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Working Paper

Towards Deeper Financial Integration in Europe: What the Banking Union Can Contribute

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**Towards Deeper Financial Integration in Europe:
What the Banking Union Can Contribute**

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October 2013

No. 13

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Towards Deeper Financial Integration in Europe: What the Banking Union Can Contribute*

Abstract

The agreement to establish a Single Supervisory Mechanism in Europe is a major step towards a Banking Union, consisting of centralized powers for the supervision of banks, the restructuring and resolution of distressed banks, and a common deposit insurance system. In this paper, we argue that the Banking Union is a necessary complement to the common currency and the Internal Market for capital. However, due care needs to be taken that steps towards a Banking Union are taken in the right sequence and that liability and control remain at the same level throughout. The following elements are important. First, establishing a Single Supervisory Mechanism under the roof of the ECB and within the framework of the current EU treaties does not ensure a sufficient degree of independence of supervision and monetary policy. Second, a European institution for the restructuring and resolution of banks should be established and equipped with sufficient powers. Third, a fiscal backstop for bank restructuring is needed. The ESM can play a role but additional fiscal burden sharing agreements are needed. Direct recapitalization of banks through the ESM should not be possible until legacy assets on banks' balance sheets have been cleaned up. Fourth, introducing European-wide deposit insurance in the current situation would entail the mutualisation of legacy assets, thus contributing to moral hazard.

Keywords: banking union, Europe, single supervisory mechanism, risk sharing

JEL Classification: E02, E42, G18

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Background and Motivation

The agreement on the Single Supervisory Mechanism (SSM) is a major landmark in establishing a future Banking Union in Europe. In the Single Market for capital, responsibility for bank supervision and for the restructuring and resolution of banks rests with the national authorities. While supervisory standards have been harmonized (*minimum harmonization*), supervision is executed by national supervisors (*home country control*), and these decisions are *mutually recognized*.

Yet, the crisis has revealed several shortcomings of national regulatory systems in Europe.

First, weak supervisory standards have promoted the build up of risks on banks' balance sheets. The shortcomings of the regulatory framework such as insufficient equity capital on banks' balance sheets, procyclicality of capital requirements, and inadequate risk weights have been documented elsewhere and are thus not the focus of this contribution (Admati et al., 2011; Admati and Hellwig, 2013; Haldane, 2012). As a result of weak supervision and of distortions in the real economy, unsustainable levels of private and public sector debt have build up. The continued weaknesses of the real economy and the recessionary developments in large parts of the Euro Area have aggravated banks' problems. Hence, there is a need to reduce overcapacities in the European banking sector and to resolve banks that have lost their business model. However, incentives to do so are weak at the national level.

Second, banking risks do not stop at national borders. The restructuring and resolution of distressed banks requires rights of European institutions to intervene if national authorities procrastinate the restructuring and resolution of distressed banks. These issues are not only relevant for the members of the Euro Area, the spill over of banking risks is particularly important for the Eastern European members of the EU, given the high shares of foreign-owned banks in these countries.

Third, formal cross-border risk-sharing mechanisms have been absent prior to the crisis (IMF, 2013a). National deposit insurance systems have been in place to shield banks against shocks, but these systems have proven inadequate given the systemic nature of the crisis, and they were not explicitly geared towards cross-border risk sharing. In the crisis, it has become evident that key bank risks cannot be insured at the national level. Risks of banks and sovereign have become seriously interwoven, and many governments lack the fiscal capacity to support their ailing banks. Cross-border risk sharing involving the bail in of (foreign) creditors has typically been avoided because of the fear of contagion and negative spill-overs. Therefore, there have been incentives to shift the resulting risks to the European level through the channel of monetary rather than fiscal policy. Distressed banks in the crisis countries have resorted to refinancing through the European Central Bank (ECB).

In short, the crisis in the Euro Area has vividly shown that a single currency area also needs a centralized, European responsibility for financial market and banking supervision. National

supervisors and regulators were not able to prevent or limit the build-up of risks in the banking sector, and they were not able to coordinate effectively in wake of the crisis. Bold steps to crisis resolution were delayed by regulatory forbearance at the national level due to the close connection between banks and sovereigns. Therefore, a European Banking Union is a logical advance of the Monetary Union and of the Single Market, and it forms an indispensable element of the future governance structure of the Euro Area.

This paper analyzes the rationale for and the essential elements of a Banking Union. It argues that a consistent Banking Union rests on three pillars: centralized banking supervision, centralized authority for bank restructuring and resolution, and common financing mechanisms for restructuring and resolution. A fiscal backstop is crucial. Yet, the perspective for a thorough and timely implementation of further essential elements of the Banking Union has remained vague. In particular, a solution to the problem of legacy assets still needs to be found. Against this backdrop, the current SSM proposal reveals four main shortcomings

First, establishing a Single Supervisory Mechanism under the roof of the ECB and within the framework of the current EU treaties does not ensure a sufficient degree of independence of supervision and monetary policy. As currently envisaged, the division of competencies between the ECB and national authorities entails the risk of diverging supervisory standards and insufficient supervisory powers at the European level. Also, non-Euro-Area member countries will not be integrated in the SSM in a satisfactory manner.

Second, a European institution for the restructuring and resolution of banks should be established and equipped with sufficient powers. For this, a fiscal backstop for bank restructuring is needed. The ESM can play a role but additional fiscal burden sharing agreements are needed. Direct recapitalization of banks through the ESM is not incentive-compatible until legacy assets on banks' balance sheets have been cleaned up.

Third, introducing European-wide deposit insurance in the current situation would entail the mutualisation of legacy assets and thus violate the principle of liability and control resting at the same level. Currently, national deposit insurance schemes currently differ across countries in terms of risk premia that are being charged to banks and with regard to other institutional arrangements. Therefore, introducing a common deposit guarantees scheme would not be feasible, nor would it be desirable given unresolved issues concerning legacy assets at present. However, national schemes need to be harmonized under national responsibility.

Fourth, an improved allocation of risks can be achieved by enhancing the capitalization of banks and strengthen the cross-border integration of equity markets (see also Hoffmann and Sørensen, 2012). Should the restructuring and resolution of banks require additional funding sources, fiscal resources should be tapped only as a last resort.

In the remainder of this paper, we develop these arguments in more detail. We begin by discussing the role the Banking Union could play as a mechanism to contain risks in banking

and as a mechanism of sharing risks once they arise (Section 2). We then provide a short summary of the current legal state of the Banking Union Proposal (Section 3). Section 4 develops a framework for the Banking Union in the long-run and outlines a framework for the transition into the Banking Union. Section 5 concludes.

1 Risk-Sharing in Financial Markets and the Banking Union

Assessing, monitoring, and allocating risks are the core functions of financial intermediaries such as banks. Therefore, the merits and the design of a Banking Union for Europe need to be discussed in the context of these core functions. In this section, we give a short summary of risk-sharing in financial markets (Section 2.1), and we discuss stylized facts of European banking markets (Section 2.2).

1.1 Risk-Sharing in Financial Markets

In order to discuss the implications of the Banking Union for risk-sharing in Europe, it is useful to start from the benchmark model of risk sharing in open economies. In a complete markets setting, risks can be shared across countries by holding Arrow-Debreu securities. Arrow-Debreu securities provide insurance against fluctuations of income: on the one hand, the evolution of future income streams is uncertain. On the other hand, households are interested in achieving a smooth consumption profile and to decouple their consumption to the best possible degree from fluctuations in income. As state-contingent securities, Arrow-Debreu securities provide households with the opportunity to decouple their consumption from shocks to national income. Consumption will not be entirely flat across all states of nature, but the degree of consumption smoothing will depend on the price of insurance. Risk will be fairly priced. While insurance can be bought against shocks to national income, shocks to world income would still affect consumption plans. Markets are complete because households can insure their future consumption against all possible future contingencies and variations in income.

Of course, the complete markets model is a caricature of real world financial markets, and even the most developed and most integrated financial markets worldwide do not achieve the degree of consumption risk sharing that the benchmark model would predict. While a large literature is devoted to an analysis of incomplete markets, most theoretical models do not bear direct implications for the discussion on a banking union: Macroeconomic models typically do not allow for relevant features of banks and of other financial intermediaries; banking models often focus on microeconomic incentive structures and ignore the feedback between banks and the macro-economy. Yet, as with many theoretical constructs, the complete markets model is a useful benchmark which allows assessing causes for departure from the ideal world.

In the real world, Arrow Debreu securities cannot be bought or sold on financial markets, and their features can only imperfectly be replicated by existing financial assets. In a strict sense, Arrow Debreu securities are state-contingent securities which guarantee a certain return (or require a certain payment) if a certain state of the world materializes. While there is no direct equivalent to Arrow Debreu securities in the real world, equity ownership in firms comes close to it. The returns to equity investment are state-dependent in the sense that equity owners receive dividends only in good states of the world and need to bear losses in the bad state of the world.

The role of banks

Most bank assets are not state-contingent: banks typically raise funding in the form of deposits, which pay a fixed return, irrespective of the state of nature. In exception are tail events if equity has been wiped out and a bail-in of holders of fixed income securities becomes necessary. Also, banks' assets (loans) are fixed income securities with a given pay off structure. In this sense, banks' assets and liabilities resemble features of a bond economy in which households can trade financial assets which pay interest independent from a wide array of states of nature. The analogy to a bond economy is not perfect though because many assets and liabilities that banks hold cannot be traded. In bond economies, perfect risk sharing cannot be achieved in the sense that consumption cannot be decoupled from the risk of future changes in income, i.e. intertemporal risk sharing is not possible. Intertemporal smoothing of income risks is possible though.

A useful distinction between equity-like and debt-like financial instruments is also that between ex ante or ex post insurance. Ex ante insurance is possible in the complete markets setting with equity-like securities: insurance takes place *before* the actual state of the world is revealed. While there is uncertainty about what the future will bring, information about possibly future contingencies is the same across all market participants. Hence, they can sign contracts which insure against all possible future contingencies, price these risks accordingly, and they have no incentives to re-negotiate these contracts ex post. In credit markets, in contrast, only ex-post insurance is possible: *after* a bad shock to income has been realized, agents can borrow against their future income in order to limit the impact a negative income shock would have on current consumption.

In the benchmark model of complete financial markets, Arrow Debreu securities can be assessed, priced, and traded without involving financial intermediaries. Hence, issues which are relevant for the functioning of real-world financial markets such as information asymmetries, transaction costs, or incentives effects do not play a role. The banking literature takes these aspects into account.

In particular, the banking literature provides a rationale for a deposit insurance system as an institutional risk-sharing device. The need for a deposit insurance system arises from the fact that banks fund themselves with many small deposits, which are callable on demand. Banks

invest these deposits into long-term loans. Thus, banks are susceptible to liquidity shocks: if all depositors call their deposits, banks have to liquidate their assets, realize only a small liquidation value, and be unable to fully pay out depositors. This mechanism can lead to bank runs (Diamond and Dybvig, 1983). Therefore, deposit insurance has the objective to insure depositors against liquidity shocks. Because, by assumption, depositors are too small (or too inexperienced) to monitor the investments and the risk of banks, deposit insurance needs to be coupled with banking supervision in order to minimize moral hazard effects. Insurance premia need to be fairly priced though to reflect the risk of banks.

The banking literature has a fairly clear message concerning the reach of deposit insurance and banking supervision: the two need to be fully aligned, and risks need to be properly priced. Fully aligning the reach of deposit insurance and banking supervision in the European context is potentially costly though, and it must be traded off against the risks that can actually be insured.

Type of shock

In the standard open economy macro model, only country-specific shocks are considered. In the real world, however, banks are exposed to a wide array of shocks: idiosyncratic, regional, country-specific, or industry-specific shocks. In the current situation in Europe, there is a strong country-specific factor which prevents effective risk sharing at the national level. Crisis management has become difficult because risks of banks and sovereigns are intimately interwoven: Banks have invested increasingly large stakes into bonds issued by their “own” governments, bank risks are strongly driven by the risk of the respective sovereign, and governments lack the fiscal capacity to support and restructure distressed banks.

Another useful distinction is that between asset value and funding shocks. If the two were uncorrelated, then a shock to banks’ asset values would affect their solvency while a funding shock would affect their liquidity. Typically, however, funding and asset price shocks do not occur in isolation, as the current crisis with the downward spiral of asset prices, triggered by funding shocks, which in turn have been triggered by increasing uncertainty about asset values has shown.

In the long-term, the aim should be to make bank risks more manageable: the failure of financial institutions should not threaten the solvency of the sovereign involved, and the risk-bearing capacity of banks themselves should be enhanced. There is no reason why banks should be exposed to macroeconomic risks to any significant degree. Instead, banks’ comparative advantage is the assessment, management, and monitoring of idiosyncratic risks. In normal times, bank-specific, idiosyncratic shocks indeed account for a substantial fraction of volatility across banks (Buch et al., 2013). Also, banks typically focus on specific regions and industries and are thus susceptible to the shocks hitting their customers. At least in the larger European countries, these idiosyncratic and regional (or industry-specific) shocks can be insured at the national level. They do not require the introduction of a pan-European

deposit insurance, which would require also a pan-European supervisor to be fully operational.

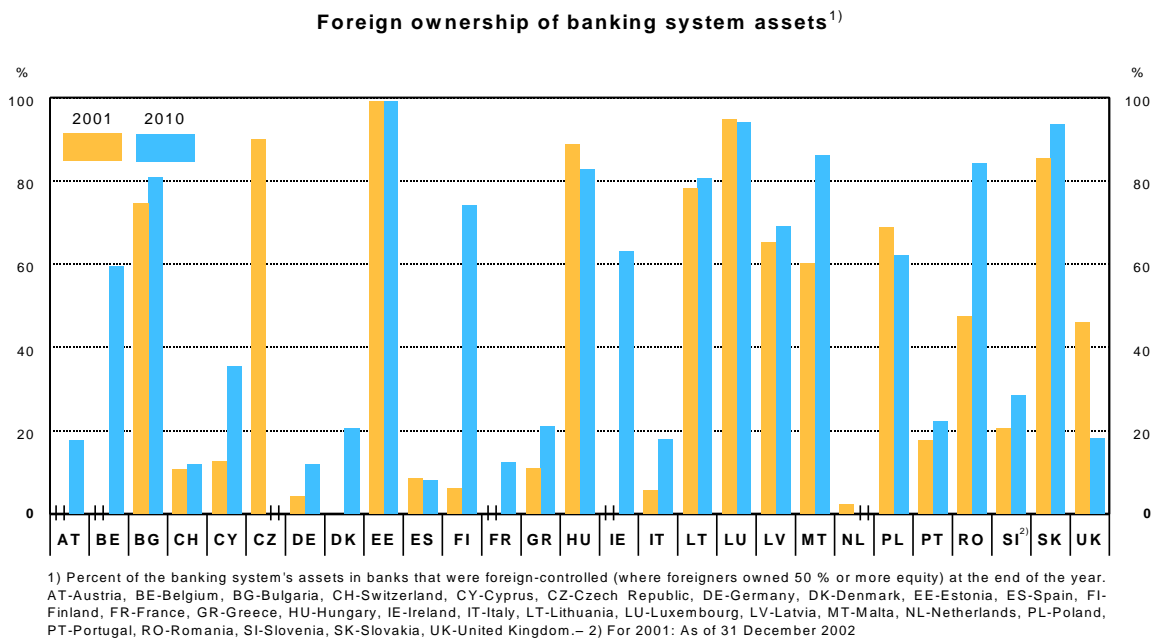
In this context, it is interesting to note that we have relatively little solid evidence on the shocks actually hitting banks. From studies for the US, we know that risk-taking in response to expansionary monetary policy shocks increases for small domestic banks but not for large domestic or foreign banks (Buch et al., 2011). Comparable evidence for European countries is scarce, not least because of the lack of sufficiently long time series of data for individual banks.

We also know from the US that a significant part of risk-sharing occurs through the cross-(state-)border ownership of equity assets. Asdrubali et al. (1996) estimate the total impact of financial markets on intra-state risk-sharing to be 62% with capital markets (including rentals, fixed income and dividends) and credit markets accounting for 39% and 23%, respectively. Hence, households in the US can shield their consumption from shocks to income in their own state because they receive dividend payments from their ownership stakes in firms in other states. Moreover, Bekaert et al. (2006) show that consumption volatility is lower in countries with open markets for equity ownership. If this literature were to bear a lesson for Europe, then policymakers should focus on the creation of a Single Market for equity ownership (Hoffmann and Shcherbakova-Stewen, 2011). Equity ownership as an element of ex ante insurance is able to cope with permanent shocks that directly affect the expected income path. In contrast, debt finance that dominated cross border financial flows in the Euro Area is an element to cope with transitory shocks around the steady state income path (Kalemli-Ozcan et al., 2004).

1.2 Taking Stock of Europe's Banking Markets

The integration of financial markets is a powerful tool for enhanced risk sharing. Prior to the financial crisis, financial market integration in Europe had indeed progressed rapidly. This increased integration has been in line with global trends, and it has also been promoted by the introduction of the Euro. While, in principle, increased integration of financial markets can have benefits in terms of a better allocation of capital across countries and improved sharing of risks, financial market integration in Europe has been excessive in two ways. First, the overall increase in foreign liabilities of many countries in Europe has expanded beyond the debt-servicing capacity of these countries. Second, financial market integration in Europe has primarily taken the form of debt market integration and thus increasing international borrowing and lending rather than equity market integration. Therefore, risk-sharing through equity ownership plays a much smaller role in Europe than, for instance, in the US.

Figure 1



Recall that ex ante insurance of shocks and risk sharing of permanent shocks can take place through cross-border equity ownership, both in the banking sector and in the non-financial sector. In the banking sector, cross-border equity ownership varies widely across European countries (Figure 1). The countries of Eastern Europe clearly stand out. Here, large parts of the banking systems are owned by foreign banks, which have entered through Greenfield investments as well as through mergers and acquisitions during the privatization of formerly state-owned banks. Also, countries hosting international financial centers such as the UK or Luxembourg have high shares of cross-border ownership of banks. To the extent that equity owners of these banks bear losses in times of crisis, this would reduce the domestic impact of banking sector shocks. Yet, this insurance mechanism does not work if either the shocks are systemic and affect both, the domestic and the foreign country, or if regulators avoid imposing losses on equity owners. Lacking adequate legal frameworks for the resolution of banks, regulators have in fact often avoided bank insolvencies during the recent crisis.

Spain is a case in point: here, cross-border ownership of banks is small, and many real estate loans have been issued by regional, domestic banks. Therefore, the scope for involving international creditors and equity owners has been limited, and losses had to be borne by domestic creditors. Fearing that a bail in of international creditors would undermine the stability of financial markets and cause contagion, many governments have refrained from sharing the burden of bank distress. In Spain, for instance, losses have been imposed on owners of hybrid debt instruments only which, in turn, were largely held by domestic investors. The Baltic States with high shares of cross-border ownership in banking, in contrast, have shifted some of the losses to foreign investors as well (Gros, 2012; Goodhart and Lee, 2012).

Moreover, financial integration in Europe has also been dominated by debt rather than equity finance. Figure 2 (below) shows that (gross) cross-border liabilities relative to GDP have increased significantly in the Euro Area, and they also increased much more compared to non-Euro Area countries. However, in the Euro Area, these liabilities have been dominated by fixed income liabilities, i.e. by borrowing from banks and the issuance of bonds. There is also a notable difference between Euro Area and non-Euro Area countries in terms of how much equity financing took place (Figure 3). Even though equity became more important up to the introduction of the Euro, fixed income assets played a major role in the process of financial integration right after the introduction of the euro.

Figure 2

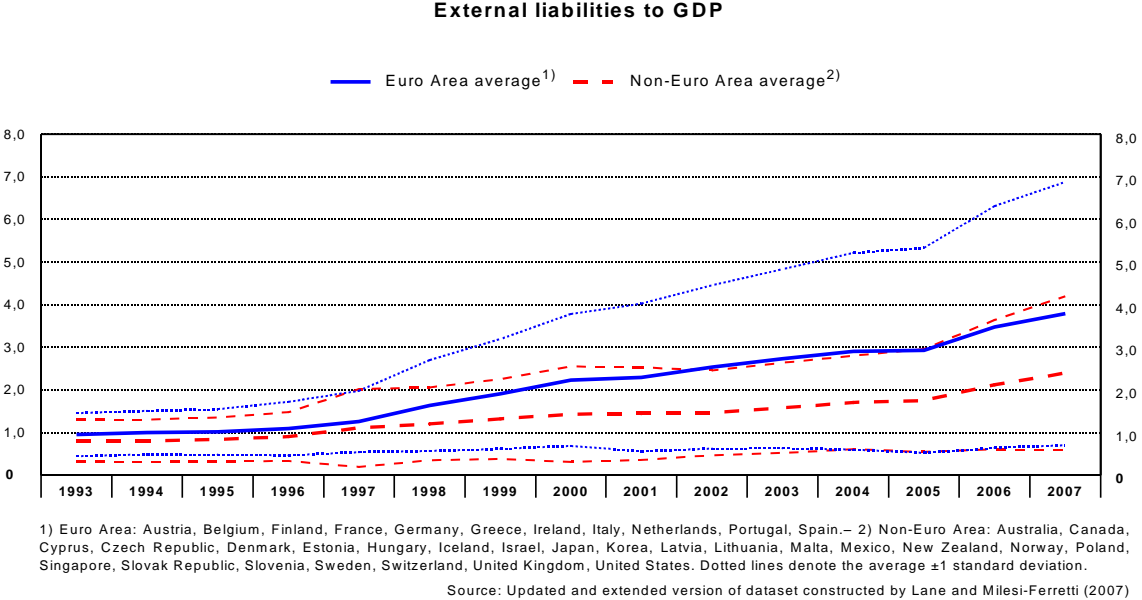
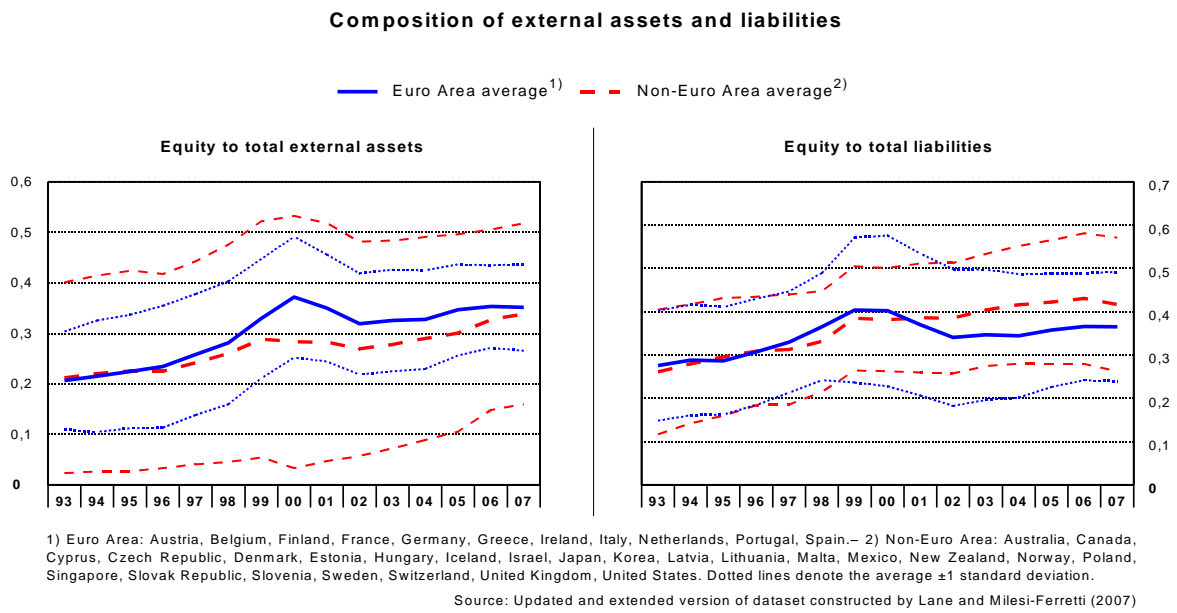
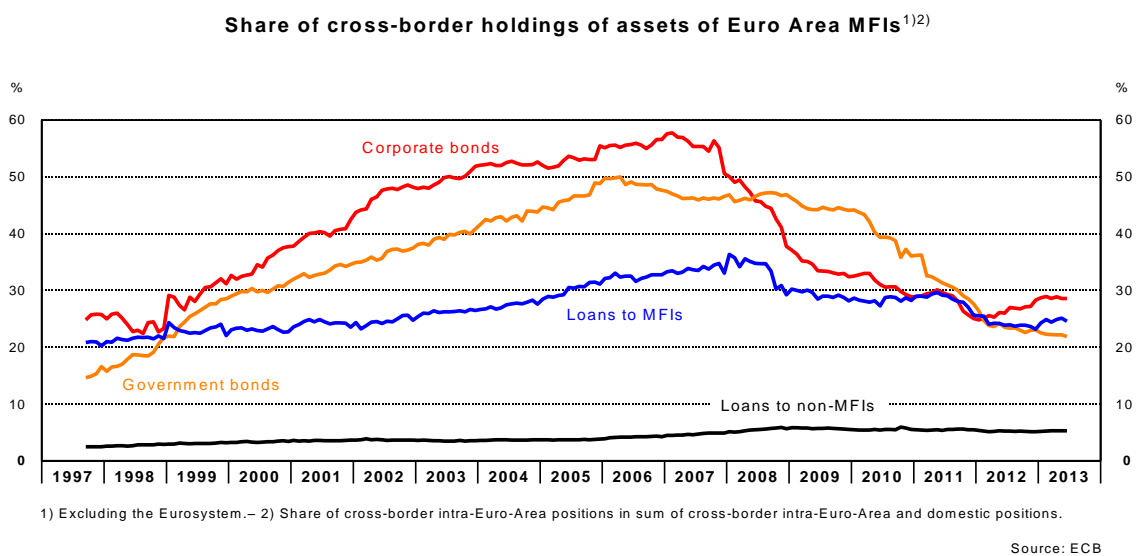


Figure 3



Since the beginning of the financial crisis, the trend toward greater financial market integration has reversed, and markets have become increasingly fragmented (European Central Bank, 2012a; Hildebrand et al., 2012; Rose and Wieladek, 2011). The share of cross-border asset holdings in the banking sector has declined (Figure 4), domestic assets are increasingly being used as collateral for refinancing operations with the European Central Bank (ECB), interest rates for cross-border bank transactions have risen, and corporate interest rates differ across Euro Area member states.

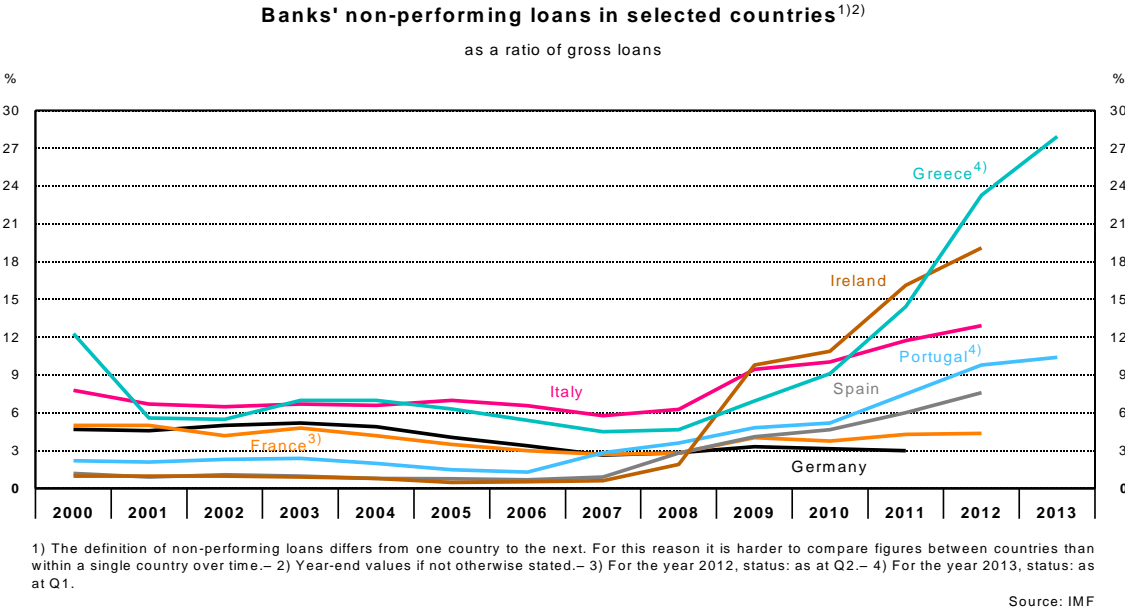
Figure 4



This increasing market fragmentation witnesses the profound crisis of confidence in European financial markets. In addition, political and regulatory incentives have prompted banks to scale back foreign activities. European Union state aid procedures require banks to closure foreign affiliates (European Commission, 2009; Zimmer and Blaschczok, 2012). Political pressure not to impair the provision of loans for the respective domestic economy might have played a role as well.

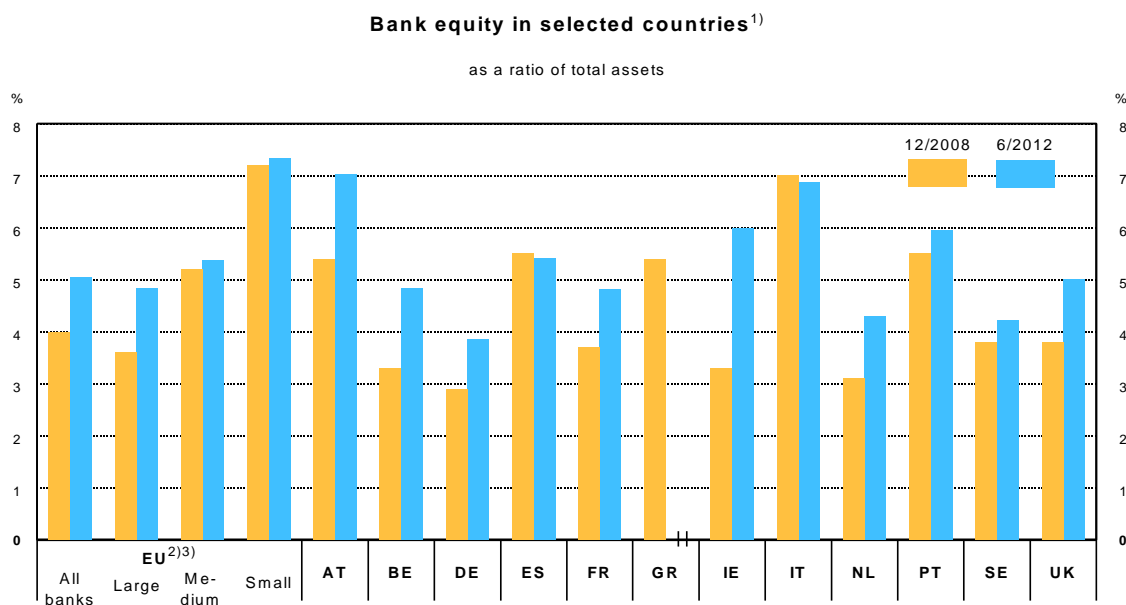
The volume of non-performing loans has increased sharply during the crisis (Figure 5). Banks that are encumbered by non-performing loans cannot adequately support the necessary structural adjustments in the real economy. The threat is a Japanese scenario in which for many years unsolved problems in the banking sector impede both investments and growth (German Council of Economic Experts, 2012a). Legacy assets are a problem not only because of their level but also because of uncertainty surrounding the valuation of banks' assets during the crisis. Weak and hesitant national supervisors have created significant uncertainty about the true valuation of banks' assets, thus impeding banks' access to external finance as tools for ex post risk-sharing. Many banks in the crisis countries have lost access to international financial markets, and countries have experienced a sudden stop and reversal of international capital flows.

Figure 5



Fragmentation of financial markets, high non-performing loans, and a weak integration of equity markets are troubling considering the weak risk-bearing capacities of banks themselves. In order to absorb losses without outside help, banks must have sufficient capital buffers. Although European banks' capital ratios have improved recently, these buffers are still insufficient to absorb relevant risks (European Central Bank, 2012b; Figure 6).

Figure 6



1) The data are consolidated on a cross-border basis (data on branches and subsidiaries located outside the domestic market are consolidated in the data reported by the parent institution) and a cross-sector-basis (branches and subsidiaries of banks that can be classified as „other financial institutions“ are included). AT-Austria, BE-Belgium, DE-Germany, ES-Spain, FR-France, GR-Greece, IE-Ireland, IT-Italy, NL-Netherlands, PT-Portugal, SE-Sweden, UK-United Kingdom.– 2) Excluding foreign (i.e. non-EU) banks.– 3) Large / medium / small banks with total assets of more than 0.5% / between 0.005% and 0.5% / less than 0.005% of the total consolidated assets of EU banks of the previous year.

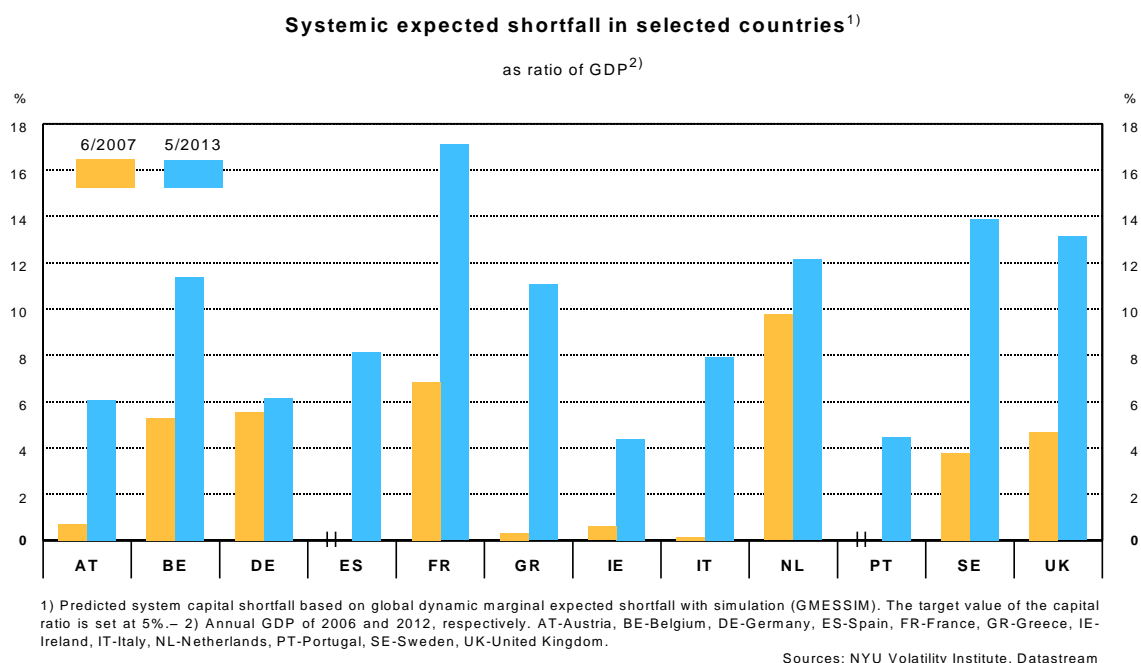
Source: ECB

Measuring the degree undercapitalization of banks is difficult, given that it requires an assessment of the value of banks' capital and assets. Also, what matters for the stability of the financial system is not only how a bank can buffer idiosyncratic shocks but also how it responds to risks for the financial system as a whole. These factors can be proxied for listed banks using the concept of the *systemic expected shortfall*. This measure indicates the capital a specific bank requires if the banking sector as a whole is in distress (Acharya et al., 2010). It increases in the level of target capitalization of a bank, in return correlations with the market, and in the size of a bank. As a market-based indicator, the measure for the systemic expected shortfall of a bank varies over time.

Figure 7 shows the aggregated systemic expected shortfall of listed financial institutions in several European countries as a share of national GDP. The underlying scenario is (i) that the financial institutions have a target capital ratio (based on market value of equity and book value of debt) of 5% and (ii) that global equity markets suffer a drop of 40 % within six months. Before the financial crisis, the systemic expected shortfall indicates a sizeable lack of capital in some European countries. Although (book) capitalization has improved in the past years (Figure 6), the systemic expected shortfall has become even larger in all countries indicating that return correlations have increased during the financial crisis.¹

¹ Figure 6 relates to the entire banking system, while the systemic expected shortfall relates to listed financial institutions only. In case of Germany the balance sheet of listed financial institutions represents approximately one third of the balance sheet of the entire German banking system.

Figure 7



The weak capitalization of banks has negative implications for the functioning of banking markets in Europe. First, loss-bearing capacities of equity owners are limited. Dealing with distressed banks in the context of bank resolution procedures will thus, inevitably, also involve the bail in of creditors. Bond holders, in turn, have already reacted by requiring an increasing parts of their claims vis-à-vis (European) banks to be collateralized. As a consequence, the degree of asset encumbrance has increased (European Central Bank, 2012b; Juks, 2012; Meusel, 2012). This increases the risks borne by deposit insurance systems and, ultimately, the tax payer.

Second, many banks rely on ECB financing at favourable terms, which shows the risks resulting from national supervision for monetary policy. If banks are distressed in one part of the currency area, be it owing to lax supervision or unexpected shocks, then it may be in an individual country's interest not to support the banks and restructure them, but to shift the burden to the European level. Delayed action by national supervisory agencies can force the central bank to intervene. In the final instance, the central bank has an interest in preventing bank crises and financial contagion by granting banks access to central bank funding. Many banks in the crisis countries have also been financed through the Emergency Liquidity Assistance (ELA) of their national central banks. Among other things, the development of the TARGET2 balances in the Euro Area shows that the ECB has, by adjusting its refinancing policy and by easing collateral requirements, become a substitute for parts of the interbank market.

In sum, the crisis in the Euro-Area has revealed severe flaws in the design of the European Monetary Union. Both, private and public borrowers had incentives for excessive borrowing,

and national supervision has proven insufficient. Capital requirements for banks were far too low, and the resulting excessive leverage had strong pro-cyclical effects (Favara and Ratnovski, 2012). Banking supervision has been ineffective with regard to containing the build-up of risks on banks' balance sheets and it may, in some cases, have delayed early crisis resolution due to regulatory forbearance (Advisory Scientific Committee of the ESRB, 2012). Risks of banks and sovereigns have become intertwined. This, together with a missing framework for coordinated cross-border resolution of distressed banks, has created incentives to shift risks to the European level and especially to ECB through its refinancing operations.

1.3 The Role of the Banking Union

How can the Banking Union contribute to more stable financial markets and improved risk-sharing? The first priority should be a reduction in risks. Commonly enforced supervisory standards through the Single Supervisory Mechanism should allow for an improved monitoring of risks and improved risk management through early intervention. Incentives of national supervisors to engage in regulatory forbearance and to shift risks to the European level should be reduced.

But even with an improved oversight of banks, not all risks might be detected. Hence, mechanisms to deal with these risks in the least distortionary way must be devised. Essentially, this is the role of procedures for the restructuring and resolution of distressed banks and thus of a Single Resolution Mechanism (SRM). Because bank resolution entails costs, explicit insurance mechanisms would spread the costs of bank distress in one country to the entire population of banks in the Banking Union. Ultimately, the Banking Union would thus encompass a European-wide bank restructuring and resolution fund and a common deposit guarantee scheme as explicit insurance mechanisms. Insurance mechanisms funded by contributions of banks would be backed by fiscal resources, either provided by the ESM or by individual countries based on ex-ante burden sharing arrangements.

The Banking Union might also strengthen the lender-of-last-resort-function of the ECB, thus enabling the sharing of liquidity risks. Effective bank resolution powers at the European level would provide for a rigorous winding down of insolvent banks. Hence, access to central bank liquidity would be only granted to solvent institutions with viable business models.

Ultimately, establishing a Banking Union might also help breaking the trend towards de-integration of financial markets and paving the way for deeper financial integration. This might enhance "market-based" insurance against shocks. Achieving these objectives, however, requires a consistent legal basis for the banking union and an appropriate sequencing of reforms. Due care needs to be taken that the Banking Union is not used as a device to mutualize risks that have been building up in the past. Rather, it should provide a consistent institutional framework for financial markets in Europe in the future. These are the issues to which we turn next.

2 Legal Background of the Banking Union

Weaknesses in the institutional framework of European banking markets have been recognized by policymakers, and efforts are now being made to create a new architecture for the European financial markets. So far, the architecture of European financial markets has rested on the principle that control and liability remain at the national level. However, as the crisis has highlighted the risks associated with national supervision, policy efforts aim at centralizing competencies and institutions at the European level. Accordingly, a Banking Union would lead to centralized bank supervision, uniform mechanisms for the restructuring and resolution of banks, a common resolution fund, and a single European deposit insurance system. The ESM would be utilized as a fiscal backstop.

2.1 The Single Supervisory Mechanism (SSM)

The political decision to shift competencies in banking supervision to the European level was taken at the Euro Area Summit on 29 June 2012. In order to avoid changes of the EU treaties, European leaders decided to establish a Single Supervisory Mechanism (SSM) under the responsibility of the ECB, based on Article 127(6) TFEU. In the meanwhile, the EU-Council and the European Parliament agreed on a regulation which sets out the establishment of the SSM, and the ECB can be expected to assume tasks in banking supervision in the second semester of 2014 (Council of the European Union, 2013).

The SSM consists of the ECB and the supervisory authorities of participating member states. Whereas the ECB is responsible for the overall functioning of the SSM and directly supervises the largest credit institutions, the national authorities continue to supervise the “less significant” institutions. The supervisory powers of the ECB include the granting and withdrawal of banking licenses, the monitoring of capital and liquidity requirements as well as early intervention and sanctioning powers. The ECB has also responsibility for the “less significant” institutions in the sense that national authorities are obliged to perform their supervisory tasks in line with regulations, guidelines and general instructions issued by the ECB.²

The regulation generally defines an institution as being “significant” if its total assets exceed EUR 30 billion or 20% of the home country’s GDP. Moreover, the ECB as well as national authorities may assess individually the significance of institutions falling below these thresholds. Based on this assessment, the ECB may assume direct oversight over these institutions or the national authority may propose to the ECB to do so. In any event, the ECB directly supervises the three most significant institutions in each country. Moreover, direct ECB oversight applies to those institutions that received direct financial assistance from the

² The application of macroprudential instruments generally falls under national responsibility. However, the ECB, after consulting the national authority, may apply *stricter* measures. For instance, it may require higher countercyclical capital buffers.

EFSF/ESM or for which such assistance was requested for. The ECB is responsible for licensing also the less significant institutions. Furthermore, the ECB may exercise early intervention powers regardless of an institution being classified as significant or not. Finally, the ECB may assume direct oversight of less significant institutions “when necessary to ensure consistent application of high supervisory standards”.

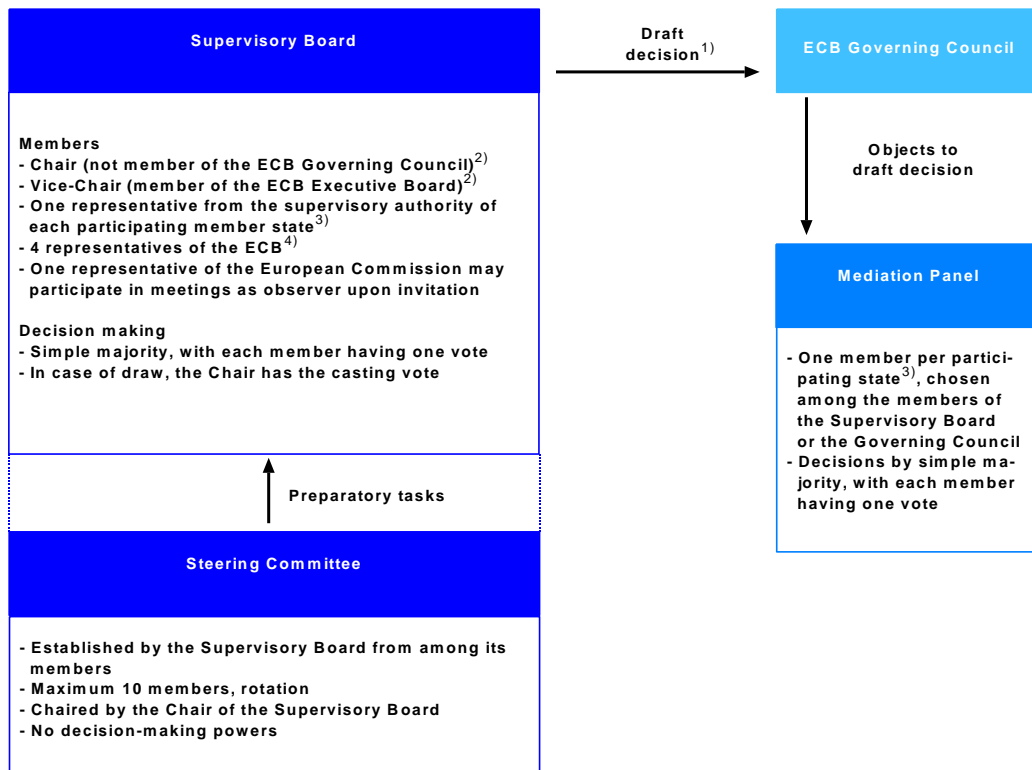
Governance Structure

Decision-making within the SSM rests within three bodies. The division of power is mainly determined by the intention to assign powers to a European supervisor without changing the European Treaty. Under Article 127 (6) TFEU, the ECB can assume supervisory functions, but this also implies that the ECB Governing Council remains in charge. This has led to the following governance structure of the SSM (Figure 8):

- The ECB *Governing Council* has the ultimate decision-making power.
- The *Supervisory Board* adopts draft decisions with simple majority, with each board member having one vote. The Supervisory Board comprises a chair, a vice-chair, four representatives of the ECB and one representative from the supervisory authority of each member state participating in the SSM. It is supported by a Steering Committee. Draft decisions will be deemed adopted unless the Governing Council objects to the draft decision within 10 working days.
- When the Governing Council objects a draft decision of the Supervisory Board, the draft decision is negotiated in the *Mediation Panel*. Members of the Mediation Panel are chosen by the participating member states among the members of the Supervisory Board or the Governing Council. Each member state chooses one representative. Decisions are taken by simple majority with each member having one vote. The SSM regulation does not specify a time limit for the mediation procedure.

Figure 8

Single Supervisory Mechanism (SSM): Governance structures at the ECB



1) A draft decision will be deemed adopted unless the ECB Governing Council objects within 10 working days.– 2) The ECB makes a proposal for the appointment of Chair and Vice-Chair which has to be approved by the European Parliament. The EU-Council decides about the appointment by qualified majority without taking into account votes of member states not participating in the SSM.– 3) Participating member states: Euro area members and EU member states joining the SSM by „close cooperation“.– 4) ECB representatives are appointed by the ECB Governing Council and shall not perform duties directly related to monetary policy.

Source: Council of the European Union (2013)

Independence and Accountability

Given the incentives to forbear bank risks and thus to mitigate costs to the budget, independence of banking supervision from policymaking is obviously a key issue. According to the SSM regulation, the ECB and the national authorities acting within the SSM shall thus act independently from policy. Members of the Supervisory Board are expected neither to seek nor to take instructions from the member states’, and governments are expected to respect that independence.

With regard to democratic accountability, the SSM regulation foresees participation rights of the EU-Council and the European Parliament in appointment of the Chair and the Vice-Chair of the Supervisory Board. Moreover, the ECB has to submit an annual report on its tasks and activities with regard to banking supervision to the EU-Council, the Eurogroup, the European Parliament and the Commission, which is also to be forwarded to national parliaments of participating member states. The Chair of the Supervisory Board presents the report in public to the European Parliament and the Eurogroup including non-Euro-Area participating member states. Besides annual reporting, the ECB has to reply to questions by the European

Parliament and the Eurogroup, and the Chair of the Supervisory Board may be heard at their request. Finally, the Chair of the Supervisory Board is obliged to engage in oral, confidential discussions with the chairs and the vice-chairs of the European Parliaments' competent committees, whenever such discussions are "required for the exercise of the European Parliaments powers under the Treaty".

These accountability provisions do not extend to national parliaments. Instead, the role of national parliaments is limited to express potential concerns arising from the annual report, sending requests to the ECB and "exchanging views" with the Chair or a member of the Supervisory Board. The SSM regulation does not affect accountability of national supervisory authorities acting within the SSM to their national parliaments.

Cooperation with Non-Euro-Area Member States

Because non-Euro-Area-member states cannot be represented in the ECB Governing Council, their incentives to take part in the SSM are limited. Therefore, the SSM regulation offers the non-Euro-Area-member states wishing to participate in the SSM (opt-in) a "safety net", including the possibility to opt-out and not be bounded by supervisory decisions of the SSM. The opt-in comes in the form of "close cooperation" between the member state wishing to join the SSM and the ECB. To this end, the ECB acquires the right to address the national supervisory authority, which is obliged to follow the guidelines of the ECB and adopt any supervisory measure requested by the ECB. In turn, the supervisory authority is granted a seat and voting rights in the Supervisory Board.

Non-Euro-Area-member states may terminate the close cooperation on their own initiative three years after the opt-in. Another possibility to opt-out arises when the member state disagrees with a draft decision of the Supervisory Board. Then, the member state may resolve the close cooperation immediately, and it is not bound by the final supervisory decision based on the concerned draft decision. In both opt-out cases, the member states may enter into a new close cooperation after three years.

Termination or suspension of the close cooperation on the ECB's initiative is possible when the member state does not comply with the cooperation terms any more or if the national supervisory authority refuses to adopt supervisory measures requested by the ECB. Moreover, the ECB may terminate or suspend the close cooperation when a member state expresses disagreement with an objection of the ECB Governing Council to a draft decision of the Supervisory Board. Regardless of the ECB's decision to terminate or suspend the cooperation, the concerned member state will not be bound by the final supervisory decision based on the amended draft decision.

2.2 Further Elements of the Banking Union

With regard to the other elements of the Banking Union, first legislative proposals have been tabled in two main steps.

In a first step, taken in June 2012, the European Commission submitted a proposal for a Bank Recovery and Resolution Directive (BRRD). The resolution harmonizes the legal basis of recovery and resolution instruments and procedures in the European Union, thus allowing a better handling of cases that involve cross border banks.

The second step was taken in July 2013 when, based on the BRRD, the Commission submitted a regulation proposal for a “Single Resolution Mechanism” (SRM) including a “Single Resolution Fund”. The SRM shifts restructuring and resolution powers for banks under the auspices of the Single Supervisory Mechanism to the European level. The sole responsibility for triggering resolution procedures would lie with the Commission, while the preparation of the resolution scheme based on the triggering decision would fall to a European agency to be established (the “Single Resolution Board”). National authorities would be responsible for the implementation of the resolution scheme, monitored by the Single Resolution Board. By incorporating parts of the BRRD into a regulation which is directly applicable, the Commission exercises the legal implementation of the BRRD rules for those member countries participating in the SSM. Implementation of the BRRD rules (and thus of the SRM) is not expected before 2015.

The anchoring of the SRM legislation in the EU treaties is a contentious issue. The Commission argues that the legislation can be based on Article 114 TFEU as it ensures the “establishing and functioning of the internal market”. Contrary to this view, many observers believe that assigning sufficient powers to a central European decision-making body will require a change of EU treaties (Lautenschläger, 2013).

Assigning powers for the restructuring of banks also requires funding mechanisms to be available. The SRM regulation thus foresees a bank resolution fund based on a European-wide bank levy. In the short-run, however, alternative funding mechanisms are needed because the resolution fund does not yet exist. Hence, the European leaders declared at the Euro Area Summit of June 2012 that, after the establishment of the SSM, the European Stability Mechanism (ESM) could be used to recapitalize banks directly. Since then, the aim to use the ESM for this purpose has been repeatedly confirmed.

A key issue is the treatment of legacy assets because, in principle, losses that have been accumulated under national supervision should be borne at the national level. In December 2012, the European Council thus stipulated that “an operational framework, including the definition of legacy assets, should be agreed as soon as possible within the first semester 2013” (European Council, 2012). In June 2013, the ESM member countries agreed on the main features of the guidelines for the ESM direct recapitalization instrument, setting out

eligibility criteria, a limit on ESM funds for bank recapitalization purposes, and co-payments of national governments filing for ESM direct recapitalization.

Despite the progress being made, the structure of the SRM and of the underlying funding mechanisms is not clear. First, the institutional structure involves three different levels of decision making and execution, making it a very complex structure in times of acute crisis. Second, the underlying principles of creditor bail-in are still too opaque and not fully spelled out. Third, it is not clear whether the ESM direct recapitalization instrument has to be considered as the last line of defense once the Banking Union has been fully established and legacy issues have been resolved or whether the use of the instrument is considered also during the transition phase. Moreover, even though a common deposit insurance mechanism is not feasible at the moment, a workable resolution mechanism needs to be coordinated with existing deposit insurance schemes. Yet, progress with regard to the harmonization of existing national deposit guarantee schemes has been slow. Although the European Council called legislators to agree “before June 2013” on the 2010 Commission’s proposal on the Deposit Guarantee Scheme Directive, the directive is still negotiated in the ECOFIN-Council.

3 A Proposal for the Banking Union

The contribution of the Banking Union to the reduction of bank risks and to appropriate risk sharing mechanisms depends on which elements will finally be realized and how these elements are specified. In this section, we present a proposal for a Banking Union, which rests on three pillars: (i) enhanced European powers for supervision, (ii) enhanced European powers for the resolution of banks as well as European-level funding sources for bank resolution, and (iii) national deposit insurance systems based on risk-based insurance premia (Figure 9). We also sketch the transition to such a long-run institutional framework for financial markets in Europe as well as accompanying measures to strengthen the integration of equity markets.³

3.1 European Supervision

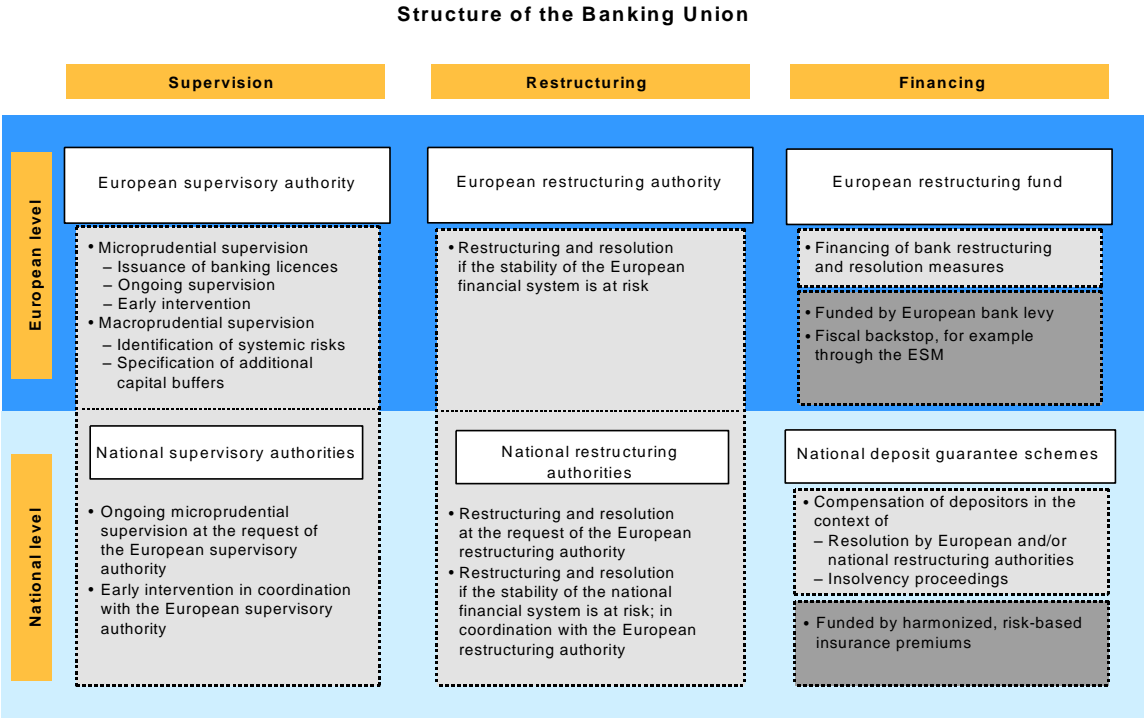
Enhancing the stability of banking systems and financial markets in Europe needs to start with enhanced risk-bearing capacities of banks themselves. Ultimately, bank risks should be borne by owners and creditors of banks other than depositors – not by the tax payer. This requires, most importantly, significantly increased capital requirements. Higher bank capital not only makes individual banks more stable, it also reduces systemic risk in the banking sector. Higher bank capital (and thus lower leverage) provides, in a much broader sense, for enhanced risk-sharing capabilities in the financial system. Because details of improved micro- and macroprudential regulation have been discussed elsewhere (German Council of Economic

³ This section is in part based on German Council of Economic Experts (2012b), Ch. 4.

Experts, 2012b; Admati and Hellwig, 2013), this section focuses on the implementation and enforcement of stricter banking regulations at the national versus European level.

National supervision is in potential conflict with monetary and fiscal policy in Europe. In a single currency area, risks can be shifted onto the central bank’s balance sheet. But the crisis also unveiled conflicts of interest between fiscal policy and supervision. As the experience in Ireland and Spain shows, distressed banks can put a massive strain on government budgets. Seeing these risks, fiscal authorities may have a preference for not disclosing bank risks and rather gamble for resurrection. National supervisors are presumably less able to withstand the resulting pressure from the economic policymakers than their supranational counterparts. Empirical evidence from the United States, for instance, shows that supervisors operating at the federal level use stricter criteria than those at the state level (Agarwal et al., 2012). Moreover, national bank supervisors are probably more likely to tolerate banks holding bonds issued by national governments (financial repression).

Figure 9



Source: German Council of Economic Experts (2012b)

While various considerations suggest more centralized supervision in Europe, the question must then be whether the supervision should be located inside or outside the central bank. The central bank needs to be involved because it has access to key information on banks through its monetary policy operations. However, a regular and extensive exchange of information between the central bank and the supervisory authority would make information available for banking supervision without the need to assign competencies in microprudential bank supervision to the central bank.

There are indeed several arguments which strongly caution against combining supervision and monetary policy under the same roof:

First, combining supervision and monetary policy creates conflicts of interest. A central bank that also assumes supervisory functions may shy away from raising interest rates if this could cause banks' financial situation to deteriorate. Such conflicting goals undermine a central bank's independence from politics. If a central bank has different and possibly conflicting goals without also having the requisite tools to achieve these goals, then there is a considerable risk that monetary policy may be instrumentalized for supervisory goals and thus essentially for fiscal purposes.

Second, the ECB has no direct fiscal institution as its counterpart. Should it be necessary to restructure and resolve a distressed bank – which inevitably entails fiscal costs – the ECB at the moment would have to delegate this task back to the national authorities. Knowing that national authorities may lack the will or the capacity to effectively resolve a bank, the ECB may either refrain from such backward delegation or come under pressure to provide the necessary bridge financing itself.

Third, the central bank's independence means that it can operate under limited democratic accountability. By contrast, a supervisory authority must be controlled by duly democratically legitimated bodies.

The current discussion on the governance structure of the SSM reflects exactly these difficulties. Establishing a mediation panel in order to separate decisions on monetary policy from supervisory decisions is an attempt to circumvent the restrictions imposed by Article 127(6) TFEU. This may have been the only feasible solution in the short-run, but, in the longer-run, a change of the treaty would provide a more consistent legal backing of the banking union.

Country coverage

A treaty change would also enable a more consistent involvement of the non-Euro Area members of the EU in the Banking Union. The evidence presented above has shown that cross-border activities of banks do not stop at the borders of the Euro-Area. Banking sector shocks within the Euro Area might spread to non-Euro-Area member states, and vice versa. Non-Euro-Area countries should thus be given the opportunity to join the European banking supervision on equal terms with Euro-Area member states.

Yet, building the SSM on Article 127(6) TFEU implies that the ECB Governing Council needs to be ultimately responsible for decisions in banking supervision. Because non-Euro-Area countries cannot be represented in the Governing Council, it is not feasible to grant equal terms for participation in the SSM. Hence, the incentives for non-Euro-Area member states to join the SSM are restricted. To balance these restrictions, the SSM-proposal offers non-Euro-area participants various ways to opt out. These options, however, contradict the

idea of a stable long-term supervisory framework encompassing all EU member states. In future crises, there will be the risk of non-Euro-Area SSM participants falling back into national solutions, possibly not taking into account externalities to third countries.

Coverage of all banks

Last but not least, there needs to be a decision on which banks would be supervised by a European institution. It has been decided that the SSM should in principle cover the “systemically important” banks only. This is a decision which may be justified on the grounds of short-run capacity constraints. But it should not become the blueprint for the future design of the Banking Union for three reasons. First, the “systemic importance” of a bank is not well-defined. A major bank linked to many other financial institutions is without doubt of greater relevance to the system as a whole than is a small, locally active bank. However, smaller banks can still be systemic if they are exposed to macroeconomic risks (Greenwood et al., 2011). The US S&L crisis in the 1980s and the current crisis among Spanish Cajas are good examples, as the banks concerned would not have been covered by the usual criteria for what counts as being “systemically important”. Second, dividing the banking system along pre-defined criteria on systemic importance would create incentives for regulatory arbitrage. This has potentially adverse effects for financial stability and for the efficient allocation of capital. Third, concerns about national thinking of national supervisory authorities and political influence in the banking sector would be mitigated to a far lesser extent. Therefore, all banks should in principle be treated equally.

The current proposal of the SSM assigns the European level responsibility for all banks in participating member states. This is a step into the right direction. At the same time, however, the regulation foresees a strong role for national supervisors with regard to banks not classified as “significant”. These banks continue to be directly supervised by national supervisors.

The current design of the SSM balances the powers between national and European supervisory by granting the ECB a right for early intervention. Presumably, the ECB will use this right only if there are clear signs of solvency or liquidity problems becoming imminent. Even then, the ECB is not obliged to step in, but it can rather decide at its discretion: Under “normal” instances, the ECB cannot assume direct oversight of “less significant” banks. It can do so only “when necessary to ensure consistent application of high supervisory standards”. In other words, the ECB can take over only if it can verify that national supervisory authorities failed to apply high standards. A more consistent setting should allow for the ECB to assume supervisory powers under any circumstances.

Moreover, the ECB should be obliged to intervene if key ratios of individual banks fall below critical values. This would correspond to the US system of “prompt corrective action”. In the US, the deposit insurer (FDIC) acts under prompt corrective action standards (PCA) that were introduced to prevent regulatory forbearance: clearly-set threshold values force the supervisor

to intervene in a timely manner. To this end, banks are sub-divided into five groups by degree of capitalization. Banks in the best group have to meet the conditions for three different capital adequacy ratios. Should a bank fall into one of the three lowest groups, the FDIC must automatically intervene. In the final stage, the FDIC must within 90 days take over the bank and then wind it up, unless the FDIC and the federal or state supervisor unanimously vote against doing so (Spong, 2000).

Summing up

The current design of the SSM suffers from a number of shortcomings. These arise in part from founding the SSM on Article 127(6) TFEU, instead of enabling a more satisfying solution by changing the EU treaties. The flaws in the SSM design need to be cured – at least in the long run. In the meantime, the SSM can be viewed as an intermediate step, which reflects current political limitations and window of opportunity considerations. When negotiating future treaty changes, policy makers should consider shifting supervisory competencies from the ECB to a separate European authority subject to appropriate democratic control mechanisms. At the same time, the necessary treaty changes should not be taken as an excuse for delaying action and not dealing with bank distress under national responsibility as soon as possible.

3.2 European-Level Restructuring and Resolution Powers

Improved regulation and supervision of banks will not suffice to enhance the future stability of the financial system and to re-establish trust in European banks. Rather, clear criteria and procedures need to be developed on how to deal with banks in distress and how to share the costs of future cases of bank distress. Clarity of who bears risks and which principles to apply would ultimately also lay the basis for banks' renewed access to external funding.

In fact, a European institution in charge of restructuring and resolution is a natural complement to a European supervisor. With European supervision and national authority for restructuring and resolution, liability and control would not reside on the same level, i.e. a single member state would become financially liable for decisions taken at the European level. Competencies for banking supervision at the European level would make national authorities unwilling to pay for potential mistakes of the European supervisor. Moreover, regulatory forbearance should be less of an issue for a European resolution authority that is independent of national governments.

In terms of powers to intervene, both, the resolution authority and the supervisor should be able to trigger the restructuring of ailing banks. This should reduce the scope for regulatory forbearance and strengthen the independence of respective institutions.⁴ Forbearance can also

⁴ Brunnermeier and Gersbach (2012) discuss triggering power in the context of supervision within the ECB.

be mitigated by introducing automatic triggers in the bank restructuring and resolution procedures similar to the prompt corrective actions standards in bank resolution procedures in the U.S. In order to take account for potential capacity limits of the European restructuring agency and to make use of existing expertise and resources in the member states, analogue to supervision, a two-level structure might be desirable.

As with banking supervision, it is crucial the European restructuring agency is fully responsible for all EU banks, and that the European level, at all times, has the power to intervene. The national authorities would in principle have to obey instructions from the central office, although the latter would not be empowered to prevent restructuring procedures initiated by the national agencies. The precondition for this is a full exchange of information between the national and European restructuring bodies.

Financing mechanisms

Bank restructuring is costly – but delaying it is even more costly. In a first instance, the financing of restructuring and resolution procedures should rely on contributions of a bank's shareholders and debtors. Effective and credible resolution proceedings for banks would thus facilitate the bail-in of the concerned bank's debt holders, maintaining the bank's status as going-concern. In this way, the absorption of losses by debt holders – as is standard in any regular insolvency proceeding – would be facilitated while addressing at the same time concerns for financial system stability. Hence, the restructuring-and-resolution element of the Banking Union provides a second channel of risk sharing via the European market for bank debt.

Yet, experience tells that not all creditors can be bailed in, and that authorities refrain from a bail in because of the fear of contagion. Depositors, which are covered by a deposit insurance system, for instance, will typically not share the losses of bank restructuring. Independence of a European bank restructuring agency can only be achieved if it can rely on its “own” financial resources. Funding can come from three sources:

First, in the longer-run, a European resolution authority should be able to finance restructuring and resolution measures using financial resources from a pre-financed European bank restructuring fund. This restructuring fund should be financed by a European bank levy. Ideally, the bank levy internalizes the implicit subsidy that arises from the systemic risk the single institutions poses for the financial system. The levy should at least significantly penalize structures that pose considerable obstacles to the orderly winding down of banks (German Council of Economic Experts, 2009).

Second, fiscal burden sharing arrangements between member states are crucial, not least because it will take some time until the European restructuring fund will be sufficiently stocked. The specific-sharing model (Goodhart und Schoenmaker, 2009) is one way of defining clear burden sharing rules in advance. In such a model, cost sharing would be based

on the actual regional activities of a specific bank. The costs could be spread by a key that can, for example, be geared toward how large the share of a bank's assets is in a particular country.

Third, the ESM can serve as a fiscal backstop in larger crisis events. This means that arrangements need to be made with regard to non-Euro-Area-countries participating in the banking union, which provide common resources similar to the ESM. However, the ESM currently is not suited to appropriately fulfill this function for three reasons: First, it covers only Euro-Area member states. Hence, equivalent terms for non-Euro-Area countries wishing to participate in the Banking Union need to be established. Second, ESM assistance cannot be granted without prior agreement of national parliaments. This is generally not consistent with the demand for quick action in bank restructuring and resolution proceedings. Third, majorities for ESM support of banks can hardly be organized if the concerned bank is only active in the minority of the member states. This underlines the importance of ex-ante burden sharing arrangements between member states (Goodhart, 2012).

3.3 European Deposit Insurance

Is the Banking Union part of the short-term crisis management or part of the long-term institutional structure of the Euro Area – or both? On this, views differ, and the dividing line is mainly with regard to the role of deposit insurance. For those who see the Banking Union as part of crisis management, common deposit insurance should come early on. Proponents of this view see the Banking Union as a device to introduce elements of joint liability and risk sharing soon, thereby providing relief to the fiscal situation of the crisis countries (IMF, 2013a). Those who see the Banking Union mainly as part of a long-term institutional framework argue that, before a common deposit insurance scheme is being introduced, legacy assets need to be dealt with under national responsibility. During the transition stage, countries could take resort to the ESM for bank recapitalization, but the government would remain liable for these funds (German Council of Economic Experts, 2012b).

To understand the role of the deposit insurance system in the context of the Banking Union, it is useful to recall the two main functions of such an insurance system. First, deposit insurance systems should prevent runs of depositors, thus protecting the payment systems and providing for efficient allocation of financial resources. Second, deposit insurance systems pay off depositors in case of actual bank insolvencies.

Hence, the main role of a deposit insurance system is to insure depositors against liquidity, not against insolvency risk. But, of course, deposit insurers also play a role in the case of bank insolvencies. In the US, for instance, the deposit insurer FDIC secures customer deposits with US financial institutions; cooperative banks have a separate deposit insurance scheme. In the event of a crisis, should the fund volume not suffice, the FDIC can draw on a US Treasury Department credit line of up to USD 100 billion and in exceptional cases of as much as USD

500 billion. These loans are covered, later on, through a surcharge on deposit insurance premia. This shows the importance of a fiscal backstop for the restructuring and resolution of banks. It does not necessarily show the importance of having a unified deposit insurance system in Europe. Rather, national deposit insurance systems could coordinate this function during a resolution case.

In any case, deposit insurance systems involve a trade off. On the one hand, liquidity risks are insured. On the other hand, any insurance system potentially creates moral hazard. To limit the scope for bank risk-taking as a result of insurance, risk-sensitive insurance premiums need to be set in a consistent and uniform way. In the US, members of the FDIC pay a premium that is related to the bank's risk profile and the amount of deposits insured, whereby the total fund volume is limited and comes to 1.5 % of the deposits insured. When calculating the risk premiums, the financial institutions are subdivided into four rather broad risk categories (Acharya et al., 2009). Premia for large and complex financial institutions are calculated separately. The impact of introducing deposit insurance with non-risk-adjusted premia in 1933 with the foundation of the FDIC is discussed in DeLong and Saunders (2011). They show that the deposit insurance led to higher risks. This finding is corroborated by studies on the S&L crisis in the 1980s (Akerlof and Romer, 1993; White, 1993; Brewer and Mondschean, 1994; Benston and Kaufman, 1997). Literature includes several methods for setting risk-sensitive insurance premia. Applying the method in Duan (1994, 2000), for instance, risk-adjusted premia for deposit insurance in Germany for the period 1991 through 1998 should have been 6.17 basis points on average – or more than double the actual premium (Laeven, 2002).

As regards premia for deposit insurance systems in Europe, current practice varies widely across European countries and even across different schemes within countries. Six of 39 existing schemes in EU member states are exclusively funded ex post; some of the pre-funded schemes are not allowed to increase the annual premium or collect extraordinary contributions in times of distress. Moreover, there is considerable heterogeneity with regard to the classes of deposits eligible for protection (European Commission, 2010b). In some member states, contributions are based on eligible deposits, in some others on insured deposits. Most importantly, contributions are risk-adjusted only in 8 member states (IMF, 2013b). Of course, any pricing rule will apply only to explicit deposit insurance systems that are in place. The fact that bank deposits in Europe are also covered by wide-ranging implicit deposit insurance promises by national governments is even more problematic. In the context of the Cyprus crisis, for instance, the German government has renewed its general guarantee for bank deposits of 2008. Hence, the natural sequence of reforms would be to, first, to reform national deposit insurance systems before considering the move to a European-wide system.

However, much of the ongoing discussion focuses on the reach and the coverage of a pan-European deposit insurance system. Little attention is given to insurance premia. Hence, an

effort must be made at the national level to ensure that existing deposit insurance schemes do not incentivize excessive leverage. The insurance premiums must be aligned as closely as possible to a bank's actual risk profile; uniform criteria for this must apply in all member states as envisaged in the Commission's proposal for Deposit Guarantee Scheme Directive (European Commission, 2010a).

Proponents of a European-wide deposit insurance argue that it is necessary to break (one of) the links between sovereigns and the national banking sectors. However, the crucial point is not the deposit insurance scheme itself, but the implicit and explicit government guarantees provided to depositors. In absence of a credible fiscal backstop at the European level, national governments will still be expected to guarantee the deposits of national banking sectors. Hence, the sole introduction of a common deposit insurance scheme will hardly contribute to breaking the links between sovereigns and banking sectors.

Given that a common deposit insurance scheme at present is neither desirable – due to legacy problems – nor effective – due to the continued involvement of national governments –, policy action should focus on the truly necessary elements of the Banking Union. Introducing common elements of depositor protection might be considered in the long run, after having fully established banking supervision, restructuring and resolution at the European level including credible financing sources. This presupposes also a solution to the problem of legacy assets. Given these preconditions, there would be no harm in merging national deposit insurance schemes. In particular, common initiatives of single member countries might reduce concentration risks at national schemes, thus making it less likely for national deposit insurance scheme to be underfunded even in larger crisis events.

As regards ex-post risk sharing, the contribution of a common European-wide deposit guarantee scheme is limited, once the other truly necessary elements of the Banking Union are established. In particular, European restructuring and resolution proceedings drawing on common resources and ex-ante burden sharing agreements will alleviate banking sector shocks that cannot be dealt with at the national level.

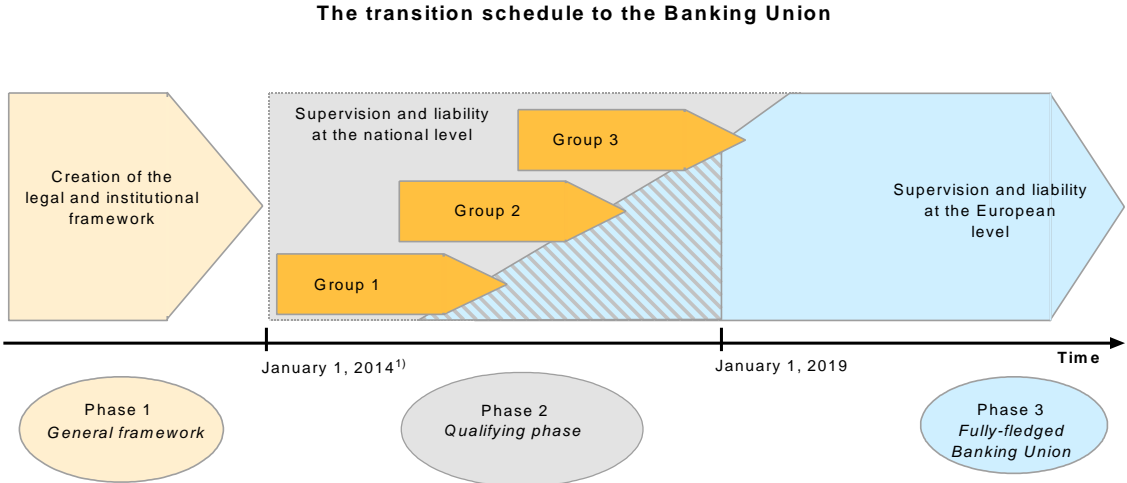
As regards the prevention of bank runs, it is crucial to establish a credible commitment towards depositors to pay out the full amount of insured deposits at any time and under any circumstances. A well-designed resolution regime clearly contributes to strengthen such a commitment if even failures of large banking groups can be dealt with in an orderly manner. The powers, tools and financial means at the European level should then suffice to split up the group's business lines and to credibly preserve the “deposit bank”. Treating the failed banks as a going concern, the restructuring agency would apply measures in an orderly process over an appropriately long time horizon, including the bail-in in of shareholders, bondholders and uninsured depositors. National deposit guarantee schemes would contribute to the financing of restructuring and resolution measures to the extent they would have suffered a loss in a regular insolvency proceeding. Clearly, payments of national deposit guarantee schemes

would have to be delayed if the enforcement of the payment should undermine the credibility of the national schemes involved. In this sense, the European level could act to some extent as a re-insurance for national deposit guarantee schemes. This structure might be regarded as similar to the agreement on ESM assistance (finally) reached in the Cyprus case. By providing funds at the European level (ESM), the credibility of the Cyprus government and thus its ability to protect insured (below 100.000 Euro) depositors was strengthened. At the same time, the bail-in of uninsured depositors of Cypriot banks became feasible.

3.4 Managing the Transition

Two main obstacles currently block the road to an encompassing Banking Union: legacy assets and an incompletely regulatory and institutional framework. The German Council of Economic Experts thus suggests a concept to manage the transition which is based on two ideas (German Council of Economic Experts, 2012b). First, liability and control will at all times – in the final stage of a fully fledged banking union and during the transition phase – be kept at the same level. Second, legacy assets will not become a common liability but need to be resolved nationally as national supervisors were in charge while these assets had been accumulated on the balance sheet of the national banking system.

Figure 10



1) If the legal and institutional preconditions - including the modification of the EU treaties - are not fulfilled as of 1 January 2014, phases 2 and 3 will start later, accordingly.

Source: German Council of Economic Experts (2012b)

Transition to a Banking Union is divided into three phases (Figure 10): During the first phase, the legal framework is prepared and the necessary institutions are being set up. The second phase entails a qualifying and screening process of all banks that are about to enter the banking union but with member states being ultimately responsible for any legacy assets to be written down. In a third phase, all banks in the market require a European banking license, i.e. a fully fledged European banking union is operational and comprised of banks that accomplished the qualifying and screening process.

Phase 1: Legal and institutional preconditions

In a first step, binding deadlines for the ultimate start of the banking union and for the transitory arrangements have to be specified. This would be followed by the creation of the national legal prerequisites in each member state and by the establishment of the necessary European institutions. However, changes in the relevant European treaties would be required in order to implement a fully-fledged banking union as described above. Ideally, this phase should be finished within one or two year's time.

Already in this phase, financial institutions should consent to the sharing of information between the relevant authorities at the national and the newly established European level. In parallel, elements of mutualisation of risk should be reduced gradually. The ECB should, if financial market conditions allow, tighten conditions for refinancing credit by conditioning access to refinancing facilities on the soundness of the financial institution in question. It needs to be ensured that such tightening of conditions for ECB refinancing is also coordinated with reduced access to ELA (Emergency Liquidity Assistance).

Phase 2: Qualification phase

In the second phase, banks qualify for entry into the banking union and for a European banking license. Both, individual banks and national supervisors can apply for admittance of a bank into the European banking union. In order to prevent delayed applications, a fixed deadline after which only banks with a European banking license remain on the market will be specified. Qualification for a European banking license involves a complete re-assessment of the value of banks' assets – including claims vis-à-vis the government – through external experts. Also, banks obtaining a European banking license must meet the full regulatory requirements of Basel III as well as a Leverage Ratio of at least 5% of total on- and off-balance sheet activities (German Council of Economic Experts, 2012b).

European authorities can admit a bank into the banking union after the qualification and screening phase has successfully been completed. Hence, banks would enter the banking union successively. Until banks have obtained a European banking license, liability and control would remain at the national level. In order to prevent European authorities to be swamped by applications of possibly thousands of banks, banks would be classified into different groups according to, for example, their size. In a first wave, only the largest banks such as those currently monitored by the European Banking Authority would have to qualify for entry into the banking union. The second wave of application with qualification and screening would consist of mid-sized banks and the final third wave of small banks. For each of the respective banks, group-specific deadlines for application for a European banking license would be specified. The criterion according to which banks are classified should refer to a point in time in the past in order to prevent manipulation.

Given the continuing instabilities on financial markets, restructuring and, in particular, the winding down of large financial institutions is unlikely to occur. Authorities might fear that such an event could trigger contagion effects. This implies though that larger and potentially systemically important financial institutions in distress have incentives to gamble for resurrection. In order to minimize the risk emanating from such behavior, European authorities already established in the first phase should, in parallel to national authorities, co-supervise even those financial institutions for which the group-specific deadlines have not yet been reached. In particular, European authorities should co-supervise the large and globally active banks as quickly as possible to allow a close monitoring and assessment of risk allocation in the European banking sector – of course during the second phase supervisory responsibility is still with the national authorities while granting a European banking license to a bank that accomplished the screening and qualification phase is with the European supervisor. During the screening and qualification phase stress-tests can be used to determine possible capital shortfalls, and capitalization plans shall be developed to restore a sufficient amount of equity capital. Care needs to be taken that such capitalization plans do not involve the shedding of assets in order to restore a sufficient level of capital adequacy.

One objection against gradual entry into banking union could be that it might lead to a segmentation of financial markets and to a potentially destabilizing shifting of deposits among banks. Yet, this concern would be mitigated by the fact that deposit insurance would remain at the national level. Hence, the explicit guarantees for bank deposits would not change if banks eventually obtain a European banking license. Also, the general regulatory framework under which banks operate would be the same for all banks. There would be differences across banks with regard to the solvency of the fiscal authorities behind each bank and thus with respect to the implicit guarantees of banks' deposits. This is a substantial element of uncertainty for depositors, in particular for the banks from the crisis countries. With a structured transition to a banking union, however, uncertainty should decrease rather than increase.

During the transition, it is likely to be necessary for some banks to be restructured and possibly even resolved. In particular, banks which have not applied for a European banking license until the end of the group-specific transition phase as well as banks that have been denied a European banking license should enter a mandatory restructuring process. If fiscal resources beyond the fiscal capacities of the government in question are necessary, the government could apply for funds for bank recapitalization from the European Stability Mechanism. The conditions under which such funding should be granted could be related to the Memorandum of Understanding specified for the case of Spain (Council of the European Union 2012), and it should particularly be ensured that existing shareholders bear losses. During this phase, the government would assume the liabilities for funds provided by the European Stability Mechanism, and the European Restructuring Authority established in Phase 1 should accompany the process. Hence, "recapitalization" of banks does not imply the

unconditional rescue of distressed banks with taxpayer's money. Rather, recapitalization is part of a process in which only viable banks with a sound business model remain in the market.

Phase 3: Full banking union

After completion of the second phase, supervision of all banks will rest with the European authorities. The European Restructuring Authorities will be in charge of the restructuring and resolution of banks. It can resort to funds from a European bank restructuring fund, the European Stability Mechanism and pre-specified rules for fiscal burden sharing. All banks remaining in the market would have a European banking license; both control and liability would be at the European level. Given that Phase 1 would be completed within a year's time, Phase 3 could potentially resume in the year 2019, i.e. in the year in which banks have to meet the new Basel III regulatory requirements.

4 Policy Conclusions

The sovereign debt crisis in Europe has revealed critical shortcomings innate in the Single Market for capital. Both, private households and public-sector entities have taken on excessive debt, and there are incentives to shift the risks to the European level. Essentially, a Banking Union is thus a necessary complement to the Single Market for capital and to a common monetary policy. That being said, a Banking Union remains primarily a long-term project that cannot eliminate the current debt overhang in Europe.

In this paper, we have argued that a Banking Union should comprise the following core elements.

First, a single supervisory agency should cover all banks, and all countries in the Single Market should in principle participate. Assigning supervisory functions to the ECB should be a temporary solution only as it entails considerable risks to the independence of monetary policy. Hence, sufficient precautions must be taken to keep the ECB's monetary policy powers and its prudential role separate both institutionally and in terms of personnel. This will, in the long-run require changes in the EU Treaty.

Second, a European restructuring agency should be part of a Banking Union, and it needs to be equipped with sufficient legal authority. There must be clear rules governing its financing through the ESM and a bank levy. With the proposals for a SRM and with the proposed resolution directive, the need for harmonization of national regulations and centralization at the European level has been acknowledged. But there is still a long way to go until agreement between national governments will be reached. The legal basis of the SRM, its complicated governance structure that presumably hampers swift decision making in the event of crisis, and funding issues remain subject to intense debate. Moreover, a large number of issues have not been addressed at all. To name a few, the problem of legacy assets needs to

addressed, ex-ante burden sharing rules need to be spelled out, and the role of the ESM as a potential fiscal backstop needs to be clarified.

Third, central powers covering supervision, restructuring and resolution of banks are the preconditions for the introduction of European deposit insurance. These preconditions will not be in place for the foreseeable future. The introduction of pan-European deposit insurance would mutualise risks without, at the same time, establishing sufficient central surveillance mechanisms. However, it is imperative that there are uniform standards for national deposit insurance schemes and that insurance premia take bank risks duly into account.

Through these channels, the Banking Union can contribute to an improved monitoring and management of bank risk. But it needs to be backed by further regulatory reforms strengthening the resilience of European banks. First and foremost, bank risks should be borne by banks' equity owners. In the current situation, many European banks are undercapitalized and could not withstand larger macroeconomic shocks. Therefore, policymakers should aim at strengthening banks' capital base by reducing overcapacities in the banking sectors and allowing those banks remaining in the market to earn sufficient margins. In the medium term, an obligatory leverage ratio, which sets bank equity capital to a level of at least 5% of total on- and off-balance sheet activities of banks, should be introduced. Abolishing the privileged role of government bonds in banking regulation would be a further important step towards disentangling bank and macroeconomic risks. Also, lowering uncertainty about the future of European banks through consistent rules for the restructuring and resolution of banks is likely to make banks more attractive for external equity investors. Applying credible and transparent procedures which involve the bail in of creditors is a further channel of increasing the scope for cross-border risk sharing.

In Europe, there is ample scope for additional cross-border risk sharing through cross-border equity ownership both, in the financial and in the non-financial sector. In the financial sector, this implies that consolidation in the banking sector should not be geared towards the creation of national champions and that cross-border ownership in banking is possible. In the non-financial sector, barriers to cross-border equity ownerships should be identified and abolished.

5 References

- Acharya, V. V., L. H. Pedersen, T. Philippon and M. Richardson (2010) Measuring systemic risk, Working Paper 10-02, Federal Reserve Bank of Cleveland.
- Acharya, V.V., A.C. Santos and T. Yorulmazer (2009) Systemic risk and deposit insurance premiums, Federal Reserve Bank of New York Economic Policy Review 16, 89-99
- Admati, A., P. DeMarzo, M. Hellwig and P. Pfleiderer (2011) Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Expensive.
- Admati, A. and M. Hellwig (2013) The Bankers' New Clothes: What's Wrong with Banking and What to Do about It, Princeton University Press, Princeton.

- Advisory Scientific Committee of the ESRB (2012) Forbearance, resolution and deposit insurance, Report of the Advisory Scientific Committee, July 2012, Frankfurt.
- Agarwal, S., D. Lucca, A. Seru and F. Trebbi (2012) Inconsistent Regulators: Evidence From Banking, Working Paper 17736, National Bureau of Economic Research.
- Akerlof, G. A. and P. M. Romer (1993) Looting: The Economic Underworld of Bankruptcy for Profit, *Brookings Papers on Economic Activity*, 24, 1–74.
- Asdrubali, P., B.E. Sørensen and O. Yosha (1996) Channels of Interstate Risk-Sharing: United States 1963-1990, *Quarterly Journal of Economics*, 111, 1081–1110.
- Bekaert, G., C.R. Harvey, and C. Lundblad (2006) Growth volatility and financial liberalization. *Journal of International Money and Finance*, 25, 370–403.
- Benston, G. J. and G. G. Kaufman (1997) FDICIA after Five Years, *Journal of Economic Perspectives*, 11, 139–158.
- Brewer, E. and T. H. Mondschean (1994) An Empirical Test of the Incentive Effects of Deposit Insurance: The Case of Junk Bonds at Savings and Loan Associations, *Journal of Money, Credit and Banking*, 26, 146–164.
- Brunnermeier M. K., and H. Gersbach (2012) True independence for the ECB: Triggering power - no more, no less, *VoxEU.org*, 20 December.
- Buch, C. M., C. T. Koch and M. Koetter (2011) Size, productivity, and international banking, *Journal of International Economics*, 85, 329–334.
- Buch, C.M., Eickmeier, S., and E. Prieto (2013) Macroeconomic Factors and Micro-Level Bank Behavior, *Journal of Money, Credit, and Banking* (forthcoming).
- Council of the European Union (2012) Spain – Memorandum of Understanding on Financial-Sector Policy Conditionality, 20 July, Brussels.
- Council of the European Union (2013) Proposal for a Council Regulation conferring specific tasks on the European Central Bank concerning policies relating the prudential supervision of credit institutions – Final compromise text, 16 April, Brussels.
- DeLong, G. and A. Saunders (2011) Did the introduction of fixed-rate federal deposit insurance increase long-term bank risk-taking?, *Journal of Financial Stability*, 7, 19–25.
- Diamond, D.W. and P.H. Dybvig (1983) Bank Runs, Deposit Insurance, and Liquidity, *Journal of Political Economy*, 91, 401–419.
- Doluca, H., M. Hübner, D. Rumpf, and B. Weigert (2012) The European Redemption Pact: Implementation and macroeconomic effects, *Intereconomics: Review of European Economic Policy*, 230-239.
- Duan, J.-C. (1994) Maximum Likelihood Estimation Using Price Data Of The Derivative Contract, *Mathematical Finance*, 4, 155–167.
- Duan, J.-C. (2000) Correction: Maximum Likelihood Estimation Using Price Data of the Derivative Contract (*Mathematical Finance* 1994, 4/2, 155-167), *Mathematical Finance*, 10, 461–462.
- European Central Bank (2012a) Indicators of Market Segmentation: Media Request Following the ECB Press Conference on 2 August 2012.
- European Central Bank (2012b) Financial Stability Review June 2012.

- European Commission (2009) State aid: Overview of national measures adopted as a response to the financial/economic crisis. Press Release MEMO/09/305, 29 June, Brussels.
- European Commission (2010a) Proposal for a directive of the European Parliament and of the Council for Deposit Guarantee Schemes, COM(2010) 368, 12 July, Brussels.
- European Commission (2010b) JRC Report under Article 12 of Directive 94/19/EC amended by Directive 2009/14/EC, Brussels.
- European Council (2012) European Council conclusions on completing the EMU, 14 December, Brussels.
- Favara, G. and Ratnovski, L. (2012) Macroprudential policy: Economic rationale and optimal tools, VoxEU.org, 6 August.
- German Council of Economic Experts (2009) Securing the future through responsible economic policies, Annual Report 2009/10, Wiesbaden.
- German Council of Economic Experts (2012a) After the Euro Area Summit: Time to Implement Long-term Solutions, Special Report, 30 July, Wiesbaden.
- German Council of Economic Experts (2012b) Stable Architecture for Europe – Need for Action in Germany, Annual Report 2012/13, Wiesbaden.
- Goodhart, C.A.E. (2012) Funding arrangements and burden sharing in banking resolution, VoxEU.org, 16 October.
- Goddhart, C.A.E. and D.J. Lee (2013) Adjustment Mechanisms in a Currency Area, Open Economies Review, DOI 10.1007/s11079-013-9268-6.
- Goodhart, C.A.E. and D. Schoenmaker (2009), Fiscal Burden Sharing in Cross-Border Banking Crises, International Journal of Central Banking, 5, 141–165.
- Greenwood, R., A. Landier and D. Thesmar (2011) Vulnerable Banks, IDEI Working Paper 700, Institut d'Économie Industrielle (IDEI).
- Gros, D. (2012) Banking Union: Ireland vs. Nevada, an illustration of the importance of an integrated banking system, CEPS Commentary, Centre for European Policy Studies, 18 October.
- Haldane, A. G. (2012) The dog and the frisbee, Bank of England, London.
- Hildebrand, T., J. Rocholl and A. Schulz (2012) Flight to where? Evidence from bank investments during the financial crisis, Working Paper, ESMT Berlin.
- Hoffmann, M. and B.E. Sørensen (2012), Don't expect too much from EZ fiscal union – and complete the unfinished integration of European capital markets! VoxEU.org, 9 November.
- Hoffmann, M. and I. Shcherbakova-Stewen (2011) Consumption Risk Sharing over the Business Cycle: The Role of Small Firms' Access to Credit Markets, The Review of Economics and Statistics, 9, 1403–1416.
- International Monetary Fund (2013a) A Banking Union for the Euro Area, IMF Staff Discussion Note, Washington, D.C.
- International Monetary Fund (2013b) European Union: Publication of Financial Sector Assessment Program Documentation – Technical Note on Deposit Insurance, Washington, D.C.
- Juvs, R. (2012) Asset encumbrance and its relevance for financial stability, Sveriges Riksbank Economic Review 2012, 3.

- Kalemli-Ozcan, S., B.E. Sørensen and O. Yosha (2004) Asymmetric Shocks and Risk Sharing in a Monetary Union: Updated Evidence and Policy Implications for Europe, CEPR Discussion Paper 4463, CEPR.
- Laeven, L. (2002) Bank Risk and Deposit Insurance, *World Bank Economic Review*, 16, 109–137.
- Lane P.R. and G.M. Milesi-Ferretti (2007) The external wealth of nations mark II: Revised and extended estimates of foreign assets and liabilities, 1970–2004, *Journal of International Economics* 73, 223–250.
- Lautenschläger, Sabine (2013), From Supervision to Resolution: A German Perspective, Speech at the Institute of International and European Affairs, 25 June, Dublin.
- Meusel, Steffen (2012) Asset-Encumbrance: Was wird aus unbesicherten Bankanleihen?, *BaFin-Journal* 2012, 7.
- Rose, A. and T. Wieladek (2011) Financial protectionism: the first tests, Discussion Paper 32, Monetary Policy Committee Unit, Bank of England.
- Spong, K. (2000) Banking Regulation: Its Purposes, Implementation, and Effects, Federal Reserve Bank of Kansas City.
- White, L. (1993) A Cautionary Tale of Deregulations Gone Awry: The S&L Debacle, *Southern Economic Journal*, 59, 496–514.
- Zimmer, D. and M. Blaschczok (2012) European Commission's control of State aid to banks: Competition protection or market design?, Working Paper, University of Bonn.