EUROPEAN BANKING SYSTEM UNSTABLE, REFORMS MUST CONTINUE

This is a translated version of the original German-language chapter "Europäisches Bankensystem instabil, Reformen müssen weitergehen", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

SUMMARY

The global financial crisis and the euro area crisis have triggered a fundamental reform of banking regulation. The further the crisis experience is away, the louder the **calls for a pause on new regulation**. However, key regulatory aims have not yet been achieved. Firstly, as measured by the unweighted capital ratio, large parts of the European banking sector are still not sufficiently capitalised to be able to withstand unexpected shocks. Secondly, there are doubts about the credibility of the new resolution regime. And finally, the sovereign-bank nexus persists.

The capital requirements for banks have been raised significantly since the crisis and banks' capital ratios have risen. However, many large banks in particular are still **insufficiently** capitalised, as measured by their **unweighted capital ratios**. This was also reflected in the latest stress test. The envisaged unweighted capital ratio of 3% (leverage ratio) is too low from a macroeconomic perspective and should be increased to at least 5%. It should be considered to design the leverage ratio in a **macroprudential** fashion analogously to risk-weighted capital requirements.

The **increased pressure on profitability** of European banks, which is due not only to the low interest rate environment, but also to structural factors, makes it harder to accumulate capital from retained earnings. However, many banks would have been able to strengthen their capital base if they had distributed lower dividends. Particularly in the former crisis countries, high levels of **non-performing loans** are harming confidence in the European banking system. A **rapid clean-up of bank balance sheets** is therefore necessary.

The new **European resolution regime** under the Single Resolution Mechanism (SRM) came into force at the beginning of 2016. It is intended to strengthen market discipline and lower expectations about the rescue of banks by the government. There are indeed indications of **increased market discipline**. However, the repeated turbulence on financial markets indicates potential **destabilising effects** of subordinated debt securities. This begs the question as to whether it was a prudent move to focus the new regulation to such an extent on bail-inable debt securities instead of further increasing capital requirements.

While the new resolution regime lessens the risk transfers from banks to governments, the risk channel from governments to banks persists. This is primarily driven by the banking sector holding sovereign debt. The German Council of Economic Experts therefore reaffirms its proposal to **remove the privileges for sovereign exposures of banks** in banking regulation, and analyses the relevance of exposures towards the domestic government for German savings banks and cooperative banks. The creation of **European Safe Bonds (ESBies)** should only be considered if implicit liability risks can be limited.

For further loosening of the sovereign-bank nexus, the European Commission suggests a **European Deposit Insurance Scheme** (EDIS). From the perspective of the German Council of Economic Experts, the **prerequisites** for common deposit insurance are **not currently met**. Beforehand, recognised risks in the banking system need to be reduced, effective supervision and resolution at European level need to be ensured and an end needs to be put to the regulatory privileges of sovereign exposures of banks.

I. FURTHER NEED FOR REGULATION

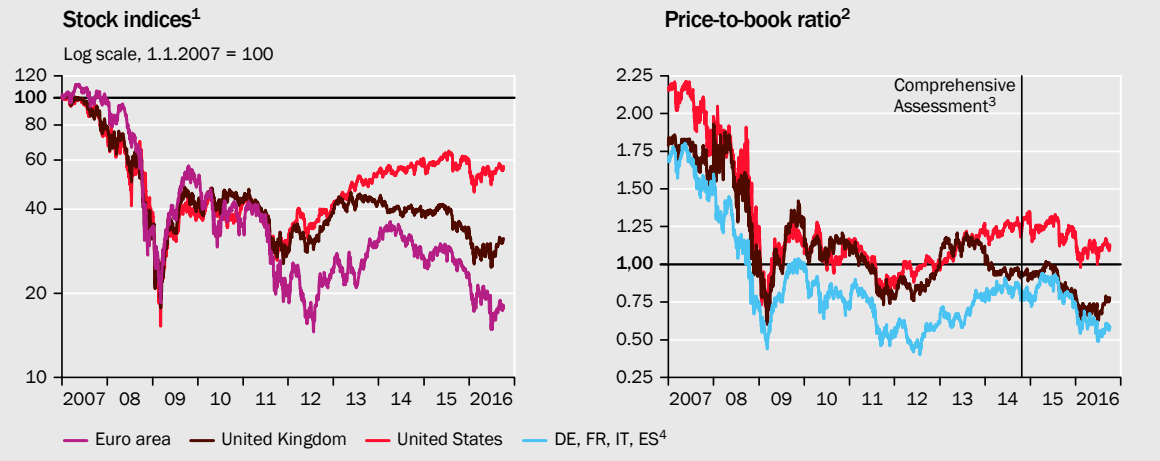
474. The global financial crisis and the euro area crisis triggered a fundamental reform of financial market regulation. The further the crisis experience is away, the louder the **calls for a pause on new regulation**. And policymakers are increasingly responding to these. This can be seen with regard to capital requirements and the new resolution regime for banks. In light of this, it is important to assess whether the previous regulatory efforts have in fact made the European financial system sufficiently resilient and whether the allegation of overregulation is potentially justified.

475. In fact, the **European banking system** is in a **weak condition**. This is reflected in low share prices and low price-to-book ratios compared to the USA. ↘ CHART 62 The price-to-book ratio of banks from the major euro area countries is far below one and thus even lower than at the time of the Comprehensive Assessment in October 2014.

476. At the same time, **key regulatory aims have not yet been achieved**. Firstly, large parts of the European banking sector are still not sufficiently capitalised, as measured by the unweighted capital ratio, to be able to withstand unexpected shocks. In addition, many banks suffer from high levels of non-performing loans. Secondly, there are doubts about the credibility of the new resolution regime. Thirdly and finally, the sovereign-bank nexus persists. Instead of calling tighter regulation into question, the regulatory framework should be further improved and the banking sector should be cleaned up.

↘ CHART 62

Bank stock indices and price-to-book ratio of selected countries and country groups



1 – Bank stock indices computed by Thomson Reuters for the respective country and country group. Euro area: 82 banks in 16 member states, United Kingdom: 11 banks, United States: 39 banks. 2 – Average of price-to-book ratio weighted by market capitalisation of each bank in the respective country and country group. Country group: 48 banks, United Kingdom: 5 banks, United States: 51 banks. 3 – Day after the publication of the results of the Comprehensive Assessment by the ECB on 26.10.2014. 4 – Germany, France, Italy, Spain.

Source: Thomson Reuters

II. LOW RESILIENCE OF EUROPEAN BANKS

477. Despite the regulatory efforts following the financial crisis, the resilience of European banks is low. This is evident in the repeated turbulences in the European banking system, which has three key weaknesses. Firstly, as measured by the unweighted capital ratios, it remains **insufficiently capitalised** to be able to withstand unexpected shocks. Secondly, profitability is low, which makes it harder to accumulate capital. Thirdly, high levels of **non-performing loans** burden bank balance sheets in some parts of Europe.

1. Unweighted capital ratios are too low

478. A **central aim** of the reforms after the financial crisis was to **improve the capitalisation of the banking sector**. Therefore, capital requirements were increased, and the quality requirements for eligible capital were tightened. Pursuant to Basel III, banks have to hold 7 % common equity tier 1 capital (CET 1) in relation to their risk-weighted assets. With various buffers, this requirement can rise to more than double. ↘ TABLE 24 In addition to these requirements pursuant to pillar 1, the supervisors can set discretionary buffers (pillar 2). Moreover, from 2018, an unweighted capital requirement (leverage ratio) of an expected 3 % is to be introduced.

479. The new regulation will be phased in gradually and does not come into full effect until 2019. However, pressure from financial markets appears to have led to many banks **meeting the new capital requirements early**. The risk-weighted and unweighted **capital ratios significantly increased** on average in all EU member states between the end of 2008 and the end of 2015. The tier 1 capital ratios are in aggregate above the targeted level and the book capital ratios are far above the announced leverage ratio. ↘ CHART 63 However, the latter differs from the book capital ratio because it does not relate to total assets, but to the

↘ TABLE 24

Minimum capital requirements in the European Union from 2019 onwards[1]

	Requirement in %
Minimum common equity capital without buffers	4.5
+ Capital conservation buffer	2.5
+ Systemic risk buffer/buffer for systemically important banks[2]	0 - 5.0
= Common equity tier 1 (CET 1)	7 - 12.0
+ Additional tier 1 (AT 1)	1.5
= Tier 1	8.5 - 13.5
+ Tier 2	2.0
= Total capital	10.5 - 15.5
In addition: Counter-cyclical capital buffer (in the form of CET 1) during a boom	0 - 2.5

1 – In % of risk-weighted assets. 2 – Where an authority imposes the systemic risk buffer and the G-SII or O-SII buffer is applicable, the higher of the two should apply. Where the systemic risk buffer only applies to domestic exposures, it should be cumulative with the G-SII or O-SII buffer.

"leverage exposure", which among other things includes additional off-balance-sheet exposures (BCBS, 2016a). Moreover, additional pillar 2 requirements and safety margins to the regulatory requirements demanded by the market are not taken into account.

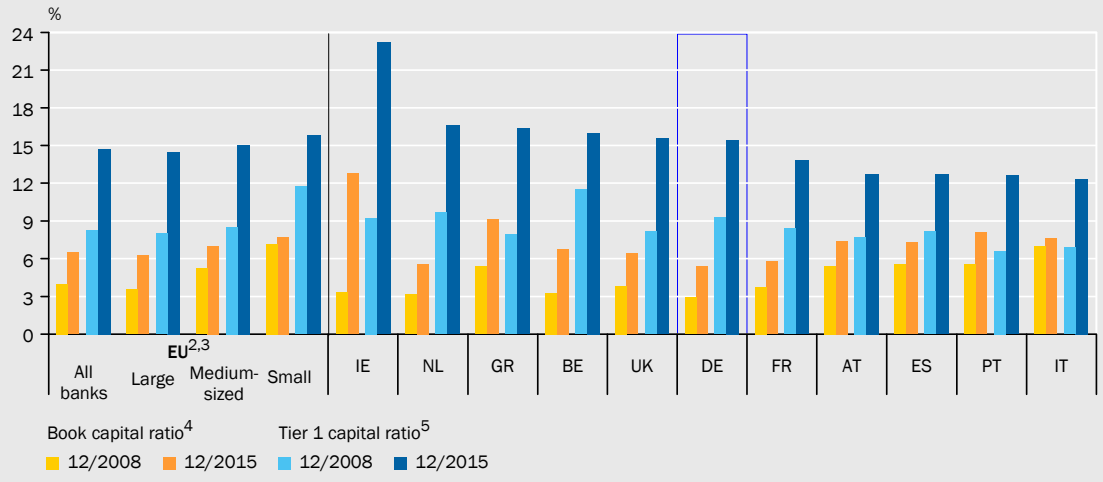
480. In view of the positive development of capital ratios, banking associations are vehemently resisting any further tightening of capital requirements, for example in the context of the current assessment of the regulatory treatment of internal models ("Basel IV", Association of German Banks and BDI, 2016). At the same time, the assessment that banks are now sufficiently capitalised and that **no further tightening** of capital regulation is necessary is gaining increasing acceptance among policymakers and supervisors (Carney, 2016; Dombrovskis, 2016; Nouy, 2016; Council of the European Union, 2016a). Only among academics can voices be heard that consider the current **capitalisation** of European banks still **insufficient** (Admati and Hellwig, 2014; Acharya et al., 2016a; Admati, 2016).

481. An extensive body of literature attempts to determine the **optimum capital ratio** for the banking system from a macroeconomic perspective with the help of various approaches weighing macroeconomic costs and benefits against each other. ↘ BOX 15 On the one hand, higher capital can reduce the likelihood and economic costs of banking crises; on the other, the funding costs of banks may rise, which may be reflected in higher lending rates and a lower lending volume.

The estimates are fraught with **great uncertainty**, meaning that the results are more indicative than hard empirical evidence for the optimum ratio. Furthermore, the optimum ratios calculated are not institution-specific although the contributions to systemic risk are likely to differ across banks. In addition, the ratios do not vary over the financial cycle.

↘ CHART 63

Capital ratios for banks of selected EU member states[1]



1 – AT-Austria, BE-Belgium, DE-Germany, ES-Spain, FR-France, GR-Greece, IE-Ireland, IT-Italy, NL-Netherlands, PT-Portugal, UK-United Kingdom. 2 – Without foreign (non-EU) controlled subsidiaries and branches. 3 – Large banks have assets greater than 0.5 %, medium-sized banks between 0.5 % and 0.005 % and small banks less than 0.005 % as a percentage of total consolidated assets of EU banks. 4 – Ratio of book capital to total assets. 5 – Ratio of tier 1 capital to risk-weighted assets.

Source: ECB

482. Despite the differences in methods and results, it is noteworthy that none of the considered studies assesses the risk-weighted capital ratios set under Basel III to be too high. ↘ BOX 15 Furthermore, a **leverage ratio** of 3 %, as announced by the Basel Committee on Banking Supervision (BCBS, 2016a) and recommended for the EU by the European Banking Authority (EBA, 2016a), appears to be **below the optimum ratios**. However, the Basel Committee does not see its capital requirements as optimum ratios, but as a minimum standard for banks that are secure and robust in the long term (Coen, 2016). The leverage ratio is understood as a **backstop** to the risk-weighted capital ratio (BCBS, 2016a). From the perspective of the literature on optimum capital ratios, these **minimum standards** appear **very mild**, particularly as regards the leverage ratio. Higher leverage ratios have already been set for systemically important banks in the UK, the USA and Switzerland (Fed et al., 2014; FinMa, 2015; PRA, 2015).

↘ BOX 15

Optimum capital ratios for banks

To determine the optimum capital ratios for banks from a macroeconomic perspective, **macroeconomic costs and benefits** of capital must be weighed against each other. The benefit of higher capital is avoiding the economic costs resulting from banking crises. To quantify this, the decrease in the probability of banking crises due to higher capital and the real-economy costs of a banking crisis must be estimated on the basis of historical data. In addition, the true economic costs depend on the efficiency of government crisis management, but the estimates do not take this into account.

Macroeconomic costs as a result of higher capital may arise due to an increase in the bank's overall funding costs, which may result in higher borrowing costs. Under the assumptions of the **Modigliani-Miller theorem**, this transmission channel would not exist. Although more capital increases the bank's funding costs because equity is more expensive than debt, the bank simultaneously becomes safer, meaning that equity and debt costs fall and the overall funding costs remain constant (GCEE Annual Report 2011 chart 40). In reality, the assumptions of the Modigliani-Miller theorem are likely to be violated, not least due to the differing tax treatment of debt and equity costs. Some empirical studies indicate that the total funding costs increase with higher equity (cf. literature in Brooke et al., 2015).

A direct **comparison** of the results of the studies that calculate optimum capital ratios ↘ TABLE 25 is difficult because these are using different definitions for the numerator and denominator of the capital ratio. A comparison with the Basel III requirements is also problematic, firstly, because the definitions used are not the same as those of Basel III. Secondly, Basel III specifies a minimum requirement that can be increased in line with the risk situation. In almost all studies, however, the optimum ratio is independent of risk. Thus the reference point for comparison is unclear.

Several studies interpret their result to mean that the **optimum risk-weighted ratio is higher than the requirements under Basel III** (Yan et al., 2012; Miles et al., 2013; Rochet, 2014; Cline, 2016). Fender and Lewrick (2015) come to the same conclusion with regard to a leverage ratio of 3 %. The study by the Basel Committee (BCBS, 2010) uses a broad approach with a large number of different methods and models (LEI approach). It comes to the conclusion that the capital requirements – starting from the long-term average prior to the Basel III reform – can still be increased considerably without net benefits becoming negative. An update of the study (BIS, 2016) confirms this conclusion. Brooke et al. (2015) find an optimum ratio for the UK that is in line with the minimum requirements. Dagher et al. (2016) calculate, on the basis of past crises, the level of capital that would have been necessary to avoid losses for bank creditors or government recapitalisations. According to the authors, the level of capital calculated is in line with the applicable minimum requirements, but only if the TLAC standard is applied.

↘ TABLE 25

Optimum capital ratios in the literature

Study	Countries	Risk-weighted capital ratio (%)	Unweighted capital ratio (%)[1]	Measure of capital
BCBS (2010)	World	10 - 13[2]	6 - 8[3]	TCE[4] and Tier 1[5]
Yan et al. (2012)	United Kingdom	9 - 11	x	TCE[4]
Miles et al. (2013)	United Kingdom	16 - 20	7 - 9	CET 1
Brooke et al. (2015)	United Kingdom	10 - 14	x	Tier 1
Fender and Lewrick (2015)	World	9.5 - 10.5	4 - 5	CET 1 and Tier 1[5]
BIS (2016)	World	10.5 - 13.5	x	CET 1
Cline (2016)	World	12 - 14	7 - 8	TCE[4]
Dagher et al. (2016)	OECD	15 - 23	9 - 13	–[6]

1 – Implicit calculation based on information provided in the study. No calculation possible in case of x. 2 – In case of BCBS (2010), risk-weighted assets according to Basel II. 3 – Implicit calculation for euro area banks. 4 – Tangible Common Equity (TCE) is not uniquely defined. It is a narrowly defined measure of equity, which excludes intangible assets (in particular goodwill). Therefore, for example Cline (2016) uses TCE as proxy for CET 1. 5 – In case of the risk-weighted capital ratio, it is TCE or CET 1. In case of the unweighted capital ratio, it is Tier 1. 6 – Not further specified („loss absorbing capital").

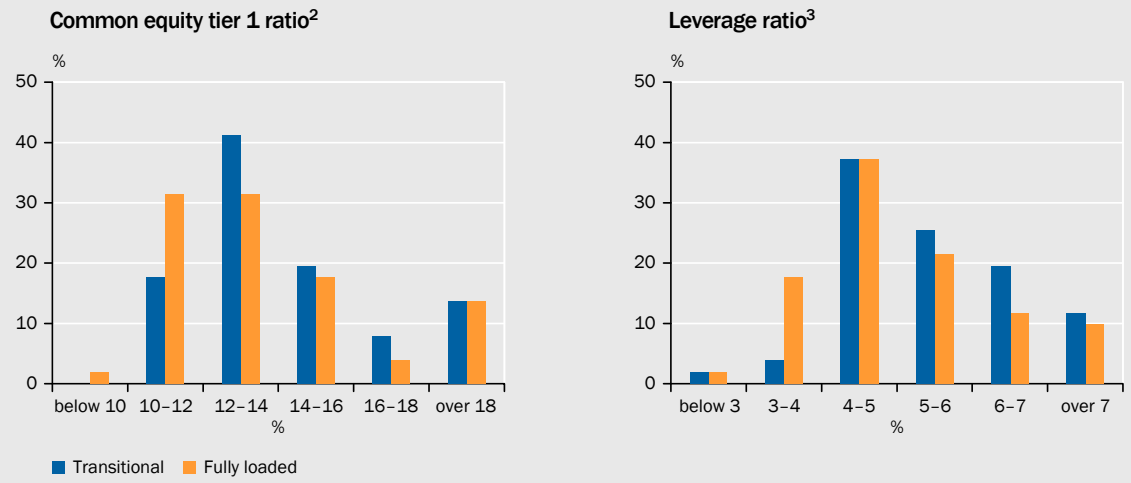
All the studies specify **ranges for the optimum ratio.** ↘ TABLE 25 In BCBS (2010), Yan et al. (2012), Miles et al. (2013) and BIS (2016), these result from differentiating between permanent and non-permanent effects of crises on gross domestic product (GDP). In Fender and Lewrick (2015), it is based on differentiating between moderate and high costs of a banking crisis. In Brooke et al. (2015) it is due to the limits of a 50 % confidence interval taking account of the parameter uncertainty. In Cline (2016), it is the figures of the base scenario and a conservative scenario. In Dagher et al. (2016) there is a clear fall in marginal benefits in the range from 15 to 23 %.

The studies considered – with the exception of Fender and Lewrick (2015) – focus on the risk-weighted capital ratio. Some studies make it possible to derive the **unweighted capital ratio.** ↘ TABLE 25 However, this conversion is subject to great uncertainty. Firstly, the ratio of risk-weighted assets to total assets fluctuates significantly between countries. This results in a range from 23 % to 78 % (median 50 %) within Europe for 2015, based on European Central Bank (ECB) data. Among small banks, the ratio is 57 % on average, among large banks it is 36 %. Secondly, the relevant measure for capital in the leverage ratio is tier 1 capital, whereas almost all the studies use common equity tier 1 capital (CET 1) or a near substitute. For 2015, the spectrum for CET 1 as a proportion of tier 1 ranges from 84 % to 100 % within Europe (median 98 %).

Finally, it should be noted that the studies ignore **further aspects** that may have an influence on the optimum ratio. For example, higher capitalisation decreases the volatility of the economic cycle and consequently increases welfare. Estimates on the basis of DSGE models point to a moderately dampening effect although there is great variation depending on the models used (Angelini et al., 2015). In addition, the potentially high **costs of the transition** to higher capital ratios are ignored. The shorter the transition phase, the higher these are likely to be (Macroeconomic Assessment Group, 2010; Dagher et al., 2016). It is, however, questionable how far the transition period can be extended if markets demand higher ratios immediately.

483. The capital ratios observed are in aggregate significantly above the minimum requirements and close to the optimum ratios. ↘ CHART 63 However, these capital ratios are likely to **overstate actual capitalisation**. Firstly, insufficient impairments on problem loans could make the capital appear to be too high. ↘ ITEMS 514 FF. Secondly, not all banks meet the tougher quality requirements un-

↘ CHART 64
Distribution of capital ratios of EU banks in the year 2016[1]



1 – As of December 2015. 2 – Ratio of common equity tier 1 to risk-weighted assets. 3 – Ratio of tier 1 to leverage exposure.

Sources: EBA Stress tests 2016, own calculations

der full application of Basel III in terms of tier 1 capital. Thirdly, the aggregate figures conceal **considerable variation** across banks. However, the capitalisation of individual institutions is decisive for stability, particularly of systemically important institutions.

484. Despite higher regulatory requirements, **large banks are less well capitalised** than small ones. ↘ CHART 63 An analysis of the significant banks on the basis of the EBA stress test data shows that even within this group, the picture is very heterogeneous; with full implementation of the CRD IV requirements, around 33 % of the banks have a common equity tier 1 capital ratio of below 12 %, 57 % have a leverage ratio of below 5 % and 20 % even have one below 4 %. ↘ CHART 64 **Sufficient capitalisation** must therefore be **doubted**, particularly as regards the unweighted capital ratio, primarily among some large banks.

485. The capitalisation of banks on the basis of **risk-weighted assets** has been increasingly criticised in the past few years. Empirical studies concluded that an unweighted capital ratio is a better predictor for bank distress than the complex risk-weighted capital ratio under Basel (IMF, 2009; Demirgüç-Kunt et al., 2013; Sun, 2011; Haldane and Madouros, 2012). At the heart of the criticism are the **internal ratings based models** (IRB approach) that banks can use to determine risk-weighted assets.

The comparatively weak forecasting power of risk-weighted capital can be explained by the **complexity** of bank portfolios and the associated model risks (Haldane and Madouros, 2012; Haldane, 2013). It could additionally be due to a **tactical underestimation** of risk-weighted assets with the aim of reducing capital requirements (Blum, 2008; Behn et al., 2014; Mariathasan and Merouche, 2014).

486. However, using an **unweighted capital ratio** only is also problematic. On the one hand, it likewise leaves scope for interpretation, for example regarding the

treatment of off-balance-sheet transactions (Beccalli et al., 2015; Schäfer, 2016). On the other hand, if the unweighted capital ratio is the binding restriction, it gives an **incentive** for banks to invest in **riskier assets** at a given capital requirement. In light of this, there is a case for combining a risk-weighted and an unweighted regulatory capital ratio.

487. The German Council of Economic Experts therefore renews its call for a **leverage ratio of at least 5 %**. An assessment should be made as to whether **only common equity tier 1 capital (CET 1)** and not the broader aggregate tier 1 should be included here. According to the EBA (2016), the effects of a switch to CET 1 would currently be moderate.

488. Furthermore, it should be considered to design the leverage ratio in a **macroprudential** fashion, analogously to risk-weighted capital requirements – as suggested by the ESRB (2015). If so, the leverage ratio would vary with the macroprudential risk-weighted buffers (GCEE Annual Report 2014 table 16). Otherwise, the binding effect of the leverage ratio would decrease with rising buffers – thus precisely at times of rising systemic risk. Moreover, a bank with a low average risk weight would not even be affected by an increase in the macroprudential buffer otherwise (ESRB, 2015).

At a tier 1 capital requirement of 8.5 % of risk-weighted assets and a leverage ratio requirement of 3 %, a bank with an average risk weight of less than 35 % (=3/8.5) is constrained by the leverage ratio requirement. This is actually likely to be the case for some, particularly large, banks. ↘ BOX 15 If the supervisor increased the buffer for the bank by 2.5 percentage points to 11 % in a boom period, the critical risk weight would drop to just 27 %. The bank would only be constrained by the leverage ratio if it had an average risk weight of less than 27 %. In case of a binding leverage ratio an increase in the macroprudential (risk-weighted) buffers would have no effect at all.

489. The **design** could, for example, follow the model used in the UK (PRA, 2015). There, the relationship between leverage ratio and risk-weighted capital ratio is based on the minimum requirements without buffers (3/8.5 = 0.35). Accordingly, the leverage ratio rises by 0.35 percentage points if the countercyclical buffer is increased by one percentage point. The same would apply to the buffer for systemically important banks. The latter was already envisaged in Basel (BCBS, 2016a).

490. A macroprudential design would ensure that the leverage ratio can act as an **effective backstop in case of increased systemic risk**, i. e., in a financial boom and for systemically important institutions. In particular, this is to be preferred to a further complication of the IRB approach by introducing additional risk weight floors, as is currently being discussed in the Basel Committee in the context of "Basel IV".

However, there is still no comprehensive empirical evaluation of macroprudential tools. This makes correct timing and appropriate dosage, in particular of

counter-cyclical tools, difficult. These tools should therefore initially be used with caution.

2. Low profits, high dividends

491. To analyse the **development of banks' capital ratios** over time, their change from 2007 to 2015 is broken down into the contributions of various components in line with the approach of Cohen and Scatigna (2014). An increase in the **risk-weighted capital ratio** can have three causes: (1) an increase in capital if more earnings are retained or capital is issued; (2) a decrease in total assets; and (3) a reallocation of assets causing the average risk weight to fall (e. g., as a result of a reallocation of corporate loans to government bonds).

492. Based on a sample of 65 large banks, similarly great variation can be seen across countries and country groups as observed for the levels of the capital ratios. In the former crisis countries, the **accumulation of capital** played a **minor role** for the change in banks' risk-weighted capital ratios. ↘ CHART 65, UPPER LEFT Instead, a significant part of the increase in the capital ratios was due to **portfolio re-balancing** that led to a decrease in risk-weighted assets. However, there are major differences between the former crisis countries. ↘ CHART 65, LOWER LEFT While the accumulation of capital clearly contributed to the improvement of the ratio among Spanish banks, **Italian Banks reduced their capital** in the period in question and increased their capital ratio exclusively through rebalancing.

493. The **reallocation to government bonds with privileged regulatory treatment** is likely to have played a key role here (Acharya and Steffen, 2015). Accordingly, the capitalisation of banks in the countries affected would have improved less in relation to the risks taken than the risk-weighted ratios suggest because government bonds are not risk-free. In most other member states of the euro area, the change in the capital ratios, by contrast, is largely due to an increase in capital, particularly in the run-up to the Comprehensive Assessment by the ECB in 2014 (GCEE Annual Report 2014 item 311).

494. Similarly, an increase in the **unweighted capital ratio** can be explained by (1) a reduction of total assets or (2) an increase in capital. The latter can result from an increase in earnings, reduced distributions or other changes in capital.

495. The analysis shows that European banks have **barely** strengthened their capital basis overall **through net income**, ↘ CHART 65, UPPER RIGHT, although there is again a certain variation across countries. ↘ CHART 65, LOWER RIGHT What is striking is the comparison with US banks, which were able to build up capital to a considerable extent from net income. Nevertheless, banks in all countries have **distributed dividends** that noticeably curbed the increase in unweighted capital ratios.

This suggests that the capitalisation of the banks could have been **improved markedly** solely **through lower dividend payments**. The observed payout policy is problematic if private and societal interests differ, such that excessive dividends are distributed and the banking system is capitalised at an ineffi-

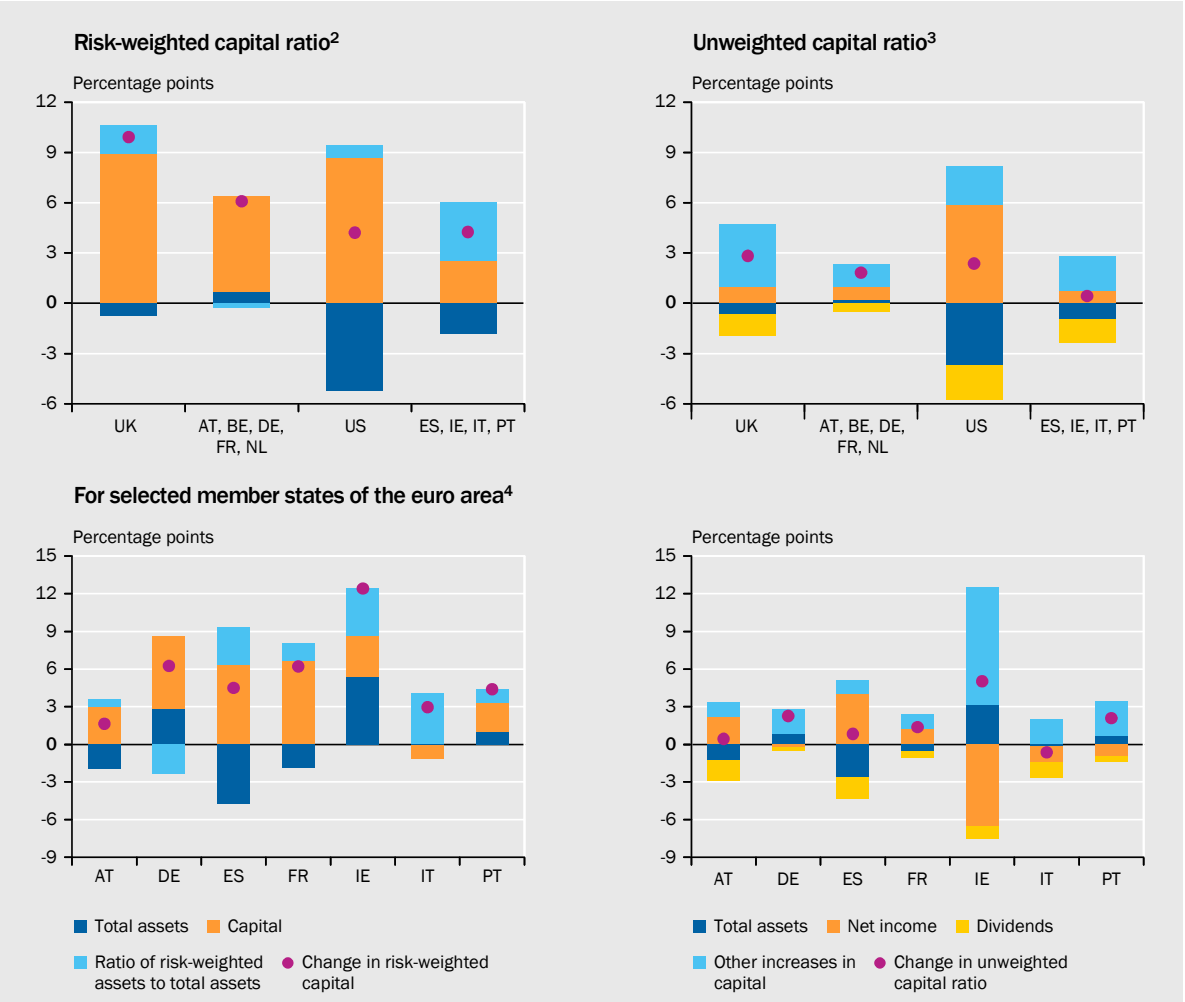
ciently low level (Acharya et al., 2016b). According to Shin (2016), when there is a price-to-book ratio of significantly below one, there is an incentive for shareholders to distribute earnings. In the short term, this generates added value compared to retaining earnings, but it damages the stability of banks in the longer term.

3. European banks under stress

496. The EBA has subjected European banks to another **stress test** in 2016, following 2014 (EBA, 2016b). Fifty-one banks accounting for around 70 % of total banking assets in the EU were tested. The objective of the stress test was to give supervisors and market participants uniform information and to assess the resilience of large EU banks to adverse market developments. The stress test did not contain a pass/fail threshold this time, and the results have **no direct conse-**

↘ CHART 65

Sources of changes in bank capital ratios for selected countries and country groups, end 2007 to end 2015[1]

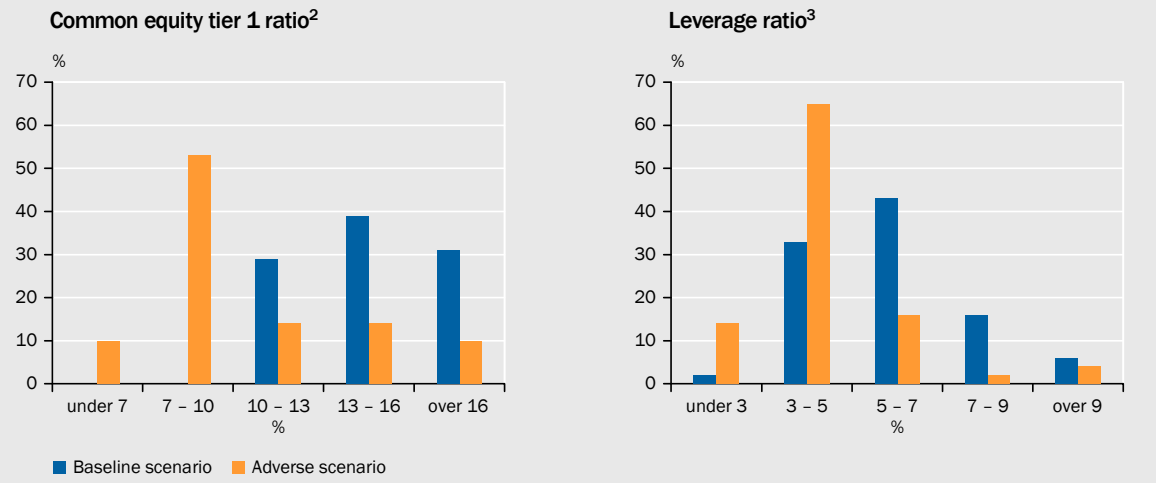


1 – Banks with total assets of more than €30 billion. If these banks make up less than 40 % of domestic assets, further banks, if possible, are included in descending order of size until a 40 % benchmark is reached; UK-United Kingdom (6 banks), AT-Austria (2 banks), BE-Belgium (1 bank), DE-Germany (6 banks), FR-France (3 banks), NL-Netherlands (1 bank), US-United States (13 banks), ES-Spain (5 banks), IE-Ireland (2 banks), IT-Italy (11 banks), PT-Portugal (2 banks). 2 – Ratio of book capital to risk-weighted assets. 3 – Ratio of book capital to total assets. 4 – Countries with only one bank not shown.

Sources: Worldscope, own calculations according to Cohen and Scatigna (2014)

↘ CHART 66

Distribution of capital ratios for different scenarios in EBA stress test 2016[1]



1 – Fully loaded capital ratios in 2018 for different scenarios. 2 – Ratio of common equity tier 1 to risk-weighted assets. 3 – Ratio of tier 1 to leverage exposure.

Sources: EBA stress test 2016, own calculations

quences for capital requirements. Instead they are used as input for the impending Supervisory Review Process (SREP) setting pillar 2 capital requirements.

The supervisors have the opportunity to **recommend** a further **capital requirement** ("capital guidance") in addition to the fixed requirements in order to cover risks from hypothetical stress scenarios. This is a comparatively mild measure. Although the supervisors expect banks to follow these recommendations, they are **not legally binding** and, in particular, do not trigger the automatic restriction of earnings distributions if the recommendation is not followed (EBA, 2016c).

497. In the **adverse scenario** of the stress test, the median value of the common equity tier 1 capital ratio (with full implementation of the CRD IV requirements) falls from 12.9 % at the end of 2015 to 9.4 % in 2018. The leverage ratio decreases from 4.9 % to 4.0 %. However, there is **great heterogeneity** among banks. ↘ CHART 66 In the adverse scenario, around 14 % of the banks fall below a leverage ratio of 3 %. This includes a number of German banks which underperformed in the stress test.

498. The EBA and the ECB commented positively on the results of the stress test and emphasized the resilience of the European banking system. Acharya et al. (2016a), by contrast, find **considerable capital shortfalls** at European banks if they apply the capital requirements of the US stress test as thresholds. The shortfalls identified all result from failures to meet the leverage ratio requirement.

499. Overall, it seems difficult to draw conclusions regarding the resilience of the European banking system from the results of the stress test. The **stress scenarios** naturally only reflect specific risks. This **compromises the significance** of the stress rest results (GCEE Annual Report 2014 item 309). In particular, the

risks from the low interest rate environment (GCEE Annual Report 2015 items 379 ff.) are barely covered. In the adverse scenario, a long period of low interest rates followed by a rapid interest rate rise would have had to be modelled for this purpose. Due to the limited significance of the stress test, the results provide **no reason to be complacent** about banks' capitalisation.

Ultimately, the stress test has proved to be a **toothless tiger**. It does not have any direct regulatory consequences and it lacks transparency as to whether and how the results will translate into regulatory capital requirements.

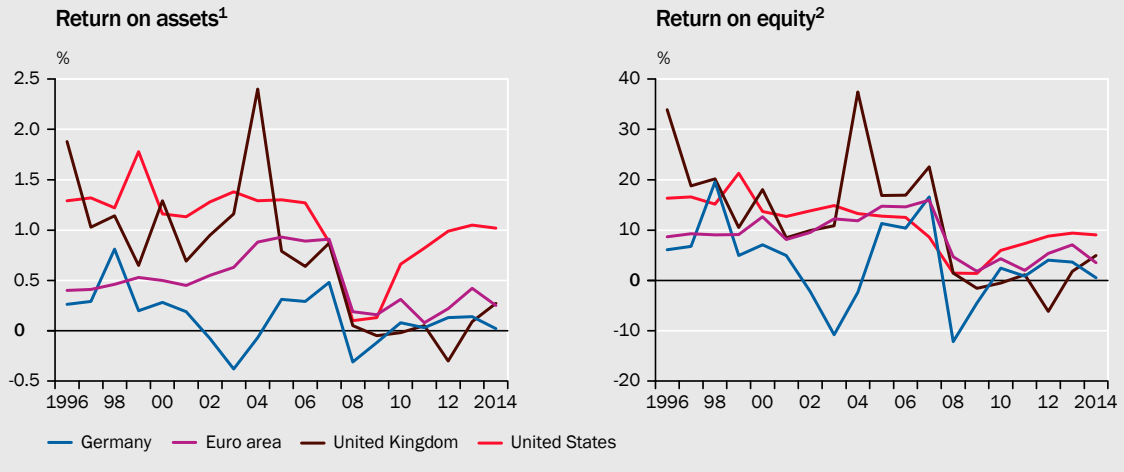
4. Banks' profitability increasingly under pressure

500. The **profitability** of European banks, in terms of return on assets, has **not recovered** since the global financial crisis. In the USA, by contrast, it is almost back to the pre-crisis level. ↘ CHART 67, LEFT Return on equity (ROE) in Europe is also significantly below the pre-crisis level, which is likely due in part to the higher level of capitalisation. ↘ CHART 67, RIGHT The drop in price-to-book ratios suggests that markets are not expecting profitability to recover any time soon. ↘ CHART 62, RIGHT According to estimates, banks' **costs of capital** have fallen recently, but are still **above ROE** (ECB, 2015a, 2016a).

501. The low profitability of euro area banks is not a new phenomenon (Albertazzi and Gambacorta, 2009). The euro area banks' return on assets was below that of the US or the UK even before the financial crisis. This indicates that the **causes** are of a **structural** nature. German banks stand out due to their particularly low profitability. ↘ CHART 67

502. **Low cost efficiency**, measured by the cost/income ratio, is likely to contribute to low profitability – primarily in Germany. Cost efficiency is much more favourable in other euro member states, particularly Spain. ↘ CHART 68, LEFT This cannot be explained by bank branch density (number of branches per 100,000

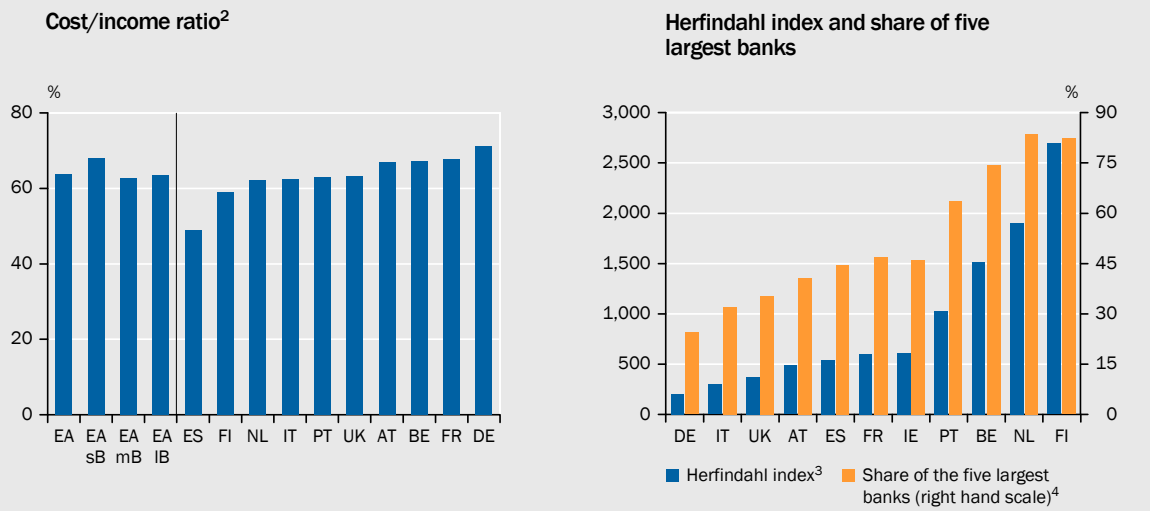
↘ CHART 67
Profitability of banks in international comparison



1 – Ratio of after-tax net income to total assets. 2 – Ratio of after-tax net income to book capital.

Source: World Bank

↘ CHART 68
Cost and concentration in European banking sector[1]



1 – AT-Austria, BE-Belgium, DE-Germany, ES-Spain, FI-Finland, FR-France, IE-Ireland, IT-Italy, NL-Netherlands, PT-Portugal, UK-United Kingdom. 2 – Average of 2009 to 2015. EA-Euro area, EA sB-Euro area small banks, EA mB-Euro area medium-sized banks, EA IB-Euro area large banks. 3 – Average of 1997 to 2015. As a general rule, an Herfindahl index below 1,000 signals low concentration, while an index above 1,800 signals high concentration. For values between 1,000 and 1,800, an industry is considered to be moderately concentrated (ECB, 2015b). 4 –Average of 1997 to 2015. Share of total assets of five largest banks.

Source: ECB

inhabitants), as Germany ranks around the middle in Europe, with Spain's banking sector registering a particularly large number of branches. However, Germany has almost twice as many bank employees per 100,000 inhabitants as Spain (ECB data as of 2015).

503. Another possible reason for the low profitability is the **intensity of competition**, particularly in Germany (Deutsche Bundesbank, 2013), where concentration is lower than in other European countries. ↘ CHART 68, RIGHT This indicator exaggerates the intensity of competition, however, as German savings banks and cooperative banks hardly compete with banks of the same banking group.

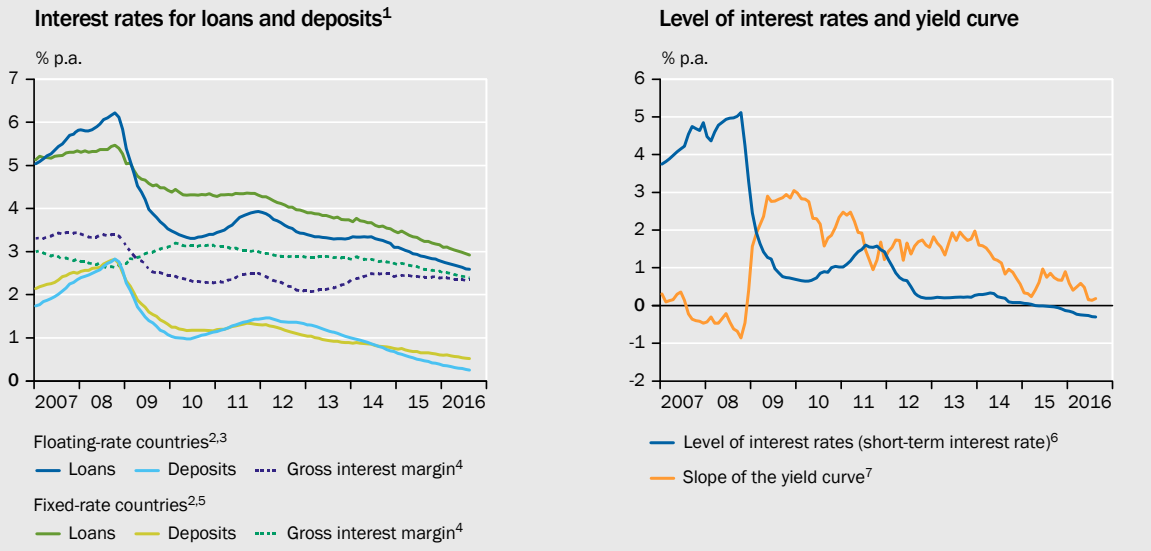
Competition is set to continue to rise in the future given the increase in price transparency following digitisation, and the market entry of non-banks such as FinTech companies, insurance companies and credit funds. The consolidation process in the banking sector evident since the beginning of the 1990s (GCEE Annual Report 2013 item 394) is also likely to continue.

504. The **increased regulatory costs** due to stricter regulation in the wake of the financial crisis are also likely to have a detrimental effect on banks' profitability. The direct costs of regulation have risen for banks in the past few years, not least because of the more complex supervisory structure in the euro area. In addition to human resource costs, these include in particular the expenditure necessary to set up an efficient IT system, which, however, cannot be attributed to regulation alone. Smaller banks are likely to be particularly affected, as some of the regulatory costs are fixed costs.

505. This has led to calls for more **"proportionality" in bank regulation**, which are gaining increasing attention from policymakers (Hill, 2016). It is argued that

↘ CHART 69

Interest rates for loans and deposits as well as level of interest rates and yield curve



1 – Households (and non-profit institutions serving households) and non-financial corporations, volume-weighted average values, outstanding amounts; overnight deposits and deposits with agreed maturity. 2 – Classification following ECB (2015a). 3 – Austria, Finland, Ireland, Italy, Portugal, Spain. 4 – Difference of rates for loans and deposits. 5 – Belgium, Germany, France, Netherlands. 6 – 3-month inte-rest rate (EURIBOR). 7 – 10-year government bond yields (AAA rated) minus 3-month interest rate (EURIBOR).

Sources: ECB, own calculations

the increasingly complex regulation is pushing smaller banks out of the market because they are unable to realise sufficient economies of scale. In this context, the European Commission is currently assessing potential relief measures for smaller banks. Scope is most likely to be found in the area of reporting obligations. However, no compromises should be made on capital requirements. Simplified procedures such as the standard approach should be maintained.

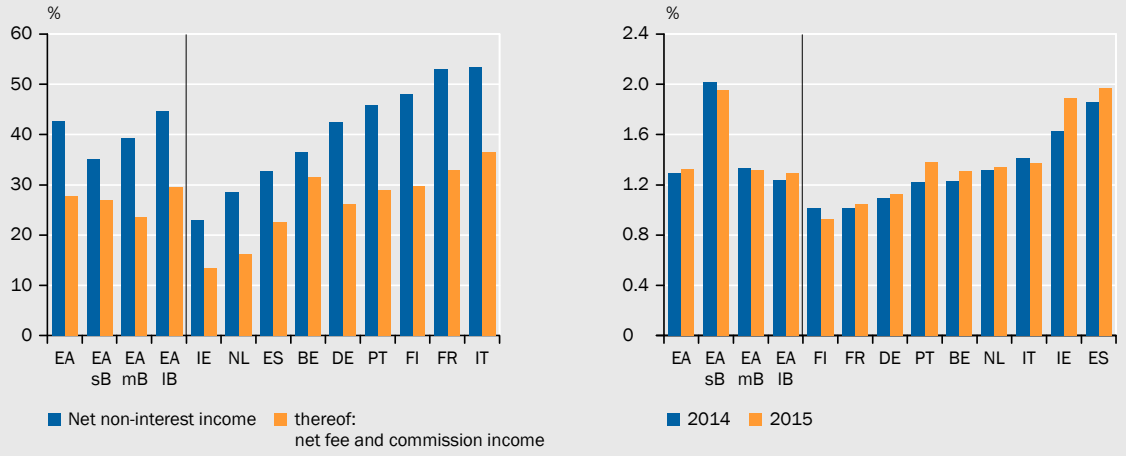
In general, the benefits associated with the **increasing complexity of regulation** need to be weighed against the costs. This applies equally to consumer protection, which also incurs considerable costs for banks, but which has been subject to little evaluation to date.

506. In addition to structural factors, the **low-interest rate environment** affects the profitability of banks, and is set to be of increasing importance in the future. A flattening yield curve reduces the profits generated from maturity transformation. A reduction in the level of interest rates reduces the interest margin if the lending rate reacts more strongly to falling interest rates than the deposit rate. This applies in particular at very low interest rates, because the deposit rate cannot be pushed too deeply into negative territory, as depositors will otherwise switch to cash. Deposit rates are already very close to zero, and for some businesses even negative. Empirical literature confirms that low interest rates and a flattening yield curve are likely to **reduce banks' interest margins noticeably** (Borio et al., 2015; ECB, 2015a; Claessens et al., 2016; Jobst and Lin, 2016).

507. The development of interest margins over time depends largely on whether predominantly **fixed- or variable-rate loans** are granted (Jobst and Lin, 2016). For example, variable lending rates are much more closely linked to the short-

↘ CHART 70

Importance of interest-related and non-interest-related business of euro area banks[1]



1 – EA- Euro area, EA sB-Euro area small banks, EA mB-Euro area medium-sized banks, EA IB-Euro area large banks, IE-Ireland, NL-Netherlands, ES-Spain, BE-Belgium, DE-Germany, PT-Portugal, FI-Finland, FR-France, IT-Italy. 2 – In relation to total operating income. 3 – In relation to total assets.

Source: ECB

term interest rate, which means that the level of interest rates is particularly important here. The slope of the yield curve plays a greater role for banks with fixed-rate loans (ECB, 2015a). The level of interest rates has a delayed effect here, as the average portfolio lending rates only adjust slowly (GCEE Annual Report 2015 item 383). ↘ CHART 69, LEFT

In countries with fixed-rate loans, such as Germany, there was actually an increase in the gross interest margin, defined as the difference between lending and deposit rates, as a reaction to the reduction in short-term interest rates in 2008 and 2009. This lowering of short-term rates was accompanied by a considerable steepening of the yield curve. ↘ CHART 69, RIGHT The subsequent flattening of the yield curve caused a **gradual but steady decline in interest margins**. Interest margins in countries with variable-rate loans tended to decline in line with short-term rates. These results are confirmed by an econometric analysis by the ECB (2015a).

508. However, the persisting **low-interest rate environment** has as yet had **little effect** on euro area banks' net interest income. Many countries actually experienced a slight increase in net interest income in 2015. ↘ CHART 70, RIGHT Primarily in former crisis countries a comparatively sharp decline in long-term deposit rates has been observed since 2014. These had risen substantially during the euro area crisis. The drop likely represents a normalisation against the backdrop of unconventional monetary policy measures (ECB, 2015b). As a consequence, gross interest margins in the former crisis countries – all with a predominance of variable-rate lending – have been almost constant for the past two years. ↘ CHART 69, LEFT

509. The shrinking margins may have been offset in part by an increase in lending volumes. An **increase in maturity transformation** or loans granted to riski-

er borrowers may also have helped to counteract declining interest margins. Deutsche Bundesbank (2016) in fact documents an increase in maturity transformation for German banks. This **increases the interest rate risk** in the banking system, making it vulnerable to a future rate hike, which could threaten the solvency of a large part of the banking system (GCEE Annual Report 2015 item 389 ↘ ITEM 421).

510. The euro area banks are likely to suffer to differing extents from the effects of the low interest rate environment. The significance of interest-related business varies between the euro area countries and among banks. Smaller banks are likely to be harder hit. ↘ CHART 70, LEFT This is borne out by the ECB's (2015a) study, which shows that the **sensitivity of interest margins** to changes in the interest rate level or yield curve is **much higher for small banks** than for large ones.

In Germany, this primarily affects the German savings banks and credit cooperatives, whose profits are heavily dependent on interest business (Deutsche Bundesbank, 2015). The longer the period of low interest rates endures, the **harder it will become** to successfully maintain a **business model** based on interest business, because an exacerbation of the effect of low interest rates on interest margins is to be expected (see the survey conducted by BaFin and Deutsche Bundesbank in 2015 on the projected earnings of smaller and medium-sized German banks; GCEE Annual Report 2015 item 384).

On the contrary, the low interest rate environment is likely to have a **positive effect** on banks with high credit risks. It should help borrowers to service their loans and improve the macroeconomic environment. ↘ ITEMS 165 FF., 185 FF. This positive effect is likely to have prevailed particularly during the early years of low interest rates.

511. The scope to increase non-interest related earnings is limited given competition, so the **costs** are set to take on a key role in compensating for the expected decline in revenues. **Further mergers** in the banking market may be an option for cost cutting. A disproportionate reduction in competition must, however, be avoided as must the emergence of systemically-relevant financial institutions.

If some banks are unable to earn their costs of capital over an extended period of time, they **may have to exit the market**. This would also ease the competitive situation and thereby increase the profitability of the remaining banks. Banks unable to survive should therefore not be prevented from exiting the market.

5. Interim conclusion: Further strengthen the capital base

512. In summary, the **profitability** of euro area banks had been very low even before the financial crisis due to **structural factors**. The low interest rate environment will likely put banks under even more pressure in the future, particularly if their business model focuses on interest business. They may be able to coun-

teract this development by reinforcing non-interest related business and through cost-cutting measures. Banks unable to remain competitive should exit the market.

513. Many euro area banks are still not sufficiently capitalised to be able to withstand unexpected shocks, particularly with a view to the unweighted capital ratio. The German Council of Economic Experts therefore renews its call for a **leverage ratio of at least 5 %**. Additionally, a **macroprudential design** of the leverage ratio deserves consideration. In particular, systemically important banks should meet higher requirements.

Given the low price-to-book ratios and low profitability, increasing capital by issuing shares or through retained earnings seems difficult at present. However, capitalisation would have developed much more positively if fewer dividends had been distributed. As a supervisory instrument, restrictions on distribution do not apply until banks fail to meet capital requirements. Precisely against this backdrop, **it should be viewed critically** that capital requirements in the form of capital guidance, such as in reaction to the EBA stress test, have **no effect on distributions**. This is detrimental to banks' accumulation of capital and therefore sends the wrong signal in the view of the GCEE.

III. NON-PERFORMING LOANS BURDEN BANKS

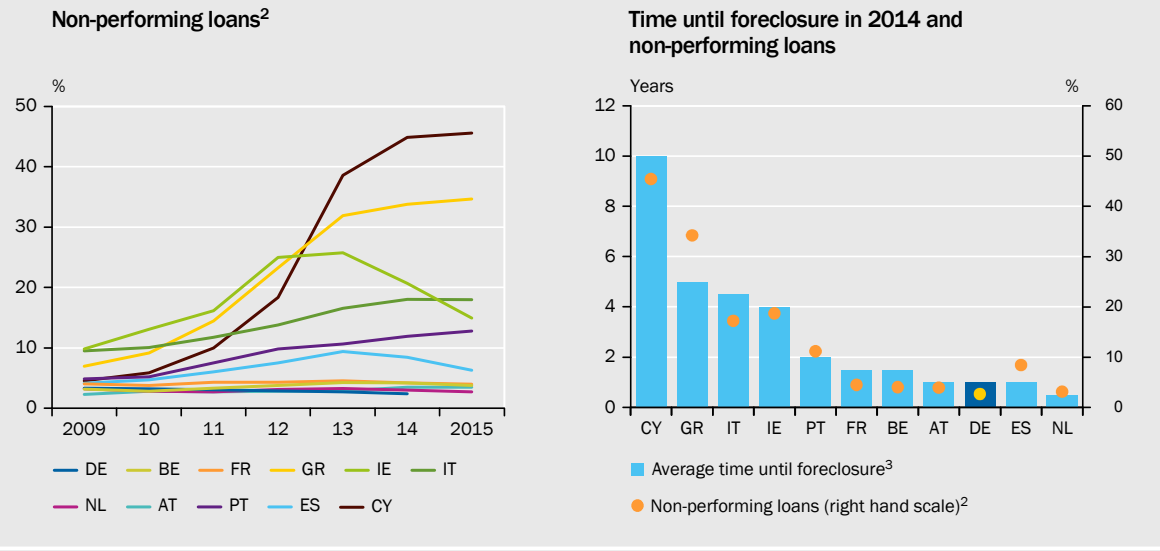
514. The **high volume of non-performing loans** (NPLs) are placing a burden on the banking system in some European countries. The former crisis countries are the most affected. While NPLs declined compared to overall loans in Ireland and Spain, they continued to rise in Greece, Italy, Portugal and Cyprus. ↘ CHART 71, LEFT The proportion of specific allowances for loans in relation to non-performing loans (coverage ratio) amounted to a weighted average of around 44 % for the EU in March 2016 (EBA, 2016d). It is difficult to assess whether this represents sufficient provisions for loan losses. The price-to-book ratios of the European banks are certainly extremely low. ↘ CHART 62, LEFT One reason for this – in addition to low profitability – may be **concerns** that **loan portfolios** are still **overvalued**.

515. The aim of the **Comprehensive Assessment** at the inception of the Banking Union in 2014 was to reveal legacy problems, in order for weak banks to be recapitalised and trust in the European banking system to be restored (GCEE Annual Report 2014 items 308 ff.). There was indeed an **increase in transparency** regarding the amount of NPLs as a result of the first-time harmonisation of definitions and review of valuations in the Asset Quality Review under the Comprehensive Assessment. However, this did not lead to a large-scale reduction of problem loans.

The large NPL holdings **exert pressure on the European banking system** in various ways. Firstly, they tie up capital, which could prevent lending to more

↘ CHART 71

Non-performing loans in the banking sector[1]



1 – AT-Austria, BE- Belgium, CY-Cyprus, DE-Germany, ES-Spain, FR-France, GR-Greece, IE-Ireland, IT-Italy, NL-Netherlands, PT-Portugal.
2 – As a ratio of total loans. 3 – Residential properties.

Sources: Aiyar et al. (2015), World Bank

profitable companies. Secondly, they raise uncertainty as to the amount of provisions for loan losses actually needed. And thirdly, they compromise banks' profitability by lowering interest income and raising funding costs, while giving rise to high administrative costs.

516. The literature discusses the **interplay between economic development and credit quality** intensively. On the one hand, unfavourable macroeconomic conditions cause an increase in the rate of loan defaults and write-offs (Hoggarth et al., 2005; Marcucci and Quagliariello, 2008). On the other, non-performing loans can also have a negative effect on the real economy.

517. The high proportion of NPLs is considered an important reason for the **sluggish lending in the euro area** (IMF, 2015; ECB, 2016a). Aiyar et al. (2015) demonstrate that a high volume of NPLs is associated with low capitalisation, high borrowing costs and low credit growth in the euro area. Bending et al. (2014) show that, on average, an increase of one percentage point in the NPL rate results in a decline in credit growth by 0.8 percentage points. Reducing non-performing loans is thus likely to be significant for the economic recovery in the euro area.

518. There is a growing consensus that **fast repair of bank balance sheets**, i. e., a reduction of NPLs and an appropriate valuation of loans, is of major importance to future economic development (IMF, 2016). Besides the risks from NPLs, there is also the risk that banks will keep extending loan terms in order to avoid defaults ("**evergreening**", GCEE Annual Report 2015 item 455). This means that bad loans may remain in portfolios, crowding out loans to healthy businesses. This would keep companies afloat that under normal circumstance would have exited the market.

This sort of **"zombification" of the economy** poses the risk that necessary structural change will be impeded. The example of Japan shows that it may be associated with high macroeconomic costs if the problem of non-performing loans is being addressed too late. ↘ BOX 16 Acharya et al. (2016) fear that the euro area may develop this way as well, highlighting the misallocation of loans by poorly capitalised banks.

519. The **ECB**, in its supervisory capacity, declared the reduction of NPLs to be one of its priorities for 2016. It published a **guidance to banks on non-performing loans** in September, which states that banks should develop strategies and quantitative targets depending on their business models and risk management, to reduce the level of NPLs. The guidance also explains how NPL impairments and write-offs should be determined in line with international recommendations (ECB, 2016b).

Following the harmonisation of definitions in 2014, the guidance is a second important step towards solving the problem of non-performing loans. However, the ECB's guidance is **not binding**, although non-compliance may lead to additional supervisory measures. This raises the question as to whether this is sufficient to reduce the high levels of NPLs effectively and quickly.

520. **Transparency about NPLs could be improved** by applying more **rule-based procedures**, as have been employed in the United States (Aiyar et al., 2015). There loans are automatically impaired if delinquent beyond a certain period of time.

The new accounting standard effective in 2018, **IFRS 9**, will ensure **more timely recognition of expected losses** through the transition from the incurred loss model to the expected loss model. However, the extent to which the new rule will affect regulatory capital is uncertain (BCBS, 2016b, 2016c).

521. In addition to increasing transparency, a reduction of NPLs is also of major importance. But this often fails because of the **limited marketability** of the loans due to existing informational and incentive problems.

One reason for this is the long **time to foreclosure** in some euro member states. According to Aiyar et al. (2015), the average foreclosure period in Europe ranged within a broad spectrum in 2014. ↘ CHART 71 RIGHT At ten years, Cyprus had the longest period, and the Netherlands the lowest at less than one year. There seem to be major differences even within countries. The time to foreclosure varied between below one and seven years across the regions of Italy in 2007 (Schiantarelli et al., 2016). At the same time Aiyar et al. (2015) show that countries with long foreclosure periods have comparatively high NPL levels. ↘ CHART 71 RIGHT Increased use of out-of-court workouts could alleviate the pressure.

522. Moreover, **European markets** for non-performing loans are currently hardly developed. This means there is no transparency about the actual value of the NPLs through market prices. One hurdle is the **lack of harmonisation** of legal frameworks in the euro area. In addition to insolvency proceedings, this applies, among other things, to the legal basis of furnishing collateral. Functioning **se-**

curitisation markets, as aspired to under the Capital Markets Union, could also make an important contribution (GCEE Annual Report 2015 item 461).

Policymakers are therefore in a position to help improve the marketability of NPLs, by increasing the **efficiency of insolvency and foreclosure proceedings** and creating a framework for European NPL markets.

523. A **speedy solution** to the problem of non-performing loans should take **high priority** for supervisors. This would improve monetary transmission via the banking channel and mitigate the danger that the European economy will become zombified. Experience in Japan shows the disadvantages of procrastination in tackling NPLs. In contrast, the examples of Sweden and the United States show the advantages of swiftly addressing them, especially when accompanied by a broad recapitalisation of the banking system. ↘ BOX 2 However, national supervisory authorities may be tempted to show too much indulgence (**regulatory forbearance)** for political reasons. The European supervisors (ECB and EBA) thus have a key role to play in dealing with NPLs.

At the same time, the supervisors have to keep an eye on the **accumulation of new NPLs** in the future, as the low interest rate environment poses the risk that loans will be granted that could become non-performing with only a slight increase in interest rates.

↘ BOX 16

Experience in dealing with non-performing loans

The way in which NPLs were dealt with during banking crises has played a key role in the subsequent development of national economies. The experiences of Sweden, Japan and the USA are outlined in the following. The Swedish and American examples are positive, because these countries quickly recapitalised their banking sectors after the crisis and reduced the levels of NPLs significantly, whereas Japan reacted rather slowly. This may have been a reason why Sweden and the USA recovered relatively quickly, while Japan slid into years of stagnation.

In **Sweden**, the deregulation of the banking sector in the 1980s led to an increase in lending and a long-lived real estate boom (Berglöf and Sjögren, 1998; Englund, 1999). When asset prices began to fall in 1992, many banks experienced solvency problems. Given the high systemic risk to the banking system, the government took **determined action** to clean up the banking sector (GCEE Annual Report 2008 Box 6). Non-viable banks were wound up immediately. Weak banks that seemed profitable in the medium term received state support in the form of guarantees, loans and capital injections along with comprehensive **restructuring requirements**. Problem loans were transferred to **asset management companies**, which enabled the bad debts to be sold off quickly and at relatively low losses. The Swedish government's determined action resulted in limited fiscal and real economic costs. Following a cumulative decline in GDP by 5.1 % from 1991 to 1993, the country returned to a positive growth rate in 1994 (Englund, 1999; Österholm, 2010).

The bursting of the asset price bubble in **Japan** in the early 1990s caused the value of collateral to plummet and an increase in non-performing loans in the banking sector (Hoshi and Kashyap, 2008; Fujii and Kawai, 2010). Too optimistic expectations of a recovery of real estate prices and economic growth, coupled with the **scant popularity of government support measures for the financial sector** led to the failure of the Japanese government to repair the banking sector in the first seven years of the crisis and a further increase in the level of NPLs in the Japanese banking sector (Fujii and Kawai, 2010). It was not until the systemic banking crisis hit in 1997 that the government decided to take

more extensive measures. In addition to a comprehensive bank recapitalisation, a **strict timeline** was set for the **reduction of NPLs**. The target rate for NPLs of around 3 % was not achieved until 2005, and economic recovery was slow (Fujii and Kawai, 2010). Laeven and Valencia (2008) estimate the decline in economic output resulting from the banking crisis of 1997 at 18 % of Japanese GDP.

Similarly to the two crises described above, the subprime crisis in the **United States** of 2007 to 2009 was brought about by a price collapse in the real estate sector. However, the US crisis occurred much more abruptly than the Japanese crisis, and quickly spread to the global financial system. With a view to the Japanese experience, the US government reacted quickly to the problems in the banking sector. For instance, the **Troubled Asset Relief Program (TARP)** was implemented promptly, and **bank stress tests** were carried out to reveal capital shortfalls (Lipscy and Takinami, 2013). TARP had a volume of US$700 billion, or around 5 % of US GDP (Lipscy and Takinami, 2013). In addition to purchasing toxic assets, it was primarily aimed at recapitalising the banking sector. This enabled US banks to improve their capital bases noticeably better than European banks (GCEE Annual Report 2013 item 363).

IV. BAIL-IN: INCREASED MARKET DISCIPLINE OR AMPLIFICATION OF CRISES?

524. During the financial crisis of 2007 to 2009 the global financial system could be stabilised only by far-reaching government support. Such measures resulted not only in direct fiscal costs but also in rising expectations of a future banking sector bail-out, which were accompanied by a decline in banks' funding costs (Ueda and Weder di Mauro, 2013; Acharya et al., 2014; Barth and Schnabel, 2014). The **new European resolution regime** under the Single Resolution Mechanism (SRM) came into force at the beginning of 2016, as a means of restoring **market discipline** and reducing bail-out expectations. However, the new rules came under criticism right from the start.

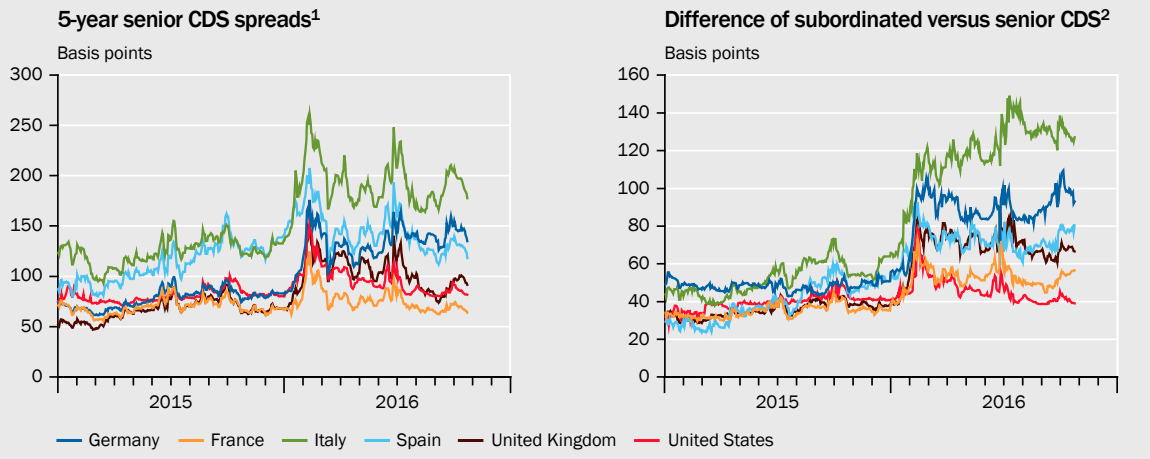
1. Turbulences on financial markets

525. In February 2016, international bank share prices fell sharply while contingent convertible (CoCo) bond **risk premiums rose**. These bonds are subordinated liabilities that can be converted to equity or written off when a certain event is triggered, such as capital falling short of a previously defined threshold. For this reason, CoCo bonds are considered hybrid capital (GCEE Annual Report 2011 Box 11) and largely classified as additional tier 1 capital (AT 1). However, they are treated as debt for tax purposes. They thus enable banks to meet regulatory capital requirements at comparatively favourable terms.

526. The rise in CoCo bond risk premiums was accompanied by a **rise in CDS spreads** for banks. Not only did spreads of senior tranches rise noticeably ↘ CHART 72 LEFT, but also those of junior tranches. The rise in junior CDS spreads was more pronounced in all major European countries, resulting in a considerable increase in the differentials between the two tranches and a stabilisation at

↘ CHART 72

Bank credit default swaps of different countries



1 – Average CDS spreads of the senior tranche, weighted by total assets of each bank (end of year 2014). Germany: 6 banks; France: 5 banks; Italy: 8 banks; Spain: 4 banks; United Kingdom: 6 banks; United States: 4 banks. 2 – Difference of the average subordinated versus senior CDS spread tranches, weighted by the total assets of each bank (end of year 2014).

Sources: Thomson Reuters, own calculations

the higher level. ↘ CHART 72 RIGHT At US banks, in contrast, the difference dropped back to the previous level.

527. Fears of a global recession combined with slower growth in China were considered to have **triggered the turbulence**. This directly affected the banking sector by raising the chance of loan defaults. The situation was intensified by the expectation that the ECB would react by easing monetary policy, thus putting further pressure on banks' profitability (Konjunkturupdate 2016 items 5 ff.).

Greater uncertainty about whether banks would be able to make CoCo bond coupon payments was likely another factor causing the turbulence. These payments cannot be made if they result in capital requirements not being met (European Parliament, 2016; Glover, 2016). A **maximum distributable amount** (MDA) is calculated to ensure that distributions do not threaten the capital base. On 19 February 2016, the ECB clarified that pillar 2 requirements are also to be factored into MDA calculation (European Parliament, 2016). As these are not published by the supervisor, it might not have been transparent for the markets which banks were at risk of suspending CoCo bond coupon payments.

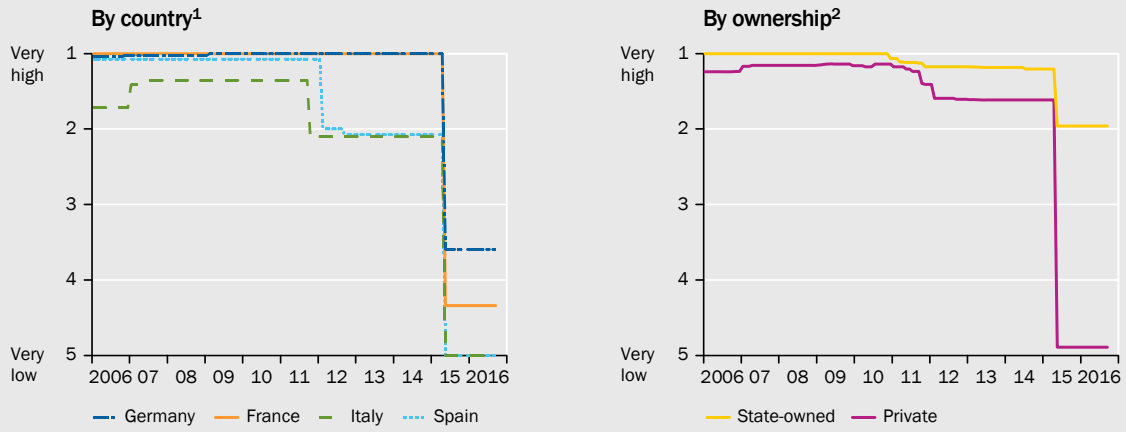
528. Disruptions occurred again after the British voted for **Brexit**. The new European resolution regime came under increasing fire as a result of the repeatedly surfacing turmoil. There are fears that the possibility of a **bail-in** might prove **destabilising** (Goodhart and Avgouleas, 2014), hence the calls, such as from Italy, to soften the bail-in rules.

2nd Credibility of the bail-in regime

529. However, the higher risk premiums and in particular their differences across banks and countries ↘ CHART 72 RIGHT are likely to primarily signal **greater market discipline** following the entry into force of European bank resolution rules.

↘ CHART 73

Support probabilities of banks with support rating



1 – Computations are based only on banks that exhibit a bank support rating throughout the whole sample period. Ratings are weighted by the average of bank assets from 2006 to 2015. Number of observations: 11 (Germany); 3 (France); 9 (Italy); 3 (Spain). 2 – State-owned: state holds at least 50 % of the bank shares in February 2015. Computations are based only on banks that could be either classified as „state-owned" or „private" based on available information and that exhibit a bank support rating throughout the whole sample period. Number of observations: 15 (state-owned); 31 (private).

Sources: Fitch, own calculations

The assessment by rating agencies of the likelihood of bank support provides another signal (GCEE Annual Report 2014 items 299 ff.). In May 2015, the rating agency Fitch took significant downgrade action on its **Support Ratings**, which predict the likelihood of the government or other market participants bailing out senior creditors. This means that Fitch estimates the current probability of support for banks in the major euro area countries to be very low. ↘ CHART 73 LEFT The country-specific differences are largely accounted for by the proportion of state-owned banks, which are of considerable importance in Germany. According to Fitch, these banks continue to enjoy a **high probability of support**, which distorts competition in favour of state-owned banks. ↘ CHART 73 RIGHT

530. The **discretion** provided for in the Single Resolution Mechanism and in the state aid rules for creditor bail-in, however, spawn the fear that government support could continue to be used to rescue banks in the future. In addition, complex governance structures and the lack of national backstops hamper the credibility of the SRM (GCEE Annual Report 2014 items 323 ff.).

Exceptions to a strict creditor bail-in might be needed in case of a severe threat to financial system stability. However, this harbours the **risk of misuse**. For instance, a systemic crisis could be used as a pretext for avoiding a bail-in of domestic creditors. The German Council of Economic Experts has repeatedly drawn attention to this problem. It has proposed solving it via a strictly rule-based procedure with high hurdles, similar to the systemic risk exception in the United States (GCEE Annual Report 2013 items 312; GCEE Annual Report 2014 item 340).

531. There is considerable uncertainty in particular about **global banks' resolvability**. Resolution of banks that are active in multiple jurisdictions remains a challenge. There are no precedents to date for utilising the SRM or the contin-

gency plans for orderly resolution developed by major banks. It is doubtful that such banks could be resolved without endangering financial system stability and without government support measures.

532. The repeated severe turbulences on financial markets could be considered an indication of a **bail-in's potential to exacerbate crises**. Contagion effects through rising funding costs or direct interconnections could accelerate a crisis and thus have a destabilising effect (Goodhart and Avgouleas, 2014). This very fact could undermine the credibility of the bail-in regime, as recent critical discussions on bail-ins show.

533. The events also reveal the complexity of hybrid instruments. The German Council of Economic Experts thus advocated at an early stage that banking regulation should rather rely on **robust capital requirements** (GCEE Annual Report 2011 box 11; GCEE Annual Report 2014 items 341 ff.). While the relaxation of pillar 2 capital requirements and weaker restrictions on distributions (EBA, 2016c) ↘ ITEM 496 could alleviate the situation in the short term, higher capitalisation of banks could, in contrast, decrease the probability of destabilising effects in the long term.

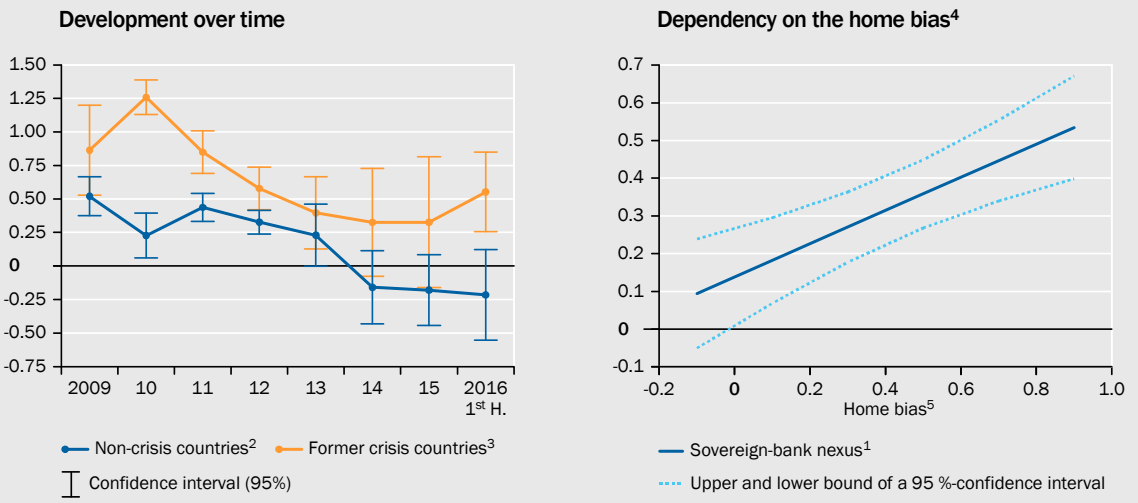
3. Subordinated debt is no substitute for capital

534. Instead of strengthening capital, regulation is increasingly focussing on bail-inable debt securities. The **TLAC** (total loss-absorbing capacity) and **MREL** (minimum requirement for own funds and eligible liabilities) buffers are regulatory capital standards intended to ensure that banks have sufficient loss absorption capacity in the event of a bail-in.

Bail-inable debt securities: **TLAC** was published as a recommendation by the Financial Stability Board (2015) and the Basel Committee on Banking Supervision as a pillar 1 capital standard for the 30 largest systemically important banks (G-SIBs). The recommendation is not legally binding and must be transposed into European law. TLAC currently applies to 13 banks in the European Union. Starting in 2019, target banks will be required to hold TLAC of 16 % of risk-weighted assets and 6 % of their leverage exposures. The requirements are to be raised by 2022 to 18 % and 6.75 %, respectively. **MREL** is based on the Bank Resolution and Recovery Directive (BRRD) and is legally binding for all EU banks. MREL is aimed at ensuring that creditor bail-ins at distressed banks can be conducted smoothly under the Banking Union's resolution regime. In contrast to TLAC, the competent resolution authority determines the individual requirements under pillar 2 for each bank at its discretion.

535. **TLAC** can contribute to improved resolvability of systemically important banks. In view of the problems of risk-weighted assets ↘ ITEM 12, the additional requirement of TLAC based on banks' leverage exposure is a welcome move. Moreover, G-SIBs and other international banks must deduct from their own supplementary capital (tier 2) exposures to TLAC instruments (BCBS, 2016d). This mitigates the risk of mutual contagion among banks. The TLAC requirements apply in addition to capital buffer requirements to prevent double counting of capital.

↘ CHART 74
Sovereign-bank nexus[1]



1 – Elasticity of the bank CDS spread with respect to the country CDS spread. 2 – Austria, Belgium, Germany, France, Netherlands. 3 – Ireland, Italy, Portugal, Spain. 4 – Elasticity of the bank CDS spread with respect to the country CDS spread conditioned on the home bias. 5 – Deviation of banks' share of domestic sovereign exposure with respect to the overall sovereign exposure from the share of the domestic GDP with respect to the total GDP of all included countries.

Source: Schnabel and Schüwer (2016)

Similar rules regarding the base used, regulatory deductions and double counting should apply to **MREL**. Retail investors should also be explicitly pointed to the associated risks when purchasing subordinated debt securities. Moreover, the **tax privileges of subordinated bonds** and hybrid instruments over equity should be reconsidered, as they are harmful to financial stability.

536. Overall, subordinated debt could contribute to a better resolvability of banks. However, it could have a destabilising effect in times of crisis, which would undermine the credibility of a bail-in. For this reason, **sufficient capitalisation based on equity** is preferable. Moreover, the introduction of TLAC and MREL makes the regulatory framework even more complex. Consequently, the German Council of Economic Experts assumed a critical view of the new capital standards from the very start of the discussion (GCEE Annual Report 2014 item 356). In particular, they should not serve as a substitute for more stringent capital requirements.

V. SOVEREIGN-BANK NEXUS PERSISTS

537. One main objective of the European Banking Union is to loosen the **nexus between sovereign and bank risks**. Considerable progress has been made as the sovereign-bank nexus has decreased substantially compared to 2010. However, sovereign and banking risks remain closely linked in former crisis countries. Moreover, the nexus has recently started to **rise again** in these countries. ↘ CHART 74 LEFT This underscores the urgency of further measures to loosen the ties between bank and sovereign risks.

538. In a recent study, Schnabel and Schüwer (2016) examine the **factors influencing the sovereign-bank nexus** based on EBA stress test data since 2011. ↘ ITEMS 557 FF The results show that the nexus significantly correlates with the **home bias** of banks' sovereign exposures. ↘ CHART 74 RIGHT However, an increase in the overall sovereign exposure does not show a significant correlation with the nexus if the exposure is diversified to include sovereign debt of other countries. Other relevant factors include the home country's debt ratio, the quality of its governance and the bank's tier 1 capital ratio. Even if these results should not be interpreted as causal effects, they indicate that the **soundness of banks and governments** plays an important role for the strength of the sovereign-bank nexus in addition to their direct interrelationships.

1. High exposures of savings banks towards the government

539. In its Annual Economic Report 2015/16, the German Council of Economic Experts developed a **proposal for removing regulatory privileges** for banks' sovereign exposures (GCEE Annual Report 2015 items 52ff). The proposal focussed on **risk-adjusted large exposure limits**, which restrict banks' sovereign exposures to a fixed percentage of banks' own funds (25 % to 100 %). The upper limit would currently apply to German sovereign exposures. The lower limit would at present only apply to Greek sovereign exposures. In addition, banks should back sovereign exposures to these countries with **capital** using risk weights reflecting the actual risk of default.

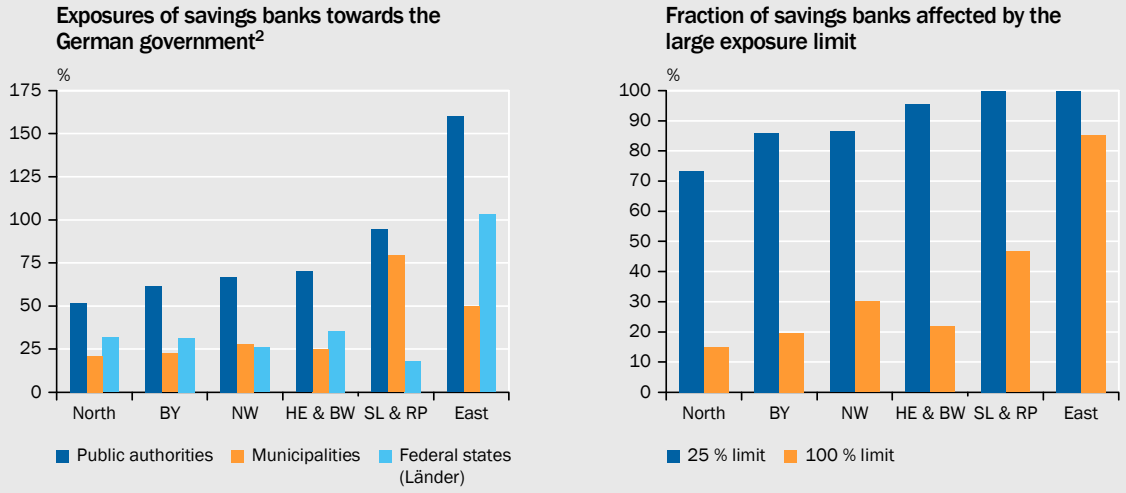
540. The **consequences of this framework** on reallocations of sovereign exposures and capital requirements were illustrated using EBA data on **major banks** (GCEE Annual Report 2015 items 52 ff.). It was shown that banks would need to considerably reduce their holdings of domestic sovereign debt. The additional capital requirements, on the other hand, would be relatively small. German, Italian and Spanish banks would need to divest the largest volumes of sovereign exposures. In Germany, state-owned banks, in particular, would have to considerably reduce their domestic sovereign exposures (GCEE Annual Report 2015 item 58.) Calculations based on an updated dataset confirm these results (Andritzky et al., 2016).

541. Current calculations based on data from Deutsche Bundesbank on individual small banks in Germany show that the **savings banks** are holding substantial volumes of domestic government debt, which constitutes over 72.8 % of capital (equity plus reserves pursuant to section 340g of the German Commercial Code, *Handelsgesetzbuch* – HGB) for 50 % of the 412 savings banks analysed, and over 120.5 % for 25 % of them. Credit cooperatives, in contrast, hold significantly less in domestic government debt, which amounts on average to only 11.8 % of their capital.

542. There are considerable **differences among the German federal states** as regards savings banks' exposures. ↘ CHART 75 LEFT The savings banks in the eastern German federal states have by far the greatest exposures to the German govern-

↘ CHART 75

Exposures of savings banks towards the German government[1]



1 – Some of the federal states were pooled for reasons of data protection. North (Schleswig-Holstein, Lower Saxony, Bremen, Hamburg), BY-Bavaria, NW-North Rhine-Westphalia, HE-Hesse, BW-Baden-Württemberg, SL-Saarland, RP-Rhineland-Palatinate, East (Brandenburg, Mecklenburg-West Pomerania, Saxony, Saxony-Anhalt, Thuringia). 2 – In relation to equity (median in %, book equity plus reserve assets according to § 340g HGB).

Sources: Research Data and Service Centre (RDSC) Deutsche Bundesbank, Monthly Balance Statistics (BISTA), June 2016, own calculations

ment, with Mecklenburg-Vorpommern recording the highest level. This is **primarily exposure to the federal states**. One explanation might be that structurally weak regions have less demand for credit, so deposits collected exceed loans issued. Excess deposits are frequently invested in bonds of German public-sector issuers. In fact, the volume of deposits of non-financials in eastern German savings banks was twice as high in 2015 as that of loans to non-financials (Ostdeutscher Sparkassenverband, 2016). For all German savings banks in aggregate, deposits more or less match loans (DSGV, 2016). In the western German federal states, savings banks' excess deposits are highest in Saarland, followed by Hesse and Rhineland-Palatinate.

Exposures to municipalities are highest in Saarland and Rhineland-Palatinate, along with the eastern German states. The median percentage for the group of Saarland and Rhineland-Palatinate is around 80 % and in the eastern German states around 50 % of capital. Overall, debt issued by municipalities and federal states constitutes the largest portion of sovereign exposure. The median percentage of banks' exposures to the federal government is 0 % in all federal states and groups of federal states analysed.

543. Based on current data, **139 savings banks would be affected** by a **large exposure limit** as proposed by the German Council of Economic Experts. They all have domestic government exposures in excess of 100 % of capital. It should be noted that in fact the ratio of exposures to eligible capital would need to be considered, which is likely to exceed the capital measure used here. Consequently, the number of savings banks affected is likely to be lower. The total exposures exceeding 100 % of capital are around €22 billion for the savings banks analysed. This amount is much lower than in the case of the public-sector credit institutions operating at supra-regional level (in particular, Landesbanken) for

which the total exposures exceeding 100 % of eligible own funds are around €92 billion (Data: EBA, 2015).

Only 28 out of the 1,017 credit cooperatives analysed exceeded the limit. At lower limits, significantly more banks would be affected, namely 290 (368) savings banks and 104 (276) credit cooperatives at a large exposure limit of 50 % (25 %). There are considerable differences across the German federal states in such cases, too. ↘ CHART 75, RIGHT

544. If, therefore, one seeks to dissolve the sovereign-bank nexus by removing the privileges of banks' sovereign exposures, the exposures to **subordinated government levels** also play an important role. Even if German public banks are obliged to fulfil their public mandate, this must not threaten financial stability. Thus a **reduction in exposures towards governments** is necessary.

545. There are signs in the European debate, however, that the **removal of regulatory privileges** in isolation is **meeting with political resistance**. At the same time, a proposal for the creation of a new safe European securities class, European Safe Bonds (**ESBies**), has garnered support, accompanied by the removal of regulatory privileges. This proposal is in principle compatible with the removal of privileges proposed by the German Council of Economic Experts. Nevertheless, the proposal of creating ESBies should only be considered if implicit liability risks can be limited. ↘ BOX 17 The creation of ESBies without a simultaneous removal of regulatory privileges is to be rejected.

↘ BOX 17

Creation of safe assets with European Safe Bonds (ESBies)

A number of economists have noted an increasing **lack of safe assets** in recent years, which is said to be reflected in declining real interest rates and is named as one of the causes for the lacklustre growth of the global economy and the euro area (Brunnermeier et al., 2011; Caballero and Farhi, 2014). It is argued that the demand for safe assets has risen as a result of greater international reserve holdings, regulatory requirements and demographic developments, while supply has actually declined – not least due to the global financial and euro area crises.

Safe assets are characterised by very low default probabilities and high liquidity. This is particularly true for government bonds, from countries such as the United States, Switzerland and Germany. These countries benefit from a **safe haven premium**. The long-term cost savings for US Treasuries is estimated at 73 basis points (Krishnamurthy and Vissing-Jorgensen, 2012). The notion "safe" refers to the probability of nominal redemption, which can always be ensured if the central bank monetises government debt. As this is not possible to an unlimited extent without doing damage to a central bank's credibility, a country's fiscal capacity actually limits the creation of safe assets. This implies that more public debt will not always raise the supply of safe assets (Schuknecht, 2016).

Private securities with no government guarantee can hardly offer a degree of safety comparable to government securities. In times of crisis, private securities may abruptly lose their status as safe assets due to their vulnerability to crises of confidence. When safe assets are in short supply, they may, however, serve as an (imperfect) substitute (for instance, in the form of senior tranches of securitisations).

Although the euro area has a single currency, it offers **no safe European security**. Instead, regulators treat all bonds issued by member state governments as safe, although this is incompatible with

Maastricht Treaty rules, particularly the no-bailout clause. Some experts regard this lack of a safe security as a major weakness in the euro area architecture. They believe it results in a vicious circle between governments and banks, as well as destabilising capital flows between member states, particularly in times of crisis (Brunnermeier et al., 2011).

The creation of **European Safe Bonds** (**ESBies**) is proposed as a solution to this problem. The bonds would constitute a new safe euro area security class and would at the same time help solving the problem of regulatory privileges of sovereign bonds (Brunnermeier et al., 2011, 2016; cf. Corsetti et al., 2015, 2016). The proposal is based on two main principles: **diversification** and **tranching**. A basket of government bonds of euro area member states with proportions based, for instance, on the member states' GDP, would be divided into two tranches. The **senior tranche** (**ESBies**) would have the highest seniority and carry minimal default risk, while the **junior tranche** (**European Junior Bonds**) would absorb the first X % of losses. X must be determined in a way that ensures both minimal default risk of the senior tranche and a sufficiently large supply of safe securities (cf. Brunnermeier et al., 2016, for sample simulations).

For ESBies to be attractive, their introduction must be accompanied by a **removal of regulatory privileges for government bonds**, for example by introducing large exposure limits and risk-adequate capital requirements. ESBies would not be subject to regulatory requirements and would be granted preferential treatment in ECB refinancing operations The junior tranches, in contrast, would be subject to normal regulation in accordance with their risk. While the original proposal called for issuance via a government agency, the most recent proposal suggests that the government should only be responsible for determining the offering terms and conditions, with the issuance being left to market players.

The main advantage of ESBies is that they would create a safe European security class while simultaneously **maintaining market discipline** and **without an explicit mutualisation of risks**. As the marginal government bond would still have to be placed in the market given appropriate restrictions of the ESBies supply, pricing would be responsive to risk. The proposal, therefore, differs fundamentally from the introduction of Eurobonds, for which there would be joint liability of member states. Ideally, in the event of a crisis, capital would no longer flow into individual member states regarded as safe, but into the safe tranche, which could prevent a sudden stop in individual member states.

Introducing ESBies would nonetheless bear risks, which would have to be limited by an appropriate design. **Implicit liability risks**, in particular, would have to be ruled out. This favours the **private issuance** of the securities, as a public institution would be under greater pressure to accept liability risks in the event of crisis. Moreover, the **criteria for the ESBies' design** would have to be largely independent of short-term political interests. In particular, government bond risk weights should be strictly applied based on a transparent and non-manipulable criterion. The weights should not be linked to actual debt levels, as this would create incentives to incur debt. The tranching limit should be determined using a formula that is based mainly on the risk of the senior tranche. The possibility of a short-term discretionary change in terms would have to be ruled out. To effectively loosen the ties between governments and banks, **banks would have to be excluded from holding junior tranches**.

For Germany, the introduction of ESBies could potentially mean a **reduction in the safe haven premium**. This comes at the advantage of a **potentially more stable euro area**. However, it remains unclear whether the introduction of ESBies can actually achieve the intended aims. The main questions are whether the junior tranches could still attract buyers in times of crisis and whether the issuance of ESBies would still be possible then. The possibility of the ECB believing it necessary to buy junior tranches itself cannot be ruled out. It is consequently unlikely that market discipline will be fully restored. The euro area's ability to create safe assets ultimately depends to a large extent on fiscal capacity. Securitisation structures can only redistribute the risk not reduce it, which is why the **continuation of the consolidation process** is essential. This would simultaneously increase the volume of safe assets.

2. Prerequisites for common deposit insurance not yet met

546. As a further instrument to reduce the sovereign-bank nexus, the European Commission proposes a **European Deposit Insurance Scheme** (EDIS) as a **third pillar of the Banking Union** (European Commission, 2015). This would shift central powers to protect bank deposits to European level, supplementing the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM).

There are two other **specific proposals** ↘ BOX 18, in addition to the European Commission's specific EDIS legislative proposal: a mandatory lending scheme among national deposit guarantee schemes (Council of the European Union, 2016b) and a European reinsurance scheme (Gros, 2013). The proposals differ in the **extent** to which risks are covered jointly across Europe and the degree of **centralisation** of governance structures. The Commission's proposal includes the highest degree of **mutualisation and centralisation** and the Council of Ministers' the least. The proposal by Gros (2013) lies in between. Gros (2013), in his reference to the European Stability Mechanism (ESM), is the only one to address the issue of a **backstop**, which might be needed if banks' contributions were insufficient.

547. The primary function of deposit guarantee schemes is to ensure **financial stability**. Guaranteeing reimbursement of deposits prevents bank customers from withdrawing their deposits should doubts arise regarding the soundness of a bank. This stabilising effect depends primarily on bank customers' confidence in the deposit guarantee scheme. As major compensation risks cannot be borne exclusively by the banking sector, an **implicit promise by the government** to shore up statutory deposit guarantee schemes is assumed (implicit backstop).

Moreover, in its function as **lender of last resort**, the central bank plays an important role in stabilising the deposit guarantee scheme. Should, in the course of a systemic banking crisis, panic-like bank runs occur that hit even healthy banks, only the central bank ultimately has the liquidity needed to restore confidence in the banking sector (Bordo, 1990).

548. Advocates of a common European deposit guarantee scheme emphasise the **diversification advantages**, as compensation risks can be better borne within the European banking sector as a whole. A European scheme could shore up individual major banks under strain or alleviate local banking crises that purely national guarantee schemes are unable to cope with and that result in government intervention. This would be a further step in loosening the **ties between governments and banks** (Goyal et al., 2013; IMF, 2013b). Decoupling national deposit guarantee schemes from member states' credit standing would also result in a convergence of deposit rates within the Banking Union and thus reduce **competitive disadvantages** of banks in less creditworthy countries.

↘ BOX 18

Proposals for a common deposit guarantee scheme

The proposals for a common deposit guarantee scheme are based on the national Deposit Guarantee Schemes (DGS). These are governed by Directive 2014/49/EU (DGS Directive), which was transposed into national law in July 2015 (Deutsche Bundesbank, 2015). The directive builds on the idea of improved consumer protection and greater harmonisation. It establishes a binding framework providing for uniform legal protection to deposits of €100,000 per depositor and bank. It also stipulates a uniform target level for the national DGS of 0.8 % of covered deposits, which must be achieved through risk-adjusted contributions by banks within ten years. Moreover, banks may be required to make special contributions if available DGS funds are insufficient. There is no explicit fiscal backstop. By contrast, fiscal backstops have been set up in Canada and the United States (IMF, 2013a). Those deposit guarantee schemes can borrow up to Can$ 20 billion (CDIC, 2016) or US$ 500 billion (FDIC, 2009) from their governments. This corresponds to around 1.0 % or 2.8 % of respective GDP.

In proposing **EDIS**, the European Commission aims to have a common deposit guarantee scheme for all banks under common supervision through the Single Supervisory Mechanism (SSM) by 2024. It would be managed by the Single Resolution Board (SRB) in collaboration with the national DGS. The target size of the common deposit insurance fund (Deposit Insurance Fund, DIF) corresponds to the total national target amounts in accordance with the DGS Directive. As the DIF's financial strength is based solely on banks' contributions, depositors may indeed have doubts as to the safety of their deposits in the event of a systemic crisis threat. At present, extensive implicit government guarantees can be assumed for domestic DGS. It is hardly possible to predict the expectations depositors, financial markets and politicians would have regarding the protection to be afforded by the common scheme.

The Council of the European Union is discussing **mandatory lending between national deposit guarantee schemes** as a counter-proposal to a fully mutualised deposit guarantee scheme (Council of the European Union, 2016). This would mean that a national DGS could borrow from other national DGSs if its funds were insufficient in the event of a bank failure. If the loans were to be repaid in full, the degree of mutualisation would be lower than under the EDIS. The lending systems would bear the default risk. It is a likely assumption that a mutual lending mechanism would largely maintain the current decentralised governance structures. The backstop issue was left open. Implicit guarantees for the domestic DGS would likely remain, with no strong expectations arising of extensive common coverage for the individual DGS.

The proposal made by Gros (2013) for a mandatory **European reinsurance scheme** lies somewhere between these two positions. It calls for a portion of the contributions to the national DGS to flow into a pooled fund. This would pay compensation to depositors if national funds' payments exceed certain threshold values determined ex ante. However, the national DGS should be able to cover individual compensation cases of banks operating on a purely national level. The reinsurance fund would be established under a newly created European institution that is as independent as possible. According to Gros (2013), such a scheme could even guarantee depositors' compensation in a systemic crisis in a member state the size of Spain. For larger crises, such as systemic crises in major member states, he proposes resorting to the ESM as a backstop.

549. It is misleading when proponents argue that a common deposit guarantee scheme is necessary to align **liability and control** (ECB, 2016c). On the basis of this argument, decisions taken in banking supervision and resolution at European-level could burden national deposit guarantee schemes.

The German Council of Economic Experts, on the contrary, emphasises that, in the Banking Union, member states have a significant impact on the risks of national banking sectors through their economic and fiscal policies (GCEE Annual Report 2014 items 349 ff.; Deutsche Bundesbank, 2014). For example, member states could amend the foreclosure framework after the fact. Default risk would increase if it became difficult for lending banks to liquidate real estate collateral. A poorly designed common deposit guarantee scheme would thus create **misaligned incentives for member states** to shift risk to European level, resulting in a clear violation of the principle of unity of liability and control.

550. The political debate, which **has completely neglected the aspect of fiscal backstops**, therefore falls short. It cannot be ruled out that expectations of a common protection mechanism may arise. In the event of a systemic crisis threat, member states would no longer be able to counteract such expectations without running the risk of triggering a bank run. If the question of protection is not politically addressed until a systemic crisis occurs, then considerable **uncertainty** will arise – just when depositor confidence in the safety of deposits is particularly important. The risk of a run on banks would increase.

551. It would be careless to establish a common scheme without at the same time clarifying the issue of how the promise of deposit protection can remain credible in the event that the common scheme itself is excessively strained. Rather, the member states should make **explicit agreements on backstops**, which reduce uncertainty in a systemic crisis. Agreements must be structured in a way that minimises incentives to deviate from the agreed terms in times of crisis, and does not encourage high expectations of an extensive common backstop.

552. Measures must also be taken to combat potential misaligned incentives for member states resulting from a common bank-financed guarantee fund. Thus a **portion of the compensation costs should be borne exclusively at national level**. For example, payouts of the fund could be borne at a proportionately higher rate by banks of the member state in which the failed bank or subsidiary is domiciled. This can be achieved by having banks in such state pay higher premiums to replenish the common fund. A reinsurance scheme as Gros proposed (2013) could be considered as an alternative. Sanctions could also be implemented to reduce misaligned incentives. A member state could be fined if it implements political measures that significantly increase risk for the common system. There needs to be the option of **excluding** such a member state from the **common scheme**, as a last resort.

553. Last but not least, the introduction of a common deposit guarantee scheme should be subject to certain **prerequisites**. Firstly, **already recognized risks** should be **removed** from banks' balance sheets prior to joining the common scheme. Banks need to be sufficiently capitalised, particularly in non-risk-weighted terms. ↘ ITEMS 478 FF Moreover, bank balance sheets should be cleaned up in member states with high levels of non-performing loans. ↘ ITEMS 514 FF Ultimately, a portion of the compensation costs can only be credibly borne at national level if there is fiscal room for manoeuvre. This requires continued budget consolidation. Secondly, **effective supervision and resolution at Europe-**

an level must be ensured. The Single Resolution Mechanism remains under construction at this time and there are still open questions regarding the credibility of bail-in. ↘ ITEMS 524 FF Thirdly, the direct influence of sovereign risks on banks should be mitigated by **removing the privileges** of sovereign exposures (Annual Economic Report 2015 items 52 ff.). ↘ ITEMS 537 FF.

554. In addition, further **harmonisation** of legal areas relevant to the banking system would be helpful. These include insolvency and foreclosure law. However, it is doubtful that comprehensive harmonisation can be achieved in all relevant areas. As the legal systems have developed nationally, harmonisation may result in changes that are politically undesirable and would not suit national specificities. Moreover, it will always be possible for sovereign states to significantly weaken banks' positions by ex-post legislative amendments. For these reasons, it seems all the more important to have effective sanction options that deter policymakers from undertaking individual discretionary measures to the disadvantage of the banks.

VI. GUIDELINES FOR A MORE STABLE FINANCIAL SYSTEM

555. Despite far-reaching reforms of financial market regulation, the European banking system is unstable and not sufficiently resilient. The low interest rate environment is putting pressure on profitability and makes it hard to accumulate capital. At the same time, many banks are suffering from high levels of non-performing loans. Even relatively small shocks cause considerable turbulence on financial markets, which underscores the financial system's vulnerability. The following **guidelines for a more stable financial system** in Europe have been developed based on the analysis of the current situation:

- The capitalisation of European banks should be further strengthened, particularly by **increasing unweighted capital requirements and following a macroprudential approach**, especially through more stringent requirements for systemically important banks. Restrictions on profit distribution should be consistently applied to undercapitalised banks.
- The problem of **non-performing loans** needs to be **quickly** addressed to prevent a zombification of the European economy and to reduce uncertainty in the banking system. A framework for a functioning European market for non-performing loans needs to be created.
- **Weak banks** should **exit the market** if they are not viable. The **credibility of the bail-in regime** should be reinforced by raising hurdles for making use of exceptions.
- Subordinated debt and hybrid capital are no substitute for equity. They could **exacerbate crises** and thus reduce the credibility of the bail-in regime.

- **Dissolving the sovereign-bank nexus** continues to be highly important. The main element is the **removal of the privileges** of sovereign exposures in regulation. The soundness of banks and governments plays an important role as well.
- A **common European deposit guarantee scheme** is not a viable option until fundamental prerequisites have been met. Moreover, the issue of national backstops for the common deposit guarantee scheme must be clarified in advance of a potential entry into force.

556. Politicians should **not yield to banks' pressure** to loosen new regulation or not to tighten it any further, if this is contrary to maintaining the stability of the financial system. Regulators should aim to **considerably simplify regulation** instead of further increasing complexity and cost. Robust mechanisms should take precedence over increasingly complex regulation.

APPENDIX: FACTORS INFLUENCING THE SOVEREIGN-BANK NEXUS

557. The study by Schnabel and Schüwer (2016) examines the factors influencing the sovereign-bank nexus in the euro area. The study is based on the EBA stress test data and looks at 31 major euro area banks during the period 2010-2015. Using a fixed effects model, the sovereign-bank nexus is estimated as the **elasticity of bank CDS spread relative to country CDS spreads**. Including interaction terms allows for an examination of which bank- and country-specific factors correlate with the elasticity. This yields the following estimation model:

$$\ln(bankCDS_{ijt}) = \beta_0 + \delta_j + \tau_y + \beta_1 \cdot \ln(countryCDS_{jt}) + \beta_2 \cdot Variable_{ijt} + \beta_3 \cdot \ln(countryCDS_{jt}) \cdot Variable_{ijt} + \epsilon_{ijt},$$

The δ_j coefficients represent country fixed effects and the τ_y coefficients yearly fixed effects. The following interaction variables are used:

- **home bias** of a bank's domestic sovereign exposures compared to a portfolio whose share of domestic sovereign exposures corresponds to the respective country's share of GDP;
- total sovereign exposure relative to the bank's capital;
- tier 1 capital ratio;
- the home country's debt ratio;
- the home country's governance quality as measured by the "government effectiveness" indicator provided by the World Bank.

558. The β_1 coefficient represents the elasticity of the bank CDS spread relative to the country CDS spread if the value of the interaction variable under examination is

zero. As regards the home bias, this corresponds to a portfolio of sovereign exposures diversified by GDP share, and for the other variables to the sample mean. The β_3 coefficient shows the influence of the respective variable on the elasticity.

The regression excluding additional variables yields an average elasticity of 0.52 (column 1 in ↘ TABLE 26). An increase in the country CDS spread by one percent is thus accompanied by an increase in the bank CDS spread by 0.52 %. In column 2, the coefficient of the interaction term indicates a markedly positive correlation between bank home bias and the elasticity. By contrast, increasing total sovereign exposures here actually has a negative (although insignificant) correlation with the elasticity if home bias is controlled for. A higher tier 1 capital ratio and better governance quality tend to lower the elasticity, while a higher debt ratio raises it. Notwithstanding the above, the interaction effect of home bias is always statistically significant. The results thus underscore the **major importance of home bias to the sovereign-bank nexus**. The soundness of banks and governments plays an important role as well.

↘ TABLE 26

Factors influencing the sovereign-bank nexus[1]

	(1)	(2)	(3)	(4)	(5)
Dependent variable: log (bank CDS)					
log (country CDS)	0.5245 ***	0.3318 ***	0.3951 ***	0.4261 ***	0.4218 ***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Home bias[2]		0.3779 ***	0.3320 **	0.3775 **	0.3537 **
		(0.0090)	(0.0249)	(0.0111)	(0.0176)
Total sovereign exposures to equity		0.0306	0.0103	0.0395	0.0365
		(0.3119)	(0.7152)	(0.1710)	(0.2325)
Tier 1 capital ratio			–5.0207 ***		
			(0.0081)		
Debt-to-GDP ratio				–1.1619 ***	
				(0.0001)	
Indicator „government effectiveness"[3]					0.1178
					(0.6020)
Interactions of log (country CDS) with …					
Home bias[2]		0.3226 ***	0.2340 **	0.2406 *	0.2026 *
		(0.0060)	(0.0251)	(0.0521)	(0.0888)
Total sovereign exposures to equity		–0.0218	–0.0142	–0.0118	–0.0148
		(0.1722)	(0.3544)	(0.4341)	(0.3462)
Tier 1 capital ratio			–1.3853 *		
			(0.0953)		
Debt-to-GDP ratio				0.3053 **	
				(0.0324)	
Indicator „government effectiveness"[3]					–0.3169 ***
					(0.0001)
Constant	4.8865 ***	4.6780 ***	4.5617 ***	4.5711 ***	4.6208 ***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Year fixed effects	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes
Number of banks	31	31	31	31	31
Number of observations	45,674	45,674	45,674	45,674	45,674
Adj. R^2	0.7556	0.7837	0.7945	0.7951	0.7982

1 – Analysis based on 31 banks from Austria, Belgium, Germany, France, Ireland, Italy, Netherlands, Portugal, Spain during the sample period 2010 to 2015. 2 – Deviation of banks' share of domestic sovereign exposure with respect to the overall sovereign exposure from the share of the domestic GDP with respect to the total GDP of all included countries. 3 – Source: Worldwide Governance Indicators (WGI), project of Worldbank: „Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies".

Clustering of standard errors on bank level. p-values in brackets.
The ***, ** and * stand for signifcant coefficients at the 1%, 5%, and 10% levels, respectively.

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