulation (EU) 575/2013 of the European Parliament and Council of the European Union of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.
- Regulation (EU) 1024/2013 of the Council of the European Union of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

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