BRUEGEL WORKING PAPER 2015/13

FIRMER FOUNDATIONS FOR A STRONGER EUROPEAN BANKING UNION

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Highlights

- The move to European Banking Union involving the supervision and resolution of banks at euro-area level was stimulated by the sovereign debt crisis in the euro area in 2012. However, the long-term objective of Banking Union is dealing with intensified cross-border banking.
- The share of the assets of national banking systems that come from other EU countries was rising before the financial and economic crisis of 2007, but went into decline thereafter in the context of a general retrenchment of international banking. Most recent data, however, suggests the decline has been halted. About 14 percent of the assets of banks in Banking Union come from other EU countries, while about a quarter of the assets of the top 25 banks in the Banking Union are held in other EU countries.
- While a crisis-prevention framework for the euro area has largely been completed, the crisis-management framework remains incomplete, potentially creating instability. There is no governance mechanism to resolve disputes between different levels of crisis-management agencies, and incentives to promote optimum oversight are lacking. Most importantly, risk-sharing mechanisms do not adequately address the sovereign-bank loop, with a lack of clarity about the divide between bail-in and bail-out.
- To complete Banking Union, the lender-of-last-resort and deposit insurance functions should move to the euro-area level, breaking the sovereign-bank loop. A fully-fledged single deposit insurance (and resolution) fund should be favoured over a reinsurance scheme for reasons of cost and simplicity.

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NOVEMBER 2015

1. Introduction

The Banking Union is a milestone in European banking integration. While supervision of European banks by national supervisors was loosely coordinated through the European Banking Authority (EBA), the Banking Union has positioned the European Central Bank (ECB) as centralised supervisor of the European banks, initially in the euro area. The Banking Union creates a paradigm shift for the various stakeholders. French and Dutch banks become euro-area banks. National supervisors work together with the ECB in the Single Supervisory Mechanism (SSM), with the ECB ultimately in charge. Customers may at some point choose a bank from another euro-area country as their 'home' bank.

While academics have argued for a long time that the increasing intensity of cross-border banking would need European banking supervision and resolution (eg Folkerts-Landau and Garber, 1992; Schoenmaker, 1997; Vives, 2001; Goodhart and Schoenmaker, 2009), the immediate reason for the sudden move to Banking Union was the intensifying euro sovereign crisis (Véron, 2011; Pisani-Ferry *et al*, 2012). The stated aim is to break the sovereign-bank loop, whereby the credit standing of nation states and banks are interlinked, and by implication, to organise bank risk sharing at the euro-area level.

This paper shows that bank risk sharing has been only partly achieved in the current set-up of the Banking Union. Some work remains to be done, notably in the field of deposit insurance (Gros and Schoenmaker, 2014; Véron, 2015). Moreover, the mix of national agencies (for deposit insurance) and European agencies (for supervision and resolution) makes the Banking Union arrangement potentially instable. There is no governmental mechanism to settle disputes between agencies operating at different levels.

Now the euro sovereign crisis seems to be tamed, it is interesting to look at the long-term rationale for Banking Union. This paper therefore documents cross-border banking trends in the European Union. Importantly, we find that cross-border banking is not only pervasive in the euro area, but also in the non-euro area member states of the EU. The latter may wish to join the Banking Union at a later stage.

This paper is organised as follows. Section 2 discusses the rationale behind the Banking Union. Section 3 documents the advance of cross-border banking in Europe. Section 4 analyses what the new governance framework of the Banking Union is about. We stress that the Banking Union should be seen as an integrated framework. Section 5 explains the completed building blocks of Banking Union, in particular single supervision and single resolution. Next, Section 6 discusses which building blocks are not yet completed, notably European Deposit Insurance. Section 7 concludes.

2. The rationale for Banking Union

The decision to move to Banking Union was taken suddenly at the height of the euro sovereign crisis in 2012. The vicious circle between the solvency of nation states in the euro area and the solvency of these nation states' banks contributed to the crisis. The sovereign-bank loop works two-way. First, banks carry large amounts of bonds of their own government on their balance sheet (Battistini *et al*, 2014). So, a deterioration of a government's credit standing would automatically worsen the solvency of that country's banks. Second, a worsening of a country's banking system could worsen the government's budget because of a potential government financed bank bailout. Alter and Schüler (2012) and Erce (2015) provide evidence of interdependence between government and bank credit risk during the crisis.

The sovereign-bank loop argument relates to the euro area, where national central banks cannot issue money and buy government bonds without limit because the ECB is in charge. To break the loop, the European Council decided to move the responsibility for banking rescues to the euro-area level. If *ex-post* rescues are organised at this level, *ex-ante* supervision should also be moved in tandem to minimise the need for such rescues (Goodhart and Schoenmaker, 2009). So, the essence of

Banking Union is supervision and resolution of banks at the euro-area level. Nevertheless, we argue in Section 6 that the risk sharing arrangements are not yet complete.

The long-term reason for Banking Union is cross-border banking. The financial trilemma states that the three objectives of financial stability, cross-border banking and national financial policies cannot be achieved at the same time; one has to give (Schoenmaker, 2011). The combination of cross-border banking and national supervision and resolution leads to coordination failure between national authorities, which put national interests first (see, for example, the abortive rescue of Fortis). This in turn puts financial stability at risk. The advance to Banking Union solves this coordination failure by adopting supranational policies. The coordination failure argument is related to the Single Market (which allows unfettered cross-border banking), and thus to the European Union as a whole.

The Banking Union has struck a compromise between these two goals. Participation is mandatory for euro-area member states, and optional for non-euro area members (Hertig *et al*, 2010). In that way, the door is kept open to address the coordination failure in cross-border banking also for non-euro area members at a later stage.

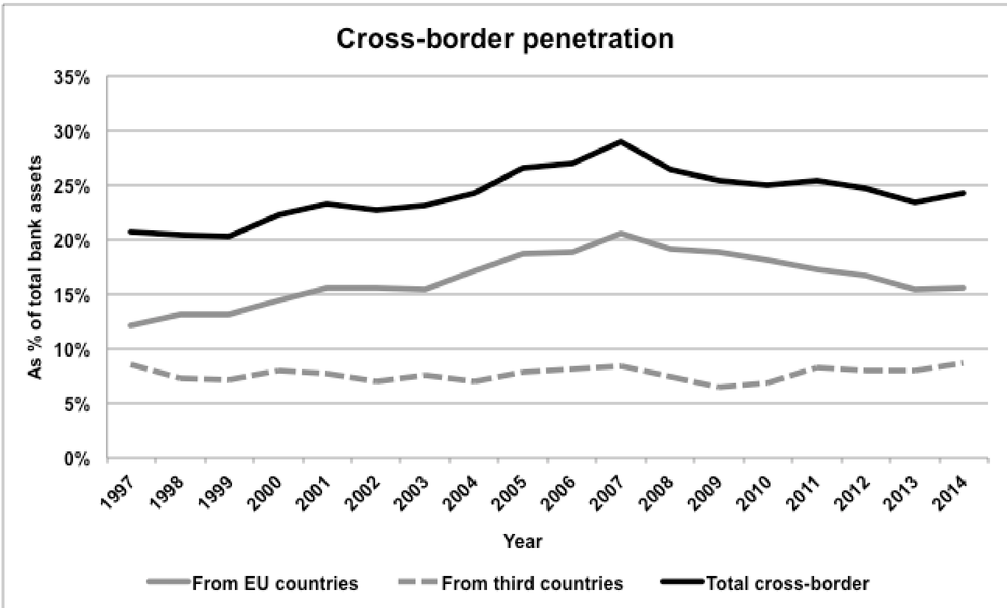
3. Cross-border banking

What is the intensity of cross-border banking in the European Union? Section 3.1 provides evidence on the level of inward banking at the country level. A high level of inward banking limits the capacity of national authorities to manage the stability of their financial system. Next, section 3.2 documents the outward banking flows of the largest banks. The home-country authorities only take the domestic share of a bank's business into account when considering a bank rescue, while they may have to pay the full cost of the rescue. A high cross-border share may therefore lead to coordination failure as witnessed with the Fortis rescue efforts in 2008 (Schoenmaker, 2013).

3.1 Inward banking flows

The global financial crisis has led to a retrenchment of international banking. Troubled banks typically first cut back on their foreign business. Moreover, banks that received state aid were often pressured by national authorities to maintain domestic lending. Figure 1 illustrates the decline in cross-border penetration since 2007. Cross-border penetration is defined as the percentage of a country's banking system assets coming from other European Union or third countries. New figures for 2014 suggest that the decline has been halted.

Figure 1: Cross-border penetration of European banking (EU; in % of total banking assets)



Source: Bruegel based on EU Structural Financial Indicators, ECB.

The aggregate figures for the European Union can be split in Banking Union countries (the 19 euro-area members) and non-Banking Union countries (the nine outs). Table 1 shows that the Banking Union covers over 70 percent of total European Union banking assets. Next, Table 1 shows that the intensity of cross-border banking in the non-Banking Union is higher than in the Banking Union countries, which suggests that the supranational approach may also be useful for the outs. Zooming in on the outs, Table 2 shows that the large share from third countries comes from the United Kingdom, where London acts as international financial centre. But also the share from other EU countries is larger in the out countries than in the Banking Union countries. In particular, the Eastern European countries, including Poland, have a large cross-border share from Western Europe. These data indicate that the outs may consider Banking Union membership, which is optional. Such membership depends, of course, on wider political economy considerations. But if and when Banking Union becomes a success, we should not be surprised to see voluntary members knocking on the door.

Table 1: Banking systems across three regions: BU, EU and US; end-2014

	Number of banks	Total assets in billion	Of which: home	other EU	third country
Banking Union	5,516	€ 30,772	83%	14%	3%
Non-Banking Union	1,752	€ 12,196	57%	19%	24%
European Union	7,268	€ 42,968	76%	16%	9%
United States	5,643	€ 12,360	84%		16%

Note: Total banking assets come from the home country, other EU countries, and third countries (i.e. outside the European Union or the US). The three components add up to 100 per cent.

Source: Bruegel based on ECB for European banks and Federal Reserve and FDIC for US commercial banks.

Table 2: Cross-border banking penetration in non-euro area member states; end-2014

	Total assets (€ billion)	Of which: home (%)	other EU (%)	third country (%)
Bulgaria	€ 47	23%	74%	3%
Croatia	€ 57	n.a.	n.a.	n.a.
Czech Republic	€ 196	12%	88%	0%
Denmark	€ 1,082	82%	17%	1%
Hungary	€ 110	55%	42%	4%
Poland	€ 380	34%	59%	7%
Romania	€ 91	31%	69%	0%
Sweden	€ 1,245	90%	9%	1%
United Kingdom	€ 8,990	52%	17%	32%
Non-euro area	€ 12,196	57%	19%	24%

Notes: Share of business from domestic banks, share of business of banks from other EU countries, and share of business of banks from third countries are measured as a percentage of the total banking assets in a country. Figures are for end 2013. Non-euro area is calculated as a weighted average (weighted according to assets). The new division of euro area (19 member countries) and non-euro area (9 members) as of 1 January 2015 is taken.

Source: Bruegel based on ECB Structural Financial Indicators.

3.2 Outward banking flows

The next step is to investigate the outward banking flows of the largest banks. The international orientation of most of these large banks can lead to the previously mentioned coordination failure, whereby the home authorities concentrate on the domestic activities in crisis resolution. Foreign activities, either in the rest of the EU or in the rest of the world, are thus ignored. To gauge the potential for coordination failure, we split the assets of these banks into assets in the home country, in other EU countries and in third countries. Financial stability concerns are related to a bank's assets in several ways. The benefits of a potential bailout can be thought of as preventing a temporary reduction of credit availability (credit crunch) through shortening of balance sheets by a forced liquidation of the loan book in a particular country. Another source of benefits is the safeguarding of financial stability of the total banking system, which might be jeopardised by a fire sale of assets or other externalities impacting negatively on aggregate investment in a country (Acharya, 2009).

When information on the geographical segmentation of assets is not available, we use the segmentation of credit exposures of the loan book, the most important asset class, as a proxy. The basis source for our data is banks' annual reports. Further information on credit exposure is available in the published stress test results for 2014 of the European Banking Authority. The full methodology for measuring geographic segmentation is described in Schoenmaker (2013). Under the new Capital Requirements Directive (CRD IV), financial institutions must disclose, by country in which it operates through a subsidiary or a branch, information about turnover, number of employees and profit before tax. This extra information allows us to refine the geographical split at country level.

Table 3 shows the top 25 banks in the Banking Union have 24 percent of their assets in other EU countries and 17 percent in third countries. The potential improvement of Banking Union is the 24 percent share in other EU countries, as the supranational resolution agency takes all Banking Union assets into account when considering a bailout (Schoenmaker and Siegmann, 2014). Moving to the non-Banking Union, Table 4 indicates that the top 10 banks have 18 percent of their assets in other EU countries and 32 percent in third countries. The European share is slightly less, while the global share is far larger for the UK banks. The similarity in the European share confirms that Banking Union can have the same benefits for the outs (see also Darvas and Wolff, 2013, who provide detailed case studies). In particular, the Scandinavian banks, Nordea, Danske, Svenska, SEB Group and Swedbank, would benefit from the risk sharing in a Banking Union. But that is also valid for Barclays, which is *inter alia* active in France, Germany, Italy and Spain.

Table 3: Top 25 banks in Banking Union in 2014 (based on pre-BUA segmentation)

	Banking groups	Total assets (in billion)	Of which: home	other EU	third country
1	BNP Paribas (FR)	€ 2,077	34%	44%	22%
2	Crédit Agricole (FR)	€ 1,762	80%	10%	10%
3	Deutsche Bank (DE)	€ 1,708	29%	28%	43%
4	Société Générale (FR)	€ 1,308	72%	14%	14%
5	Banco Santander (ES)	€ 1,266	26%	40%	34%
6	Groupe BPCE (FR)	€ 1,223	90%	2%	8%
7	UniCredit (IT)	€ 844	43%	51%	6%
8	ING Bank (NL)	€ 828	36%	50%	14%
9	Crédit Mutuel (FR)	€ 706	89%	8%	3%
10	Rabobank (NL)	€ 681	75%	6%	19%
11	Intesa Sanpaolo (IT)	€ 646	87%	10%	3%
12	BBVA (ES)	€ 632	43%	16%	42%
13	Commerzbank (DE)	€ 557	50%	34%	16%
14	DZ Bank (DE)	€ 402	76%	16%	8%
15	ABN AMRO (NL)	€ 387	75%	15%	9%
16	La Caixa Group (ES)	€ 339	89%	10%	2%
17	Landesbank Baden-Württemb. (DE)	€ 266	76%	16%	8%
18	KBC Group (BE)	€ 245	52%	43%	5%
19	Bankia (ES)	€ 242	86%	13%	1%
20	Bayerische Landesbank (DE)	€ 232	77%	15%	8%
21	Banque Postale (FR)	€ 213	93%	7%	0%
22	Nord LB (DE)	€ 198	84%	12%	4%
23	Erste Group (AT)	€ 196	46%	52%	2%
24	Belfius (BE)	€ 194	71%	24%	5%
25	Banca Monte dei Paschi (IT)	€ 183	94%	6%	1%
	Top 25 Banking Union	€ 17,335	59%	24%	17%

Notes: Top 25 banks are selected on the basis of total assets (as published in *The Banker*). Assets are divided over the home country, the rest of Europe and the rest of the world. Top 25 banks is calculated as a weighted average (weighted according to assets).

Source: Bruegel based on annual reports.

Table 4: Top 10 banks in non-Banking Union in 2014

	Banking groups	Total assets (in billion)	Of which: home	other EU	third country
1	HSBC (UK)	€ 2,170	33%	9%	58%
2	Barclays (UK)	€ 1,745	37%	24%	38%
3	Royal Bank of Scotland (UK)	€ 1,350	74%	5%	21%
4	Lloyds Banking Group (UK)	€ 1,099	96%	2%	1%
5	Nordea (SE)	€ 669	24%	74%	1%
6	Standard Chartered (UK)	€ 598	12%	4%	84%
7	Danske Bank (DK)	€ 465	62%	38%	0%
8	Svenska Handelsbanken (SE)	€ 300	59%	27%	14%
9	SEB Group (SE)	€ 281	60%	32%	8%
10	Swedbank (SE)	€ 226	76%	19%	5%
	Top 10 non-Banking Union	€ 8,902	50%	18%	32%

Notes: Top 10 banks are selected on the basis of total assets (as published in *The Banker*). Assets are divided over the home country, the rest of Europe and the rest of the world. Top 10 banks is calculated as a weighted average (weighted according to assets).
Source: Bruegel based on annual reports.

The actual improvement in resolution has to be calculated on the basis of the Banking Union Area (BUA), which is confined to the euro-area countries at the time of writing but may expand to non-euro area countries on a voluntary basis. The new home base is the entire Banking Union Area. To assess the improvement, we split banks' assets in other EU countries into other BUA countries and non-BUA countries. Table 5 shows that the new home share in the Banking Union amounts to 74 percent $(BU = 0.74)$, an improvement of 15 percentage points compared to the home share in the pre-Banking Union era $(h = 0.59)$.

Table 5: Top 25 banks in Banking Union in 2014 (based on BUA segmentation)

	Banking groups	Total assets (in billion)	Of which: BUA	non-BUA	third country
1	BNP Paribas (FR)	€ 2,077	68%	10%	22%
2	Crédit Agricole (FR)	€ 1,762	87%	3%	10%
3	Deutsche Bank (DE)	€ 1,708	48%	8%	43%
4	Société Générale (FR)	€ 1,308	77%	9%	14%
5	Banco Santander (ES)	€ 1,266	34%	32%	34%
6	Groupe BPCE (FR)	€ 1,223	91%	1%	8%
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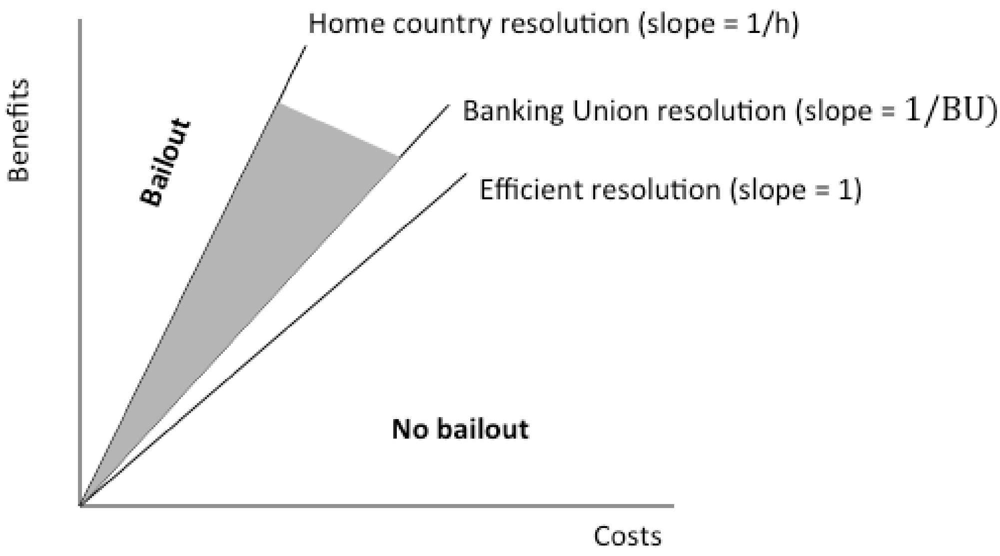
25	Banca Monte dei Paschi (IT)	€ 183	98%	1%	1%
	Top 25 Banking Union	€ 17,335	74%	9%	17%

Notes: Top 25 banks are selected on the basis of total assets (as published in *The Banker*). Assets are divided over the home country (which is the Banking Union Area), the non-Banking Union Area in Europe and the rest of the world. Top 25 banks are calculated as a weighted average (weighted according to assets).
Source: Bruegel based on annual reports.

The improvement is visualised in Figure 2. In terms of costs C (x-axis) and benefits B (y-axis), the efficient benchmark is that a bailout takes place when the aggregate (world-wide) benefits exceed the total costs, so that the line is characterised by $B = C$, i.e., a slope of 1. Thus, in the costs-benefits space, the line that separates bailout from no-bailouts has a slope of one. The solution pre-Banking

Union (home country resolution) is to have a bailout only when the home country (h) benefits exceed the total costs, i.e., $h \cdot B \geq C$, which leads to the line $B = C/h$ above which a bailout takes place. Under a Banking Union supranational authority, bailouts take place when BU-specific (BU) benefits exceed total costs, i.e $BU \cdot B \geq C$. The supranational approach thus improves to the line $B = C/BU$. The grey area in Figure 2 identifies the area of improvement, where the burden sharing in Banking Union can improve on the outcome under home country resolution.

Figure 2: Outcomes for the different resolution mechanisms



Source: Adapted from Schoenmaker and Siegmann (2014).

4. An integrated framework

Before turning to the working of the Banking Union, we first define the overall governance framework for supervisory and resolution. The mandate and role of the various agencies should be assessed in an integrated framework to ensure a comprehensive coverage of supervisory and stability concerns and to align incentives of the agencies[1].

The framework for governance starts with the rule-making authority. For the financial sector, the ministry of finance (in the European context) typically prepares proposals for financial legislation, which is subsequently amended and approved by parliament. The ministry of finance thus drives the policy-making agenda and has ultimate responsibility for the overall design of the regulatory and supervisory framework. The precise division of powers between the executive (government) and the legislative (parliament) differs across countries. In Europe, the executive is more firmly in the driving seat[2]. For example, the United Kingdom's HM Treasury initiated the creation of the UK FSA, after the landslide election victory of the Labour party in 1997. Europe follows the standard pattern with the executive (either the president/prime minister's office or the finance ministry) proposing new rules and the parliament amending and approving these new rules. At the EU level, the European Commission has the right of initiative for new legislation.

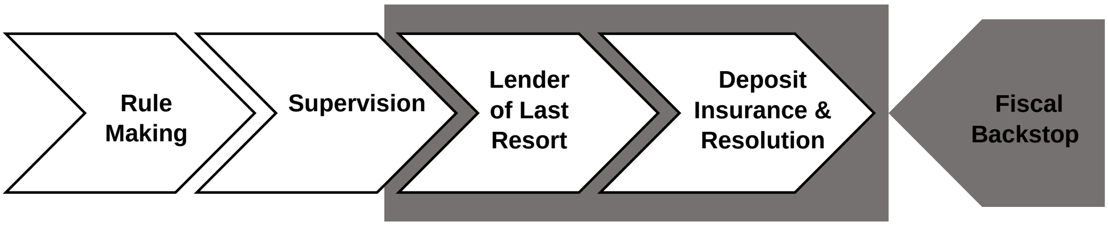
The next stage in the framework is supervision. The supervisory agency aims to prevent a financial crisis occurring. Regulation and supervision can be seen as a form of *preventive* crisis management. By contrast, the other financial agencies – lender of last resort, resolution, and deposit insurance – have to deal with a financial crisis once it occurs. That is the *resolution* stage. The two stages are interrelated. In a game-theoretical framework, the endgame of resolution also determines the actions of the supervisory agency (Schoenmaker, 2013). We therefore apply a backward-solving approach, starting from the fiscal backstop in Figure 3.

[1] This section draws on Chapter 7 in Schoenmaker (2013).

[2] There are a few exceptions. The Finnish parliament has broad constitutional powers. A case in point is the Parliamentary Oversight Council overseeing Suomen Pankki, the Finnish central bank.

The guiding principle for decision-making on crisis management is *"he who pays the piper calls the tune"* (Goodhart and Schoenmaker, 2009). So long as recapitalisations are organised and paid on a national basis, the national governments will normally want to oversee and undertake the function of supervision. When recapitalisations would be done at the European level, then supervision should also be moved to the same level.

Figure 3: Governance framework for financial supervision and stability.



Ministry of Finance	Supervisory Agency	Central Bank	Deposit Insurance and Resolution Authority	Ministry of Finance

Note: The framework illustrates the five stages from rule making to the fiscal backstop. The top line illustrates each function. The bottom line shows the generic agency for each function in the national setting.
Source: Adapted from Schoenmaker (2013).

Figure 3 illustrates the various functions involved in the governance framework for financial supervision and stability. The framework starts with the rule-making and supervisory functions. So far, we have used the broad term of resolution for crisis management. In the initial stage, the central bank may provide lender-of-last-resort assistance to help one or more banks. If that does not work, the deposit insurance and resolution authority comes in to decide on the appropriate line of action. The Global Financial Crisis showed (again) that deposit insurance is not only meant for depositor protection – originally initiated for protection of 'widows and orphans' – in the case of an idiosyncratic failure, but also for maintaining financial stability. The level of deposit insurance was increased across the world during the Global Financial Crisis to prevent bank runs that would further destabilise the financial system (Engineer *et al*, 2013).

Deposit insurance and resolution can thus be regarded as an integrated function (Gros and Schoenmaker, 2014). The least cost principle requires the resolution authority to choose the resolution method in which the total amount of the expenditures and (contingent) liabilities incurred has the lowest cost to the deposit insurance and resolution fund. The basic resolution methods include a (assisted) take-over by a healthy bank, a public assistance programme, and a liquidation with pay-outs to retail depositors under the deposit insurance scheme. The only exception to the least cost principle is if there are systemic risks affecting the financial system.

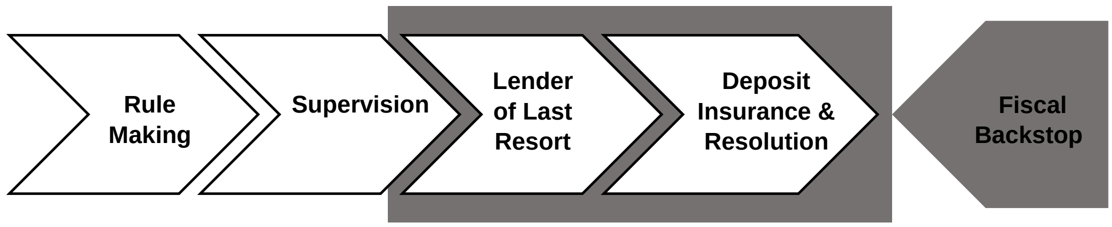
The final stage in the governance framework is the fiscal backstop. Crises affecting banks are commonly macro-economic and general in nature, following asset market collapses and economic downturns. The deposit insurance and resolution fund can thus run out of funds. The ultimate backup of government support is needed to give the fund credibility. Legislation may contain an explicit provision for a loan from the Treasury or ministry of finance to the fund. Alternatively, there is an implicit backstop.

Similarly, the government is the ultimate backstop for the central bank. While a central bank can provide unlimited liquidity (by expanding its balance sheet), its capacity to bear losses is limited to its capital (Goodhart and Schoenmaker, 1995). In the case of large losses on lender-of-last-resort loans, the government may need to replenish the capital of the central bank. In the UK, because of the risk to public funds, the Memorandum of Understanding on Crisis Management between HM Treasury and the Bank of England requires Treasury approval for any emergency liquidity assistance (lender of last resort) provided by the Bank. The arrow for the fiscal backstop is backward in Figure 3, illustrating our backward-solving approach towards governance.

5. How does the Banking Union work?

The governance framework can be applied to the new Banking Union. Figure 4 provides an overview of the agencies in the current Banking Union framework. The European Commission (EC) is the rule-maker and the key policy-maker initiating new policies and rules for the financial system. In parallel, the European Banking Authority (EBA) drafts technical standards and develops the single rulebook for the EU internal market. It is important to note that this rule making has a EU-wide reach, while the Banking Union Area only includes the euro-area and opting-in countries. The second function, supervision, has now been delegated to the European Central Bank (ECB) under the Single Supervisory Mechanism (SSM).

Figure 4: Agencies in the current Banking Union framework.



Ministry of Finance	Supervisory Agency	Central Bank	Deposit Insurance and Resolution Authority	Ministry of Finance
EC and EBA	ECB	NCBs	SRB	ESM

Note: The framework illustrates the five stages from rule-making to the fiscal backstop. The top line illustrates each function. The middle line shows the generic agency for each function in a national setting. The bottom line shows the (European) body for each function.
Source: Adapted from Schoenmaker (2013).

The shaded areas in Figure 4 then deal with crisis management. The first leg of crisis management is lender-of-last-resort support (also called emergency liquidity assistance) for illiquid, but solvent, banks. This should also become the responsibility of the ECB. However, at the time of writing, the responsibility still rests with the national central banks (NCBs), although NCBs needs approval from the ECB to provide emergency liquidity assistance. Nevertheless, such assistance is currently for the risk and account of NCBs. The end game of any crisis is reached when banks are insolvent and have to be restructured or dissolved, which requires deposit insurance and/or resolution. Accordingly, we would argue for a Single Deposit Insurance and Resolution Board (SDIRB) (Gros and Schoenmaker, 2014).

Nevertheless, the legislation provides only for a Single Resolution Mechanism (SRM) with a Single Resolution Board (SRB) and a Single Resolution Fund (SRF). Deposit insurance remains at the national level, though based on a common framework. This halfway house is not viable in the medium term. The political reality – in the direct aftermath of two financial crises – is that politicians and citizens are currently wary of underwriting all insured deposits at the euro-area level. When the banking system is more stable (*inter alia* better capitalised) and the economy has resumed its growth path, it may be a more suitable time to shift deposit insurance from the national to the euro-area level.

The European Stability Mechanism (ESM) has been created to provide the fiscal backstop to member countries and possibly the banking systems of member countries in financial distress. We argue that the ESM should also be able to provide a credit line to the Single Resolution Fund as well as to provide direct recapitalisation of troubled banks (see Section 6).

5.1 The Single Supervisory Mechanism (SSM)

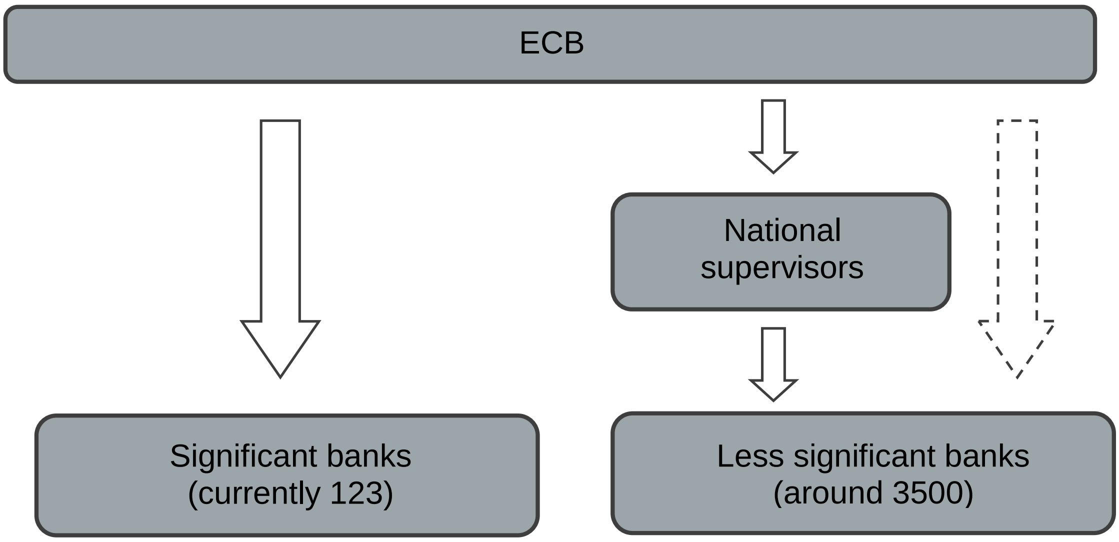
The ECB started its supervisory role, in conjunction with the national supervisors (officially called national competent authorities) in November 2014. Within the SSM, the ECB has the central role. Just like the ECB Governing Council for monetary policy, the SSM is governed by a Supervisory Board of 25 members, of which six are designated by the ECB and 19 from national supervisors. An important feature is that decisions are made by a single authority, by simple non-weighted majority rule, which enhances its European orientation. Day-to-day supervision of individual banks is conducted by groups of ECB and national supervisors, called Joint Supervisory Teams, acting under the coordination of the ECB. A team is in place for each supervised bank (see Angeloni, 2015).

The ECB has extensive powers over the banks under its direct responsibility, covering all supervisory tasks: granting and withdrawing licenses, authorising mergers and acquisitions, determining how much capital banks should hold, setting other prudential requirements, all the way to asking for recovery plans and enacting early intervention for ailing banks. Figure 5 shows that these direct powers are aimed at the 123 significant banks in the euro area. These are not only the very large banks discussed in Table 3 in Section 3. Mody and Wolff (2015) differentiate between banks that fall into three size categories: small (assets below €100bn), medium (assets between €100bn and €500 billion), and large (assets more than €500 billion). Of the €22 trillion in assets, the 'small' group has about 80 banks with €3.1 trillion, the 'medium' group has about 30 banks with €6.3 trillion, and the 'large' group has only 13 banks with aggregate assets of €12.5 trillion[3].

The ECB has indirect powers over the around 3500 less significant banks. The national supervisors are the first point of call for these smaller banks. Nevertheless, the ECB has the power to overrule the national supervisors and give directions to less significant banks if the national supervisors are not complying with the agreed single regulatory framework. Moreover, the ECB has some direct powers, such as granting and withdrawing licenses, and authorising mergers and acquisitions, over the smaller banks. These direct powers relate to important milestones in a bank's life (birth, marriage and death). Using game theory, this latent power gives national supervisors a strong incentive to play the cooperative game with the ECB. Otherwise, it may lose its powers over the less significant banks. The SSM system is thus incentive compatible and makes a single integrated approach towards the supervision of significant and less significant banks possible. For all practical purposes, we can thus truly speak of a single supervisory mechanism.

[3] Checking the vulnerability of the SSM banks, Mody and Wolff (2015) find that the largest banks, with their scale economies and internationally diversified assets, appear to be out of the woods. But many of the small and medium-sized banks remain under considerable stress. The weakest of these banks are burdened by non-performing corporate loans and may need to be downsized or closed, where the SRM can play a useful role.

Figure 5: The Single Supervisory Mechanism



Note: This diagram depicts the working of the Single Supervisory Mechanism.

Going forward, an interesting question is at which level the ECB should enforce the regulatory requirements, such as capital and liquidity requirements (Angeloni, 2015). Should that be at the consolidated level or at the regulated entity level? In the former case, an integrated Banking Union market may emerge, where cross-border banking groups can transfer excess capital and liquidity across the group (while, of course, meeting the minimum requirements at entity level). In the latter case, enforcement at the level of individual subsidiaries, which are often organised at country level, would reinforce the segmentation between national banking markets. This enforcement question is related to the organisation of deposit insurance (see below). A single deposit insurance scheme at the European level would be consistent with consolidated supervision, while the current system of national deposit insurance schemes is consistent with entity based supervision. It should be noted that most banks run their business in an integrated way (Schoenmaker, 2013).

5.2 The Single Resolution Mechanism (SRM)

The Single Resolution Board (SRB) started its resolution role, in conjunction with the national resolution authorities, in January 2016. The SRM will *inter alia* apply the new bail-in rules of the Banking Recovery and Resolution Directive (BRRD), which requires that at least 8 percent of total liabilities is bailed-in from shareholders and creditors before resolution is undertaken. Within the SRM, the SRB has a central role, but it has to work closely with the national resolution authorities, which are close to the banks and thus speak the language and know the local conditions. The SRB has an executive board with a chair, a (generally non-voting) vice-chair, and four other members. The division of labour is largely similar to that of the SSM. The SRB decides on the significant banks (as in the SSM) as well as cross-border banks. The national resolution authorities are responsible for resolution of the smaller national banks, unless there is funding from the Single Resolution Fund, and for the execution of large banks' resolution schemes after these have been decided by the SRB. For the smaller banks, the SRB thus gets involved when resolution funding is needed in order to minimise the use of such funding. It should be stressed that the SRM is applicable to all banks in the participating countries (initially the euro-area countries). The task of the SRB is twofold: preparing *ex-ante* resolution plans and deciding on *ex-post* resolution actions.

The SRB meets in two settings: an executive and a plenary session. In the executive session, the SRB consists of the executive board (ie the chair and the four executive directors) and the member(s) from the relevant national resolution authorities of the countries in which the (troubled) bank is operating. The executive session decides on the resolution plans and schemes for individual banks (with one exception, as explained below). The executive session decides by consensus. If there is no consensus, the chair and four executive members vote by simple majority. This voting procedure ensures that the European public interest is taken into account, while avoiding national interests.

In its plenary session, the SRB comprises the executive board and all national members. The plenary session is responsible for general resolution policies and for resolution schemes whereby the funding from the Single Resolution Fund exceeds €5 billion. So the large cases in need of substantial funding are dealt with in the plenary session.

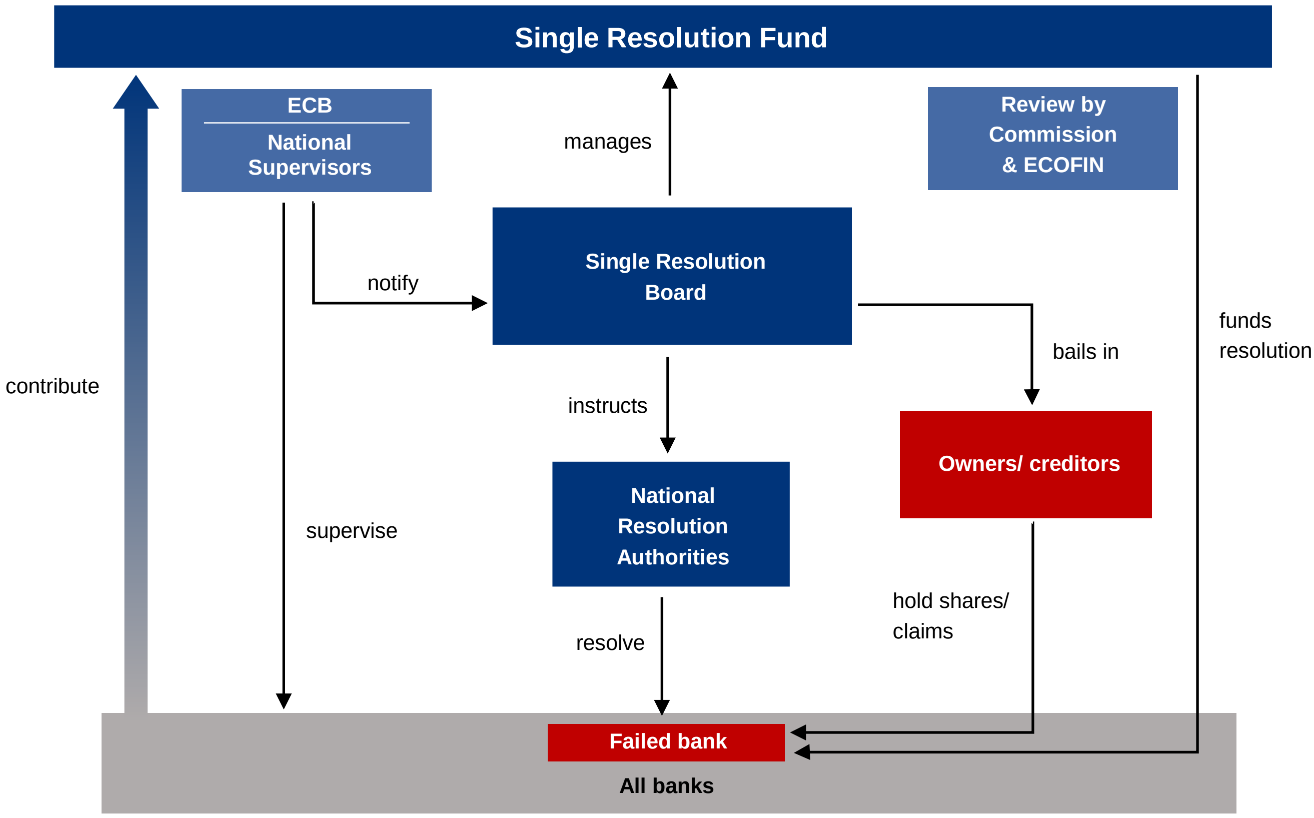
The ECB and the European Commission have permanent observers, without voting power, in the SRB. Before taking a resolution action, three conditions need to be met: 1) the bank is failing or likely to fail; 2) there are no alternative private sector solutions; 3) resolution is necessary in the public interest. The ECB, as supervisor, decides on the first condition, after consultation of the SRB. But the SRB can also decide on the first condition, after informing the ECB. This ensures that the SRB has the power to act in case of forbearance by the ECB (see ASC, 2012, on forbearance). Next, the SRB decides on meeting the second and third condition.

After that the SRB decides on the draft resolution scheme, in particular which liabilities to exclude from bail-in. The decision on the resolution scheme is reviewed by the European Commission (within 24 hours) to safeguard that the internal market principles are not violated (state aid control). The European Commission can object to the amount of funding from the Single Resolution Fund or judge that there is no threat to the public interest. In these cases, the Economic and Financial Affairs Council (ECOFIN) gets involved. ECOFIN can approve or object (with motivation) to the Commission proposal when the European Commission concludes an absence of public interest or when the European Commission changes 5 percent or more in the proposed amount of funding from the Single Resolution Fund. After the decision is final, the SRB instructs the relevant national resolution authorities to take the necessary measures to implement the resolution scheme.

It should be stressed that the aim of the new legislation (BRRD and SRM) is to minimise resolution funding. As discussed above, a resolution scheme for a failed bank starts with the bail-in of shareholders and creditors for at least 8 percent of this bank's total liabilities. Next, funding from the Single Resolution Fund is restricted to a maximum of 5 percent of total liabilities. The Single Resolution Fund aims to accumulate 1 percent of covered deposits of the euro-area banks, which amounts to €55 billion. Importantly, the Single Resolution Fund represents private funding, collected through annual contributions levied on the euro-area banks. For the building-up of the Single Resolution Fund, there is an eight-year transition period, which is covered by an Intergovernmental Agreement (IGA) between the euro-area countries. In the first year, 40 percent of the national funds will be mutualised in the Single Resolution Fund; in the second year, a further 20 percent. In the next 6 years, 6.67 percent is added each year. This adds up to a 100 percent mutualisation of national compartments, which will then disappear.

For the use of the Single Resolution Fund, there are separate voting procedures. During the transition period, a two third majority of the voting Board members representing 50 percent of contributions is needed. After the transition, again a two third majority of votes representing 30 percent of contributions is needed. Note that each Board member has one vote. Figure 6 summarises the working of the SRM.

Figure 6: Single Resolution: Players and decision-making structures



Note: This diagram depicts the working of the Single Resolution Mechanism.
Source: Adapted from Petersen (2014).

6. Completing the Banking Union

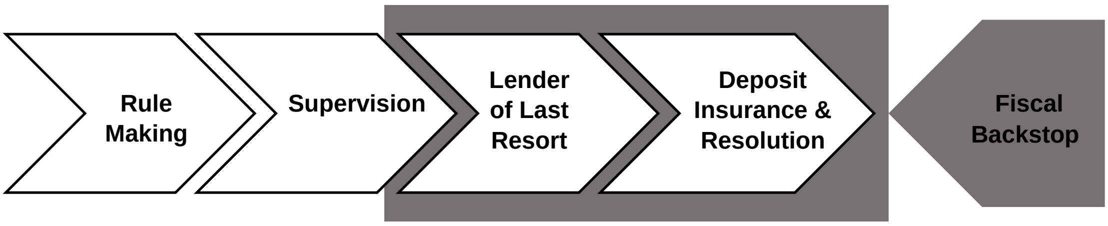
The original rationale for Banking Union is to organise bank risk sharing (crisis management) at the euro-area level. By inclination, the prevention (regulation and supervision) should also be organised at the euro-area level. While the latter has been largely achieved, the risk sharing is still very incomplete. That makes the Banking Union arrangement potentially unstable. First, there may be fights between the agencies operating at different levels, which go beyond the usual bureaucratic clatter of weapons. For example, if a bank would fail and the guaranteed deposits need to be repaid, the national deposit insurance authority may complain about the lack of supervision by the ECB and start a quarrel about the appropriate timing of closure (and hence deposit insurance pay-outs). As these agencies do not operate at the same level, there is no governmental mechanism (being the Prime Minister/Minister of Finance or the European Council/Ecofin) to bang heads together. Second, the framework is not incentive compatible (Goodhart and Schoenmaker, 2009). Following principal-agent theory (Jensen and Meckling, 1976), there is a risk of under-provision of supervisory effort, when a supervisor is not confronted with the costs of its (in)action.

Third, and most important, the incomplete risk sharing does not adequately address the sovereign-bank loop. While there is uncertainty about the future divide between bail-in and bail-out (Véron, 2015), nation states may still have to fund bank bailouts, with potential ESM support given to the state. This instrument is labelled indirect recapitalisation (Art 15, ESM Treaty). Only when a state cannot provide support without triggering a fiscal crisis, the ESM may directly recapitalise a bank. Moreover, banks can still keep large holdings of bonds of their own government on their balance sheet. Erce (2015) provides evidence that the transmission of sovereign to bank risk works through the size of banks' exposures to the sovereign.

6.1 Need for European deposit insurance

How to complete the Banking Union? Figure 7 shows the agencies in a completed Banking Union. On the top of the list is moving the lender of last resort and deposit insurance functions to the euro-area level. That makes the overall governance system incentive compatible. Moreover, it means that the fiscal backstop of these functions is no longer at the national level. That breaks the transmission from bank to sovereign risk in the bank-sovereign loop. A final element would be to enable direct bank recapitalisation from the ESM, without first waiting for the country to go bankrupt before enacting such direct recapitalisation. In risk-sharing terms, the ESM is behind the bank risk sharing, both indirectly by providing a credit line to the Single Deposit Insurance and Resolution Board, and directly by providing direct bank recapitalisation. The European arrangements would then match the US arrangements for bank risk sharing (Gros, 2012a).

Figure 7: Agencies in a 'completed' Banking Union framework.



Ministry of Finance	Supervisory Agency	Central Bank	Deposit Insurance and Resolution Authority	Ministry of Finance
EC and EBA	ECB	ECB	SDIRB	ESM

Note: The framework illustrates the five stages from rule making to the fiscal backstop. The top line illustrates each function. The middle line shows the generic agency for each function in a national setting. The bottom line shows the (prospective) European body for each function.
Source: Adapted from Schoenmaker (2013).

A Single Deposit Insurance and Resolution Board would also send an important signal to bank depositors. Depositors do not have to check the solvency of the local deposit insurance fund before depositing their money with a bank from a Banking Union Area country. In that way, depositors are then in a position to consider any bank from the Banking Union as their 'home' bank. The history in the United States of deposit insurance is revealing (Gros and Schoenmaker, 2014). Before the introduction of the FDIC as part of the New Deal legislation in the 1930s by Franklin Roosevelt, many of the state-level deposit guarantee schemes went bankrupt because of a lack of geographic diversification and size (Golembe, 1960). The vicious circle between the national governments and banks is a reflection of a similar problem in Europe today. A final argument for a broad fund is that it keeps up the notion of an integrated banking market, at least in the Banking Union Area.

Note that we argue for a fully-fledged Single Deposit Insurance (and Resolution) Fund. There are proposals to create a reinsurance scheme (Gros, 2012b). The national deposit insurance schemes remain in place, but they reinsure themselves in a larger European fund in case the deposit insurance pay-outs exceed the national fund. As usual with reinsurance, the national schemes pay a premium for this cover of extreme risks. Although this helps insuring against tail risk of multiple small national banks or a mid-sized/large bank failing, the national fund need to be refinanced by extra (future) premiums on the remaining national banks. If the national parts are relatively large in comparison to the reinsurance part, the drag on the economy remains because national banks have to refund the national fund through future deposit insurance premiums (Schoenmaker and Wolff, 2015). If, by contrast, the national parts are small, then the reinsurance scheme is basically a European scheme. But a reinsurance scheme is more complex and has more operational risk. It is therefore less conducive to depositors' trust than a plain federal deposit insurance scheme.

The second open issue is the transmission of sovereign to bank risk, caused by banks' large holdings of government debt (European Systemic Risk Board, 2015). These sovereign exposures carry a zero risk weight and are exempt from large exposure rules in micro-prudential supervision. A large exposure limit on such holdings would be very powerful to break the sovereign-bank loop by forcing banks to diversify their government bond holdings. Such large exposure limits on companies work very well to prevent banks going bankrupt when a large company defaults on its bank loans.

Political-economy considerations suggest that the policy actions are interrelated. Before northern Europe may want to agree to 'European' deposit insurance, they want at the minimum to ensure that the banks covered by this European deposit insurance scheme are not overly exposed to the southern European governments.

7. Conclusions

The idea of Banking Union is very powerful. It neatly complements the Economic and Monetary Union and has been instrumental in arresting the euro sovereign crisis. But after the immediate crisis was over, governments have started to shop selectively on the Banking Union list. The main message of this paper is that the governance framework for banking supervision and crisis management should be considered as an integrated package. Selective shopping creates new instabilities by non-aligned national and European agencies. We therefore argue in favour of transferring the lender-of-last-resort and deposit insurance functions also to the European level to join the European supervisory and resolution functions.

Another tenet of this paper is that the long-term rationale behind Banking Union is related to cross-border banking in the Single Market. We therefore suggest that non-euro area members may also wish to join Banking Union at a later stage. Fortunately, the Banking Union legislation allows for such voluntary membership of the outs. That would also help to reduce the increasing tension between the ins and the outs within the European Union.

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