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26 October 2014

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Report

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# Results of 2014 EU-wide stress test

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Aggregate results

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# Abbreviations

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<b>AfS</b>	Available for Sale (accounting portfolio)
<b>AQR</b>	Asset quality review
<b>bps</b>	Basis points
<b>CA</b>	Competent authority
<b>CEE</b>	Central and Eastern Europe
<b>CET1</b>	Common Equity Tier 1
<b>CRR/CRD IV</b>	Regulation (EU) No 575/2013 and Directive 2013/36/EU
<b>CT1</b>	Core Tier 1
<b>EBA</b>	European Banking Authority
<b>ECB</b>	European Central Bank
<b>EEA</b>	European Economic Area
<b>ESRB</b>	European Systemic Risk Board
<b>EU</b>	European Union
<b>HfT</b>	Held for Trading (accounting portfolio)
<b>HtM</b>	Held till Maturity (accounting portfolio)
<b>IRB</b>	Internal Ratings Based
<b>NII</b>	Net interest income
<b>NTI</b>	Net trading income
<b>P&amp;L</b>	Profit and loss
<b>pp</b>	Percentage points
<b>RE</b>	Real estate
<b>SL</b>	Specialised lending
<b>SME</b>	Small and medium enterprises

## Executive Summary

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The objective of the EU-wide stress test is to assess the resilience of banks in the EU to adverse economic developments, helping supervisors assess individual banks, contributing to understanding systemic risk in the EU and fostering market discipline. The stress test is based on common macroeconomic scenarios and a consistent methodology and it is accompanied by unparalleled transparency into banks' balance sheets and the potential impact of severe but plausible shocks on them.

The 2014 stress test includes 123 banking groups across the EU and including Norway with a total of EUR 28,000BN of assets covering more than 70% of total EU banking assets. The EU-wide stress test is coordinated by the EBA across the EU and is carried out in cooperation with the ESRB, the European Commission, the ECB<sup>1</sup> as well as competent authorities from all relevant national jurisdictions. The EBA developed the common methodology and ensured a consistent and comprehensive disclosure of results; the ESRB and the European Commission provided the underlying macroeconomic scenarios. Competent authorities including the ECB were responsible for the quality assurance of banks' results, as well as for the asset quality reviews informing the starting point of the stress test. They are also responsible for deciding on follow up actions in the supervisory reaction function.

The impact of the stress test is assessed in terms of the transitional CRR/CRD IV Common Equity Tier 1 ratio for which a 5.5% and 8.0% hurdle rate are defined for the adverse and the baseline scenario respectively. Whilst the definition of capital varies somewhat depending on national transitional rules, the EBA has ensured all jurisdictions apply the same rules for unrealised gains/losses on sovereign exposures and has provided full disclosure of the consistently defined fully implemented capital ratios under CRR/CRD IV (see section 2.2.3).

The weighted average Common Equity Tier 1 Capital ratio as of end 2013 is 11.5%. After a reduction of 40bps due to the asset quality review, primarily in SSM countries, the starting capital ratio for the stress test is 11.1% Common Equity Tier 1 Capital. In the adverse scenario the projected aggregate Common Equity Tier 1 ratio falls by approximately 260bps. This corresponds to a total capital depletion of EUR 261BN over the three years of the exercise including the impact of total risk exposure amount (EUR 67BN), after which the aggregate EU Common Equity Tier 1 ratio is at 8.5% (7.6% on a fully implemented CRR/CRD IV basis). The main drivers for this impact are credit losses (-440bps impact on CET1 Capital ratio) and an increase in total risk exposure amount (risk weighted assets) with an impact of -110bps on the CET1 Capital ratio. This more than offsets the positive net effect on capital due to operating profit before impairments (+320bps impact on CET1 Capital ratio), which are constrained by the methodology and scenario, with net

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<sup>1</sup> The ECB's comprehensive assessment included selected subsidiaries. Thus sample and aggregate numbers reported by the ECB and the EBA are not necessarily the same. However, the data reported for all individual banking groups in the EBA exercise are consistent with those reported by the ECB.

interest income falling 16%. 24 participating banks fall below the defined thresholds leading to an aggregate maximum capital shortfall of EUR 24.6BN. The additional capital raised in 2014 by banks with a shortfall reduces the capital needs for those banks to EUR 9.5BN and the number of banks with a shortfall to 14.

This report summarises aggregate results of the exercise. The annex also contains the resulting capital ratios on a bank-by-bank basis. In addition to this report, the EBA published granular data for each bank including detailed information on the starting point at the end of December 2013 as well as the impact on P&L and balance sheet on its website. More detailed information is also available in form of interactive tools on the EBA website.<sup>2</sup>

The supervisory reaction for individual banks based on these results is the responsibility of competent authorities. Supervisory actions will be communicated by each competent authority shortly after the publication of the stress test results.

Table 1: Overview on key figures for the 2014 EU-wide stress test

<b>Sample</b>	<ul style="list-style-type: none"> <li>▪ 123 banks</li> <li>▪ EUR 28,000BN of assets</li> <li>▪ Approximately 70% of the EU banking sector</li> </ul>
<b>Starting point</b>	<ul style="list-style-type: none"> <li>▪ Capital strengthening of 9.2% to 11.6% CT1 from 2011 to 2013 for the major EU banks</li> <li>▪ Starting CET1 Capital ratio: 11.5%</li> <li>▪ AQR adjusted CET1 starting point: 11.1%</li> </ul>
<b>Impact</b>	<ul style="list-style-type: none"> <li>▪ Combined impact of stress test and AQR: 300bps</li> <li>▪ Impact of stress test: 260bps</li> <li>▪ Main driver of the impact: -440bps for credit losses</li> </ul>
<b>Shortfall</b>	<ul style="list-style-type: none"> <li>▪ Threshold of 5.5% CET1 in the adverse and 8.0% in the baseline scenario</li> <li>▪ Banks failing the stress test: 24</li> <li>▪ Maximum shortfall: EUR 24.6BN</li> <li>▪ Shortfall under the adverse 2016: EUR 24.2BN</li> <li>▪ Shortfall after capital raising: EUR 9.5BN</li> </ul>
<b>Transparency</b>	<ul style="list-style-type: none"> <li>▪ Up to 12,000 data points per bank</li> <li>▪ Capital composition and fully loaded ratio</li> <li>▪ Detailed exposure data</li> </ul>

<sup>2</sup> <http://www.eba.europa.eu/risk-analysis-and-data/eu-wide-stress-testing/2014>



# 1. Objectives of this document

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The objective of this document is to summarise the main results of the 2014 EU-wide stress test. It describes the main methodological aspects as well as the governance of the stress test. The main results on an EU-level, and in some cases on a country level, are then described based on the stress test results submitted by banks. Details on methodology, templates and scenarios for the EU-wide stress test can be found in documents published on the EBA website.<sup>3</sup> Main results and starting point data of the stress test are published on a bank-by-bank level, in the form of an interactive tool and as a database on the EBA website. This document does not capture any information regarding the supervisory actions to be taken by competent authorities based on the outcome of the stress test for individual banks.

This report is provided for analytical and transparency purposes only and does not substitute the original PDF files published by the EBA which have been submitted and confirmed by the competent authorities. Cut-off date for the data: 25 October 2014 – 15:00 CET.

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<sup>3</sup> <http://www.eba.europa.eu/risk-analysis-and-data/eu-wide-stress-testing/2014>

## 2. Rationale, purpose and governance of the EU-wide stress test

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### 2.1 Purpose of the exercise

The EU-wide stress test is designed to provide supervisors, banks and other market participants with a common analytical framework to consistently compare and contrast the resilience of EU-banks under adverse market conditions across a sample of 123 banking groups from 22 countries.

The EBA provided competent authorities with a common set of tools, including a common methodology, an internally consistent but relevant scenario, and a set of templates to capture starting point data and stress test results to allow a rigorous assessment of banks' resilience under stress. The common methodology defines how banks should calculate the stress impact of the common scenario bottom-up and at the same time sets constraints for their calculation. Along with the templates, it also ensures that the stress test results can be effectively disseminated in a transparent and comparable fashion at an EU-level. The disclosure of granular data on a bank-by-bank level is meant to facilitate market discipline and also serves as a common ground on which competent authorities base their supervisory assessments of banks' resilience to relevant shocks, in order to identify appropriate mitigating actions.

The EU-wide stress test is focused on providing consistent transparency as a complement, not as a substitute, to the supervisory review and evaluation process<sup>4</sup> and other supervisory stress tests. Also, although significant work was carried out in the context of the stress test to challenge banks' results and ensure comparability across banks and countries, the stress test does not replace the supervisory review of banks' internal models for the calculation of capital requirements and complements the EBA supervisory benchmarking exercise for assessing possible discrepancies in the outcomes of banks' internal models.

#### Box 1: The suite of stress tests

There is a wide range of stress tests that are applicable in banking, which can be categorised into those carried out by firms, by supervisors and by macro-prudential authorities, since these differ by aim and usage of results. Region and sector-wide micro-prudential stress tests like the EU-wide stress test 2014 are not designed to replace other stress tests. Instead they are a complement which provides key information on a consistent basis across the single market and provide additional information as input and challenge to other stress tests. It should also be noted that the EU-wide stress test combines micro-prudential and macro-prudential aspects.

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<sup>4</sup> <http://www.eba.europa.eu/documents/10180/748829/EBA-CP-2014-14+%28CP+on+draft+SREP+Guidelines%29.pdf>

Figure 1: Stylised categorisation of stress tests by type, aim and use

	Type	Aim	Use	
<b>Firms</b>	Firms own stress testing { risk, portfolio or institution}	Risk management	Banks' risk management and planning	<b>Region-wide micro-prudential stress tests</b> <ul style="list-style-type: none"> <li>▪ Hybrid in methods and aims; multiple use</li> <li>▪ Either bottom up or top down</li> <li>▪ Focus on comparability</li> </ul>
<b>Supervisors</b>	Micro-prudential stress tests { risk, portfolio or institution}	Bank-by-bank information on risks and vulnerabilities	Supervisory risk analysis and action, early warning tools	
<b>Macro-prudential authorities</b>	System-wide macro-prudential stress tests {institution}	Aggregated information on systemic risks	Systemic stability, economic policy implications	

With respect to the 2011 EU-wide stress test, and cognisant of the significant capital strengthening carried out by EU banks the 2014 exercise was improved in a number of ways:

- A complete review and overhaul of the methodology was carried out. The review led, among other changes, to the definition of tighter constraints for banks' calculations in particular in form of defined caps and floors and prescribed fixed stress impacts for various risk types;
- The exercise was for the first time linked to an asset quality review in all EU-countries to ensure the validity and enhanced comparability of the starting point of the stress test;
- Competent authorities, including the ECB, have taken full responsibility for the quality assurance process including ensuring the validity of input data as well as checking the credibility of outcomes;
- The time horizon of the stress test was increased from two to three years;
- The hurdle rate was raised to 5.5% Common Equity Tier 1 ratio based on the CRR/CRD IV implementation (as against 5% Core Tier 1 ratio in 2011).

## 2.2 Summary of the main methodological aspects

### 2.2.1 Sample of banks

The EU-wide stress test exercise was carried out on a sample of 123 banking groups from 22 countries with a total of approximately EUR 28,000BN of assets as of end 2013, i.e. covering more

than 70% of total banking assets in the EU. The exercise was run at the highest level of consolidation where the scope of consolidation was the perimeter of the banking group as defined by the CRR/CRD IV. The full list of banks for the EU-wide stress test is reported in the Annex.<sup>5</sup>

The sample was selected to cover at least 50% of the national banking sector, directly or via subsidiaries of parent companies included in the sample, in each EU Member State and Norway, as expressed in terms of total consolidated assets as of end of 2013. Competent authorities including the ECB could expand the sample if they deemed this necessary.

The resulting sample constitutes a significant increase compared to the 2011 stress test exercise that was carried out on a sample of 91 banks. It should be noted that the sample for the EU-wide stress test exercise differs from the sample of the Comprehensive Assessment carried out by the ECB for two reasons:

- The EU-wide stress test was run for all EU-countries and not limited to the euro-zone.
- The EU-wide stress test was carried out for banks on the highest level of consolidation in the EU, so that subsidiaries of banks from other EU or non-EU countries and other entities were excluded from the sample.

For the same reasons or because of the inclusions of smaller banks, samples of national variants complementing the EU-wide stress test and published at a later stage may differ from the sample of the EU-wide exercise.

### **2.2.2 The static balance sheet assumption**

The EU-wide stress test was conducted based on the assumption of a static balance sheet. A zero growth assumption was applied for both the baseline as well as the adverse scenario. Assets and liabilities that mature within the time horizon of the exercise were assumed to be replaced with similar financial instruments in terms of type, credit quality and maturity as at the start of the exercise. No workout or replacement of defaulted assets was allowed in the exercise. In particular, no capital measures taken after the reference date 31/12/13 were to be considered. Furthermore, it was assumed in the exercise that banks would maintain the same business mix and model (geographical, product strategies and operations) throughout the time horizon. With respect to the P&L, revenue and cost, assumptions made by banks were to be made in line with the constraints of zero growth and a stable business mix.

Exemptions from the static balance sheet assumption were solely granted due the directions in mandatory restructuring plans that had been publicly announced before 31/12/2013. These restructuring plans needed to be formally agreed with the European Commission. 26 banks were exempted from the static balance sheet assumptions because of restructuring plans approved by the European Commission before this reference date. An additional 6 banks from Germany,

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<sup>5</sup> Source for aggregate sector data: ECB aggregate consolidated data of EU banks

Slovenia and Portugal abstained from applying for the exemption in spite of an approved restructuring plan.<sup>6</sup>

Banks that are subject to a restructuring plan were requested to align their projections under the baseline scenario with those foreseen in their plans. Under the adverse scenario, banks were expected to use more conservative projections in line with the adverse stress test scenario.

For a further group of 6 banks in the sample from Cyprus, Ireland and Greece restructuring plans were approved by the European commission after the end 2013 reference date.<sup>7</sup> To ensure a consistent application of the common methodology, but also to give competent authorities and market participants the full information to assess the results, these banks were allowed to submit stress test results based on the static as well as a dynamic balance sheet assumption. All information published for these banks is based on the static balance sheet assumption with the exception of one template<sup>8</sup> that discloses resulting capital ratios based on the dynamic balance sheet assumption. The Cypriot bank did not submit these additional results based on the dynamic balance sheet assumption.

Capital actions taken after the reference date as well as any losses realized in 2014 do not affect the stress test results. Major capital measures and losses between January and September 2014 are therefore disclosed on a separate template.<sup>9</sup>

### 2.2.3 Definition of capital

#### a. Transitional arrangements

The impact of the EU-wide stress test was assessed in terms of Common Equity Tier 1 Capital ratios. The definition of Common Equity Tier 1 that would legally apply at each point during the time-horizon of the stress test was used (i.e. CRR/CRD IV definition of capital with national transitional arrangements as per December 2013, December 2014, December 2015 and December 2016). The regulatory framework regarding capital requirements and risk exposure amount is similarly applied as of these dates. In particular, data provided as starting point 31/12/2013 was computed according to CRR/CRD IV requirements as of the first day of application of the new regulation, i.e. 01/01/2014.

Transitional arrangements were reported in line with the implemented national transition schedule to accurately reflect the legal position of every bank in each member state and to form a basis for supervisory action. So for example, the percentage of goodwill, holdings of financial institutions, defined pension fund assets, IRB shortfall, minority interests and deferred tax assets that are deducted from capital for the calculation of Common Equity Tier 1 Capital increases over

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<sup>6</sup> Bayerische Landesbank, HSH Nordbank AG, IKB Deutsche Industriebank AG, Nova Kreditna Banka Maribor d.d., Nova Ljubljanska banka d. d., Banco BPI

<sup>7</sup> Co-operative Central Bank Ltd, Alpha Bank, S.A., Eurobank Ergasias, S.A., National Bank of Greece, S.A., Piraeus Bank, S.A., Allied Irish Banks plc

<sup>8</sup> 36.TR\_Outcome Dynamic\_2 Calc

<sup>9</sup> 37.TR\_Capital Measures\_3Q2014

the years up to the full deduction prescribed in the CRR/CRD IV. However, the schedule for these increased deductions is based on the national transition schedule. The only exception from this rule concerns sovereign exposures held as Available for Sale. The CRR/CRD IV allows a discretion<sup>10</sup> on this aspect so that unrealised gains/losses on sovereign bonds in this category could be subject to a prudential filter which would avoid any impact on the banks capital position. For the purpose of the 2014 EU-wide stress test unrealised losses were deducted from capital in all banks based on a common set of transitional arrangements as set out in Part Ten, Title I of the CRR for unrealised losses, i.e. including 20% of unrealised losses in 2014, 40% in 2015 and 60% in 2016. This treatment applied not only to additional unrealized losses during the stress projection period but to total accumulated unrealized gains/losses, i.e. including those present at the starting point. This treatment was applied to sovereign exposures only, but not to other exposures in the Available-for-Sale portfolio. Across the EU around half of all sovereign bonds are held as Available for Sale. This exemption was applied given the importance of sovereign exposure and because the widening of credit spreads and a lack of confidence in public finances was identified as a core risk underlying the ESRB macroeconomic scenario.

#### b. Hurdle rates

For the purpose of the EU-wide stress test the following hurdle rates were applied as a minimum across all participating banks based on transitional Common Equity Tier 1 capital:

- The capital hurdle rate was set at 8.0% Common Equity Tier 1 ratio for the baseline scenario.
- The capital hurdle rate was set at 5.5% Common Equity Tier 1 ratio for the adverse scenario.

#### c. Transparency on the components of capital

It should be noted that the transition schedule for CRR/CRD IV requirements as described above differs among countries in the EU, some countries having opted for an early adoption of the fully loaded requirements. While the results of the stress test are assessed in terms of the national transitional Common Equity Tier 1 Capital ratio, information on relevant transitional adjustments are published on a bank-by-bank level to give full transparency.

Additional Tier 1 and Tier 2 instruments eligible as regulatory capital under the CRR provisions that convert into Common Equity Tier 1 or are written down upon a trigger event were reported as a separate item if the conversion trigger was above the bank's Common Equity Tier 1 ratio in the adverse scenario. However any potential conversion or write down is not included in the Common Equity Tier 1 ratios shown.

#### d. Disclosure of fully loaded CRR/CRD IV capital ratios

In addition, to further enhance comparability across countries, in particular in light of the differing transitional arrangements described above, a fully loaded Common Equity Tier 1 Capital ratio is

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<sup>10</sup> Regulation (EU) No 575/2013, Article 467.2 subparagraph 2 and 3 of CRR.

reported for 2016 under the baseline and the adverse scenario as a memo item and is published alongside the transitional capital ratios in the annex to this report. This ratio assumes a full implementation of CRR/CRD IV rules, i.e. without any transitional adjustments. In the case of sovereign exposure held as Available for Sale, and due to the aforementioned discretion allowed in Article 467.2 of the CRR, no common full implementation was feasible for the computation of the fully loaded Common Equity Tier 1 ratio. In order to achieve a consistent and common definition, the fully loaded Common Equity Tier 1 ratio reported in the context of the EU-wide stress test is based on the same phase-in schedule for sovereign gains/losses from the Available-for-Sale portfolio as described above, i.e. including 20% of unrealised gains/losses in 2014, 40% in 2015 and 60% in 2016.<sup>11</sup>

#### 2.2.4 Risk coverage

The EU-wide stress test was primarily focused on the assessment of the impact of risk drivers on the solvency of banks. Banks were required to stress test the following common set of risks:

- Credit risk;
- Market risk;
- Sovereign risk;
- Securitisation risk;
- Cost of funding and interest income.

Although the focus of the exercise remained on credit and market risk, banks were also requested to assess the impact on interest income, including the increase in the cost of funding, over the stress-test time horizon. Capital requirements for operational risk were also taken into account with operational risk costs to be included in P&L items, e.g. administrative and other operating expenses, other income and expenses, impairments, or as additional reserves. Realised conduct and litigation losses in 2014 were included in a bank-level disclosure template.<sup>12</sup> CAs assessed whether the projection of litigation and conduct cost was relevant for the stress test results of the corresponding banks also compared to existing provisions. In some cases this led to significant additional losses taken into account in the stress test. Given the solvency focus and the long-term horizon of the exercise, a liquidity stress was not included.

As part of the stress test exercise, banks had to assess the impact of the macroeconomic scenario (see annex) on these risk types. For example, the adverse scenario assumes a cumulative deviation of EU GDP from its baseline level by -7.0% in 2016 and an increase of EU unemployment relative to the baseline level by 2.9 percentage points in 2016, both of which together with

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<sup>11</sup> There may be other options within the CRR/CRD IV than the sovereign discretion noted, where countries take different approaches, such as significant investment deductions

<sup>12</sup> 37.TR\_Capital Measures\_3Q2014

decreasing real estate values lead to higher credit losses. At the same time higher interest rates and widening spreads have a market risk effect on bond holdings and lead to increasing funding costs which are only partly allowed to be passed through to new lending. In particular the latter constraint for the projection of cost of funding and net interest income was defined to avoid unduly favourable outcomes for banks. Based on the static balance sheet assumption heightened credit and market risk could not be mitigated by hypothetical management actions or portfolio assumptions like hedging, portfolio rebalancing or curing of defaulted loans.

## 2.3 Governance

The process for running the common EU-wide stress test involved close cooperation between the EBA, competent authorities from all relevant jurisdictions, the ECB the ESRB as well as the European Commission:

- The EBA was mainly responsible for the development of a common methodology and templates and hosted a central question and answer process, answering over 1000 questions, to facilitate the calculation of stress results by banks. The quality assurance process was the responsibility of competent authorities but the EBA assisted by providing sets of statistical benchmarks to all competent authorities as a tool to assess the banks' results. The EBA also acted as a data hub for the dissemination of results of the common exercise.
- Competent authorities, including the ECB, were responsible for conveying instructions on completing the exercise to banks and for receiving information directly from banks. Competent authorities were also responsible for the quality assurance process, i.e. for the assessment of banks' assumptions, data, estimates and results as well as the definition of additional data and qualitative information to be provided by banks as basis for the assessment. In addition, competent authorities were responsible for carrying out asset quality reviews ahead of the stress test and for joining-up the results of assets quality reviews with stress test results – changing if required the banks' starting position as well as the projection over the full time horizon of the stress test. Competent authorities are responsible for defining and the communication of all follow up actions that will form the supervisory reaction function.
- The underlying adverse and baseline scenarios of the EU-wide stress test were provided by the ESRB and the European Commission respectively.



## Box 2: Integration of asset quality reviews and the stress test

As part of a continued effort to restore confidence in the EU banking sector, the EBA issued in October 2013 recommendations addressed to competent authorities requiring them to undertake asset quality reviews (AQRs) of asset classes considered to be high risk. The objective of the recommendations was to contribute to a more uniform approach in competent authorities' evaluations of banks' credit portfolios, including risk classification and provisioning, in order to support sufficiently prudent capital levels and provisions to cover the risks associated with these exposures.<sup>13</sup>

Asset quality reviews can have two effects on the stress test data. First, changes in assets classification and valuation can have an impact on the starting values of data used for the stress test e.g. changes in loan classification and provisioning can affect the starting capital ratio. Second, stress projection data can be affected. For example if the asset quality review leads to changes in the risk assessment or the share of defaulted exposure for a portfolio, projected credit risk losses for this portfolio may be affected, too. Stress test data published by the EBA and used in this report already includes both adjustments as carried out by competent authorities.<sup>14</sup>

Details regarding the details of the impact of asset quality reviews and their and their impact will be released by competent authorities as appropriate.<sup>15</sup>

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<sup>13</sup> EBA Recommendation on asset quality reviews EBA/REC/2013/04

<sup>14</sup> The results of the Polish banks in the EU-wide stress test exercise do not include AQR adjustments, due to late submission by the Polish Authorities who will provide further details at the Polish Financial Supervision Authority website.

<sup>15</sup> For details on the methodology applied by the ECB see e.g. <https://www.ecb.europa.eu/ssm/assessment/html/index.en.html>

## 3. Aggregate outcomes of the exercise

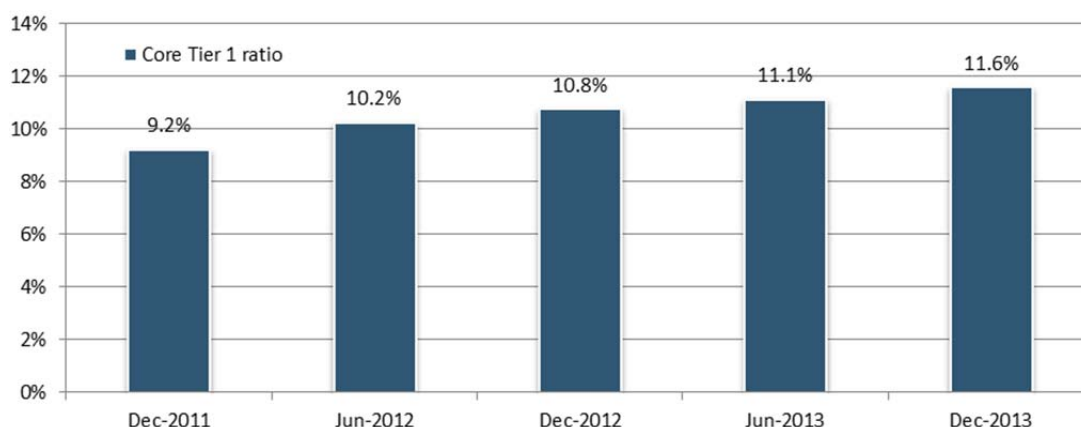
### 3.1 Summary

Overall the scenario tested under the 2014 EU-wide stress test saw EU banks experience EUR 261BN of capital depletion mostly caused by EUR 492BN of credit losses (-440bps impact on CET1 Capital ratio), which is only marginally offset by continued but diminished earnings. In the adverse scenario, the weighted average Common Equity Tier 1 ratio falls by 260 bps from 11.1% – post AQR – at the end of 2013 to 8.5% at the end of 2016. 24 participating banks fall below the capital threshold in the adverse scenario, leading to a maximum capital shortfall of EUR 24.6BN and a shortfall of EUR 24.2BN in the adverse scenario. The following will focus on the latter.

### 3.2 Banks' capital position ahead of the stress test

The efforts of EU-banks to improve their capital position already started in preparation of the 2011 EU-wide stress test exercise, which led to significant pre-emptive capital raisings. After the publication of results of the 2011 stress test, the subsequent EBA recapitalisation exercise and the EBA capital preservation recommendation resulted in a significant and permanent injection of capital. As a consequence, capital ratios rose significantly. Since December 2011 until December 2013 the Core Tier 1 capital ratio applying the EBA definition used during the recapitalisation exercise increased by over 200bps.<sup>16</sup> As a consequence the starting point for the 2014 stress test exercise has been strengthened relative to previous exercises.

Figure 2: Evolution of Core Tier 1 Capital ratios from 2011 stress test to December 2013 for major EU banks<sup>17</sup>



<sup>16</sup> 'Final report on the implementation of Capital Plans following the EBA's 2011 Recommendation on the creation of temporary capital buffers to restore market confidence'; EBA/REC/2011/1; see annex for details on the capital preservation recommendation

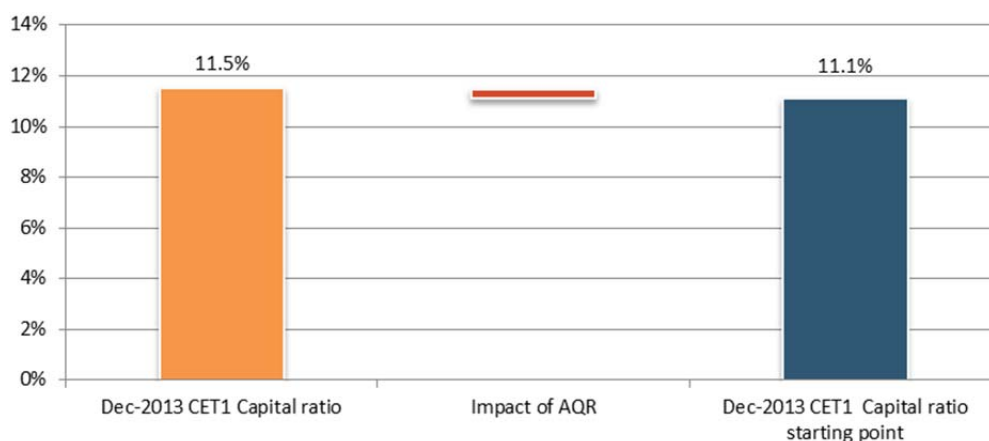
<sup>17</sup> Based on sample in EBA KRI database covering 90% of the assets in scope of the EU-wide stress test

### 3.3 Impact of the stress test on capital ratios

#### 3.3.1 Impact on Common Equity Tier 1 ratios

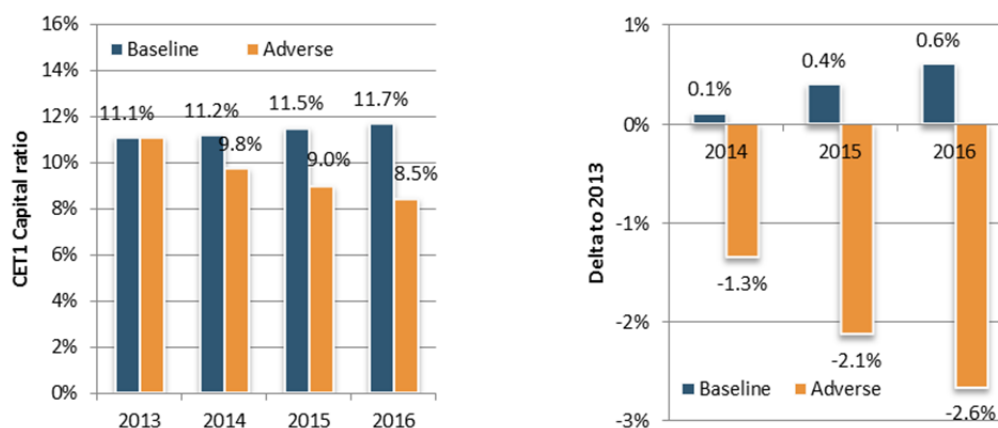
The aggregate weighted average Common Equity Tier 1 Capital ratio for the stress test sample in December 2013 is 11.5% and therefore well above regulatory minima and in line with international peers. Including the effect of the asset quality review, i.e. 40bps primarily in SSM countries, the Common Equity Tier 1 Capital ratio is 11.1% which is the starting point for the stress test. All following analyses in this report regarding the stress impact are computed relative to the Common Equity Tier 1 Capital post the asset quality review.

Figure 3: Impact of asset quality reviews on weighted average Common Equity Tier 1 Capital ratio for the starting point 2013



The aggregate Common Equity Tier 1 Capital ratio across the sample decreases by 260bps in the adverse scenario, from 11.1% in 2013 to 8.5% in 2016. The total impact on Common Equity Tier 1 ratio in the adverse scenario from 2013 to 2016 including the effect of the asset quality review is 300bps.

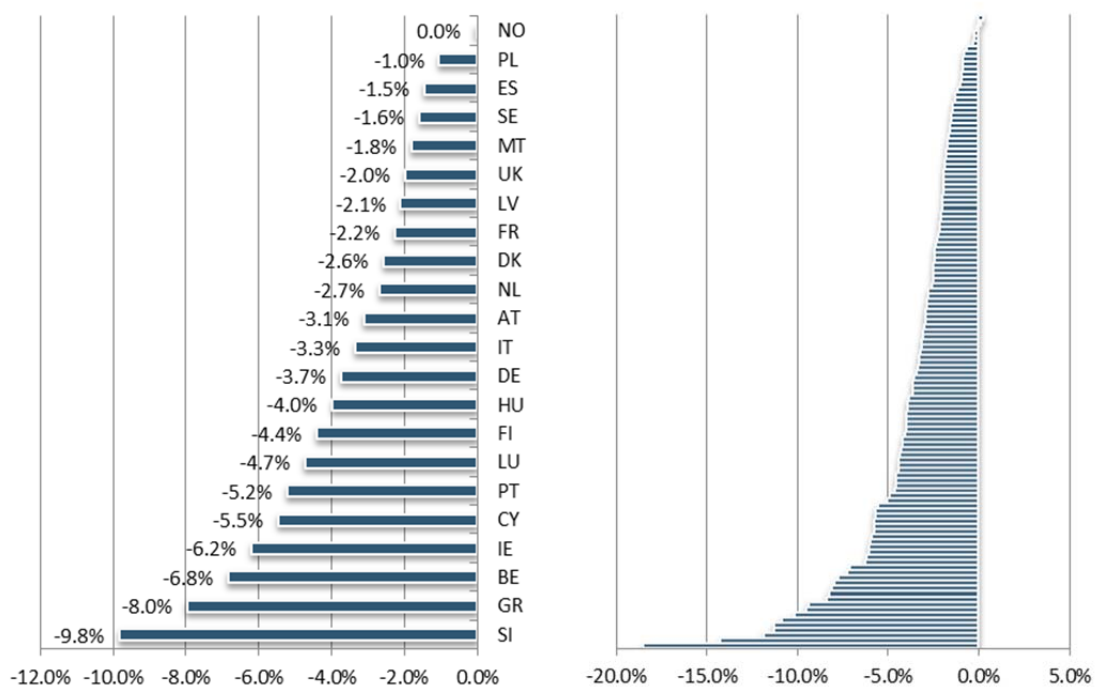
Figure 4: Evolution of aggregate Common Equity Tier 1 ratio and delta to starting point 2013



There is a significant dispersion regarding the impact across countries, with the decrease in Common Equity Tier 1 Capital ratio ranging from values close to zero to values above 500bps. Across the sample of banks the impact on the Common Equity Tier 1 Capital ratio is slightly positive for some outliers and goes up to values above 10,000bps in other cases. This may be the result of different drivers, including the characteristics of the scenario for different countries, the composition of banks' portfolios and their business mix as well as the characteristics of the quality assurance process.

It should also be noted that a number of banks are above but close to the capital threshold of 5.5%, but that following the significant strengthening of capital ratios in recent years, 56% of the banks in the sample show a CET1 ratio above 8% in the adverse scenario.

Figure 5: Impact on Common Equity Tier 1 ratio from 2013 to 2016 in the adverse scenario by country and for individual banks sorted by size of the impact<sup>18</sup>



<sup>18</sup> Impact relative to the 2013 starting point post asset quality review adjustments.

Figure 6: Number of banks by ranges of Common Equity Tier 1 Capital ratios 2013 and 2016 in the adverse scenario

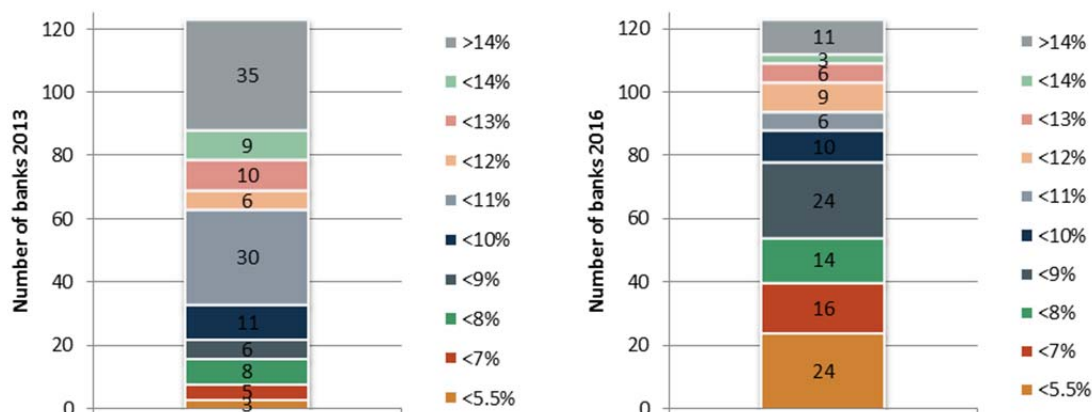
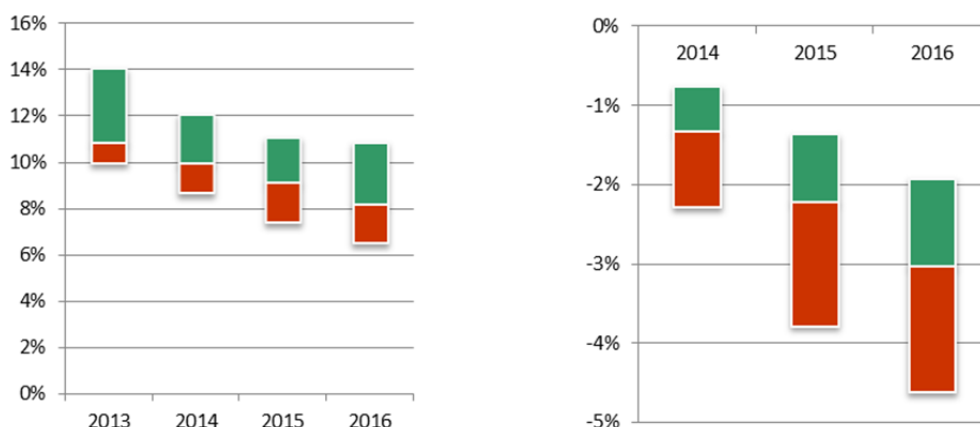


Figure 7: Median and interquartile range for Common Equity Tier 1 Capital ratio and change from 2013 to 2016 in the adverse scenario



### 3.3.2 Shortfall

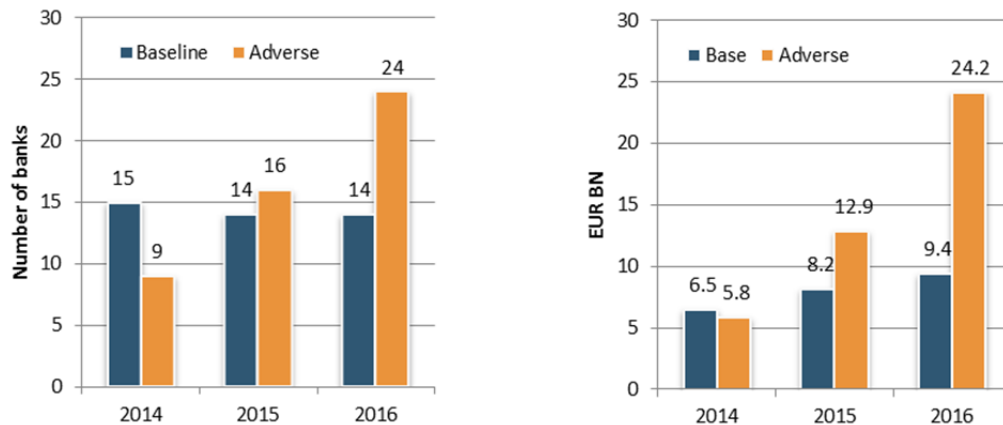
For the 2014 EU-wide stress a 5.5% and 8.0% hurdle rate are defined for the adverse and the baseline scenario respectively. In all, post the asset quality review, 16 banks experienced a shortfall in the baseline scenario against the 8% threshold, all but one of which reported a Common Equity Tier 1 Capital below the threshold in 2013. And in total, 24 banks experienced a shortfall in the adverse scenario, including the 16 with a shortfall in the baseline scenario.

All banks report the maximum shortfall in the 2016 leading to an aggregate shortfall of EUR 24.2BN in the adverse scenario and EUR 9.4BN in the baseline scenario.<sup>19</sup> Two banks report a

<sup>19</sup> Please refer to section 3.5.2 for information on the capital actions taken by these banks in 2014 reducing their shortfall.

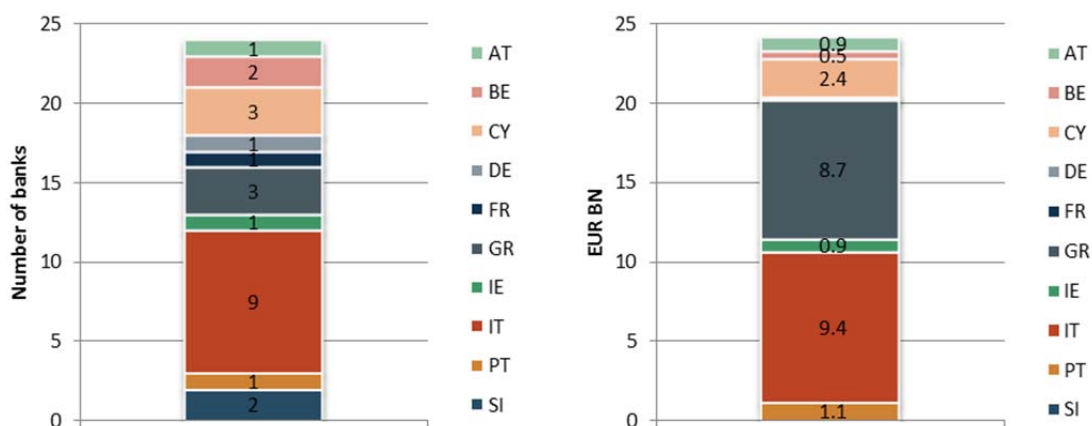
higher shortfall under the baseline scenario than under the adverse scenario so that the maximum shortfall across both scenarios is EUR 24.6BN for 24 banks. It should be noted that there is also a bank that reports a Common Equity Tier 1 Capital ratio below 8.0% in 2013 only which is not included these figures.<sup>20</sup>

Figure 8: Evolution of number of banks failing the stress test capital shortfall<sup>21</sup>



Out of the 24 banks with a shortfall under the adverse scenario, 9 banks with an aggregate shortfall of EUR 9.4BN are from Italy, 3 banks with EUR 8.7BN of aggregate shortfall are from Greece – based on the static balance sheet assumption – and another 3 banks with EUR 2.4BN of aggregate shortfall from Cyprus.

Figure 9: Number of banks failing the stress test and shortfall in the adverse scenario in 2016 by country<sup>21</sup>



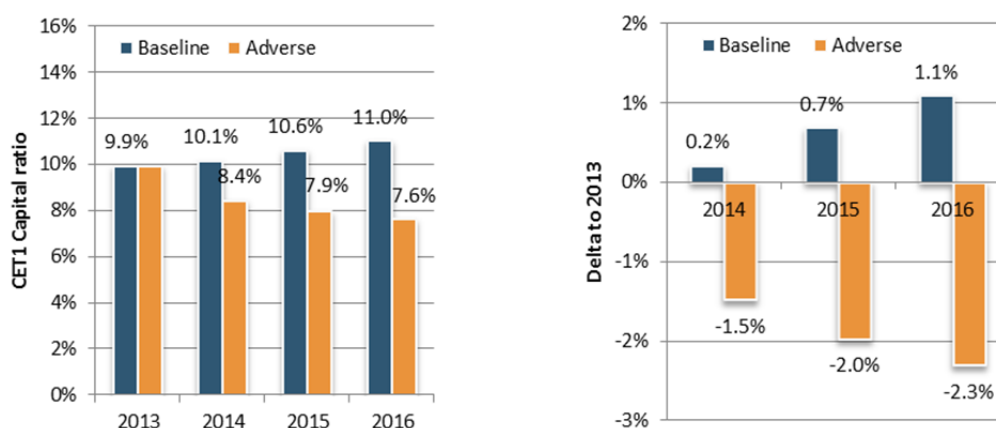
<sup>20</sup> Liberbank

<sup>21</sup> Two banks report maximum shortfall in the baseline scenario resulting in a total shortfall of EUR 24.6BN

### 3.3.3 Impact on fully loaded CRR/CRD IV Common Equity Tier 1 Capital ratios

The stress impact is calculated based on the transitional arrangements of CRR/CRD IV rules. On a fully loaded basis, projected capital ratios are significantly lower, albeit on average still above regulatory minima and with significant dispersion across countries. In the adverse scenario the fully loaded Common Equity Tier 1 Capital ratio<sup>22</sup> decreases from 9.9% in 2013 to 7.6% in 2016 with significant dispersion across countries. Differences across countries between the resulting 2016 capital ratios on a transitional and a fully loaded basis are largely due to stress test assumptions given national transitional arrangements. For countries with an early adoption of CRR/CRD IV requirements the ratios are similar or identical.

Figure 10: Evolution of aggregate fully loaded Common Equity Tier 1 ratio and delta to starting point 2013

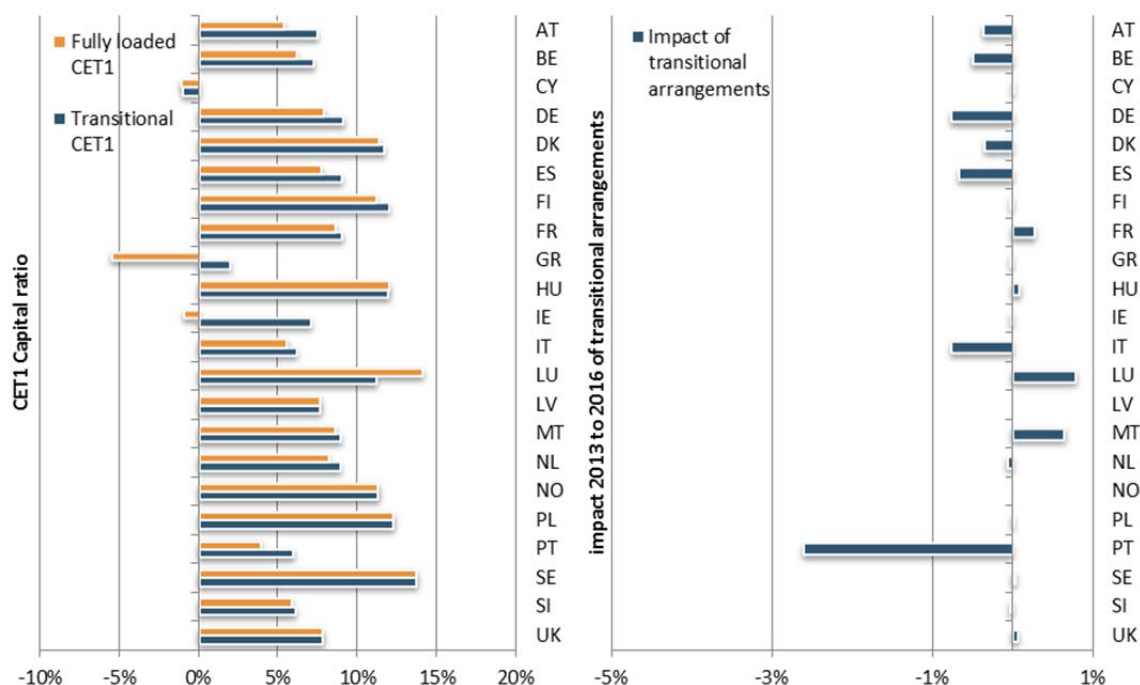


This is also visible from Figure 11. It shows, on the left-hand side, the 2016 adverse Common Equity Tier 1 Capital ratios on a transitional basis and on a fully loaded basis, i.e. the future impact up to the full implementation of the new rules. It also shows, on the right-hand side, the impact of the change in transitional adjustments from 2013 to 2016 on the transitional Common Equity Tier 1 Capital ratio. In some countries the transition towards CRR/CRD IV requirements has a positive impact on capital. This can for example be due to unrealised gains in the Available-for Sale portfolio, that that under national implementation had to be filtered out.

All results in the following sections of this report are based on the transitional Common Equity Tier 1 Capital definition.

<sup>22</sup> The fully loaded Common Equity Tier 1 ratio reported in the context of the EU-wide stress test is based on the same phase-in schedule for sovereign gains/losses from the Available-for-Sale portfolio as described in section 2.2.3, i.e. including 60% of unrealised gains/losses.

Figure 11: 2016 Common Equity Tier 1 ratios by country in the adverse scenario - transitional, fully loaded CRR/CRD IV and impact from 2013 to 2016 of transitional arrangements



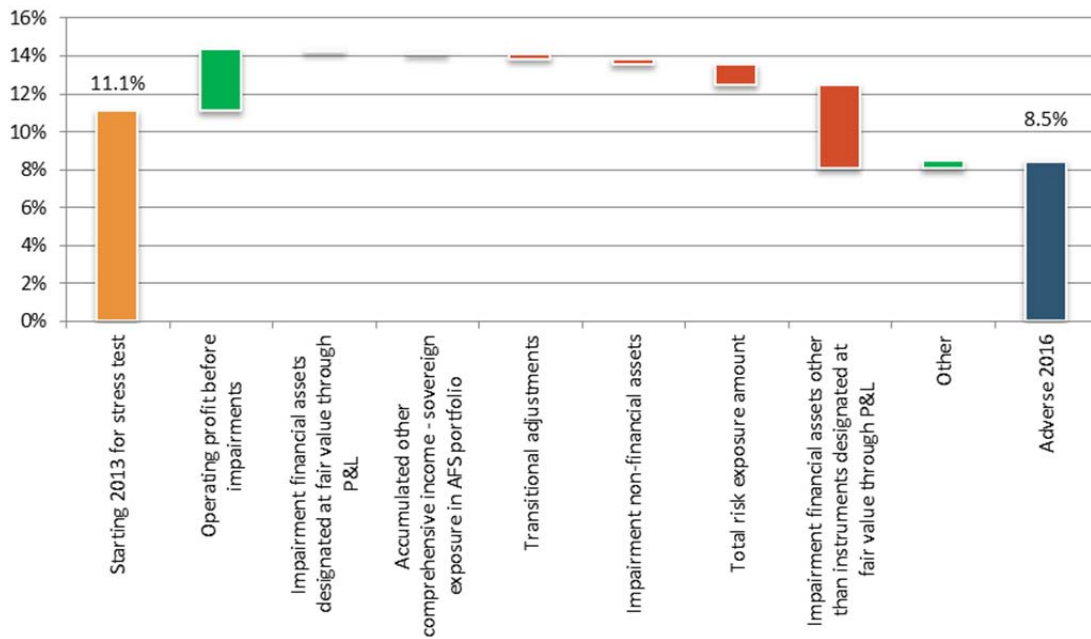
### 3.3.4 Main drivers of the impact

On the capital side by far the most important driver for the stress impact is given by credit risk losses, i.e. impairment of financial assets other than instruments designated at fair value through P&L gross of taxes (-440bps impact on CET1 Capital ratio). Another important driver is the increase of total risk exposure amount due to stressed risk parameters (-110bps impact on CET1 Capital ratio). On the other hand, a positive net effect on capital arises from operating profit before impairments gross of taxes (+320bps impact on CET1 Capital ratio). Net interest income is by far the largest component, albeit falling by 16% over the stress test. Another minor but still positive component of operating profit is net trading income, i.e. after the initial effect of the market risk shock assumed in the stress scenario which in many cases sees trading profits wiped out some recovery is projected over the remainder of the stress test. The net effect of losses of sovereign exposures held as Available for Sale makes only a relatively small contribution to the overall impact (-20bps impact on CET1 Capital ratio). The following sections will detail these main drivers of the impact along risk types covered in the stress test.

Other drivers with less significant impact are impairments on other financial assets, and non-financial assets, e.g. value reductions of real estate held by banks. Transitional adjustments, i.e. the phasing in of CRR/CRD IV provision other than those concerning the treatment of sovereign exposure held as Available for Sale, have a negative effect on capital (-30bps impact on CET1 Capital ratio) that is included in the overall impact.



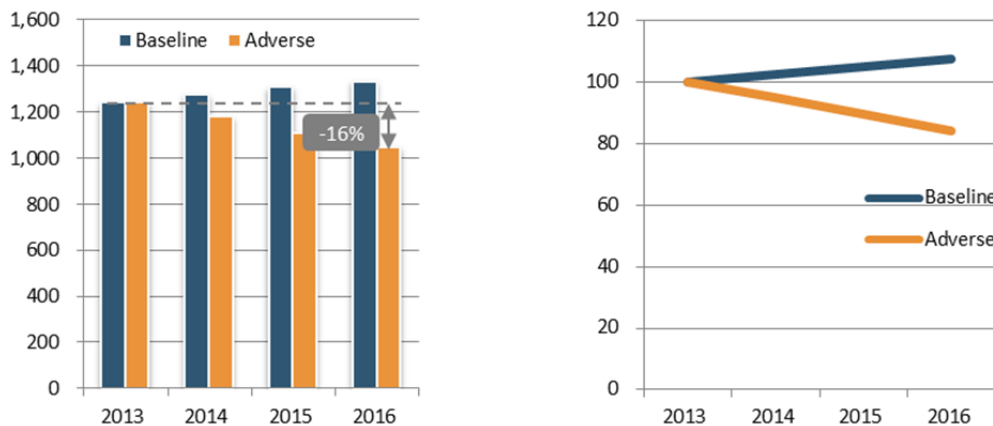
Figure 12: Contribution of different drivers to the change in Common Equity Tier 1 Capital ratio from 2013 to 2016 in the adverse scenario<sup>23</sup>



### 3.3.5 Impact on capital

The cumulative impact of the adverse scenario on Common Equity Tier 1 Capital is EUR 195BN across the full sample. This is equivalent to the depletion of 16% of the aggregate Common Equity Tier 1 Capital of European banks.

Figure 13: Evolution of aggregate Common Equity Tier 1 Capital (EUR BN) and evolution relative to starting point (2013 = 100)



<sup>23</sup> Contribution of P&L items measured gross of taxes.

The main contributors to the impact on the capital side are shown in Table 2. Net interest income has by far the largest positive effect while net trading income after stress remains positive but with an overall very small contribution to the aggregate P&L. Credit losses in the form of impairments on financial assets other than instruments designated at fair value through P&L account for EUR 492BN of losses. Other impairments account for EUR 43BN. As a result, total losses after tax and after dividends is EUR 143BN. In addition, the cumulative effect on other comprehensive income and capital of the stress on sovereign exposure held as Available for Sale is EUR 17BN.

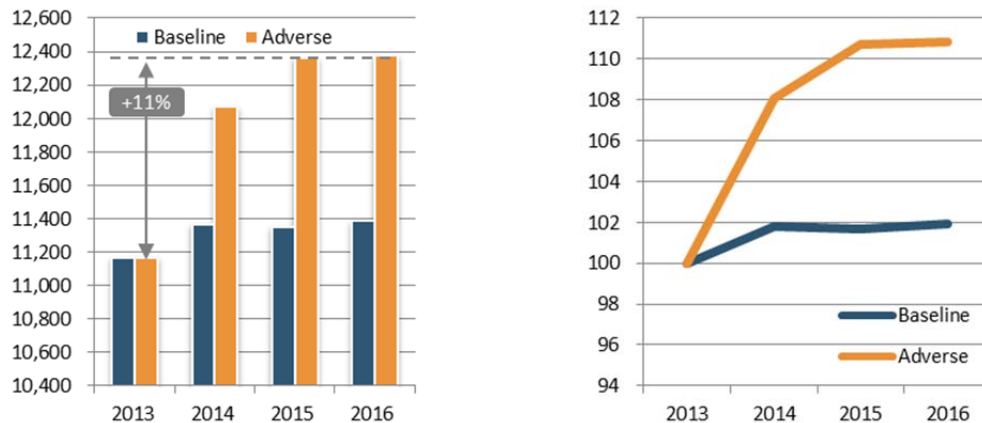
Table 2: Stylised EU aggregate profit and loss account - Cumulative profit and loss from 2014 to 2016 in the adverse scenario and accumulated capital impact of sovereign exposure held as Available for Sale

Net interest income	942
Dividend income	24
Net fee and commission income	469
Net trading income	35
Other operating income	49
Administrative and other operating expenses	-1,157
Operating profit before impairments	362
Impairment financial assets other than instruments designated at fair value through P&L	-492
Impairment financial assets designated at fair value through P&L	-10
Impairment non-financial assets	-33
Other income and expenses	12
Pre-Tax profit	-160
Tax	43
Net income	-117
Net income - attributable to owners of the parent net of estimated dividends	-143
Accumulated capital impact of sovereign AFS exposure	-17

### 3.3.6 Impact on risk exposure amount

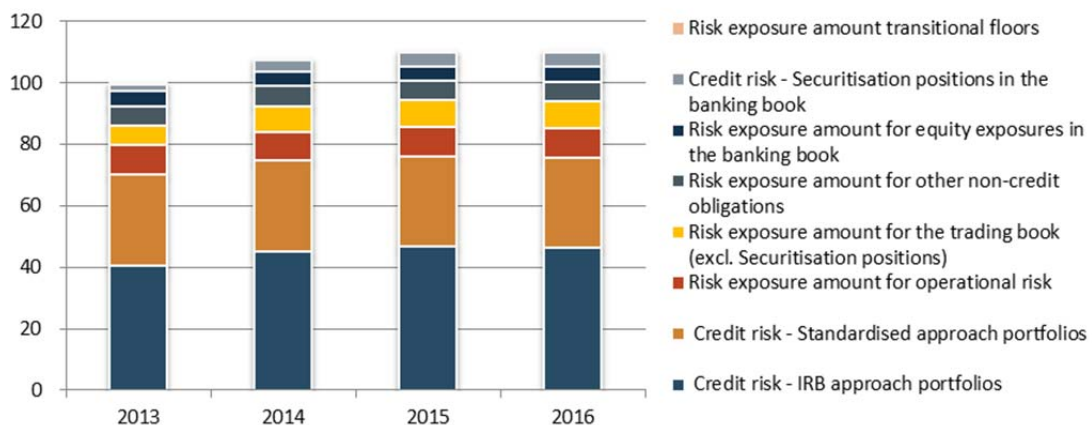
The methodology of the EU-wide stress test requires banks to calculate stressed risk exposure amounts based on the scenario. In addition, floors are defined so that the risk exposure amount cannot fall below the starting level independent of how much exposure defaults in a scenario. In 2016, total risk exposure amount under the adverse scenario increases by 11% (-1.1% of Common Equity Tier 1 ratio or EUR 67BN capital impact) while it stays roughly constant in the baseline scenario.

Figure 14: Evolution of aggregate total risk exposure amount (EUR BN) and evolution relative to starting point (2013 = 100)



In particular, the methodology specifies that risk exposure amount for credit risk under the IRB approach – accounting for 41% of total risk exposure amount – should be calculated based on stress risk parameters, i.e. stressed PD and LGD values (see Box 1). Also, a fixed stress on risk exposure amount for securitisations depending on the risk profile of positions is defined. For market risk an increase for risk exposure amount for VaR, SVaR and CRM capital charges due to predefined assumptions is assumed, while risk exposure amount stays constant for banks not using internal models.

Figure 15: Evolution of risk exposure amount by risk type under the adverse scenario (2013=100)



## 3.4 Impact by risk type

### 3.4.1 Credit risk

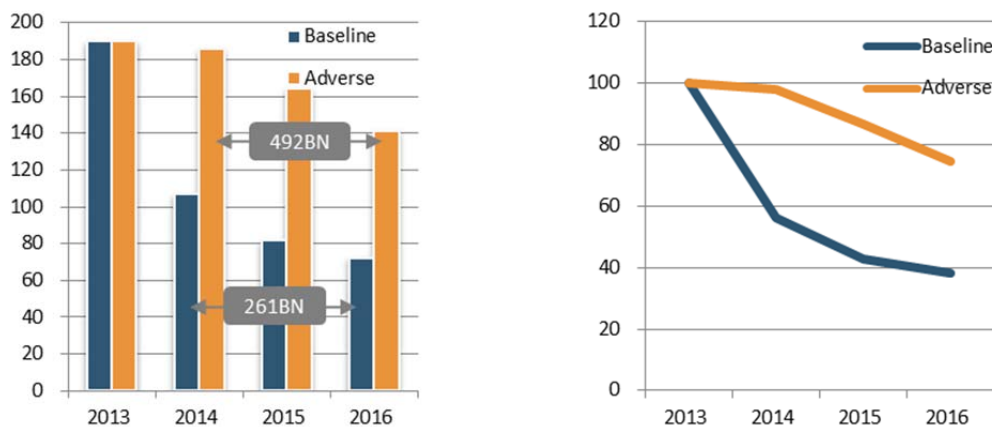
Credit risk losses in the form of “impairments on financial assets other than instruments designated at fair value account” form the majority of the stress impact on capital. The methodology requires banks to use internal models to project these losses but sets strict caps and

floors, e.g. for coverage ratios and defaulted exposure. In addition, benchmark parameters developed by the ECB/ESRB were provided for banks which have no internal models available as well as for sovereign exposures. It should also be noted that the methodology requires banks not only to project additional defaults and corresponding credit losses, i.e. impairments, but also to stress the provisions for exposures already defaulted at reference date December 2013.

The credit risk stress covers more than EUR 20,000BN of exposure. The stress impact leads to a significant increase in defaults, with the share of defaulted exposures increasing from approximately 6% to 10% in 2016 under the adverse scenario.

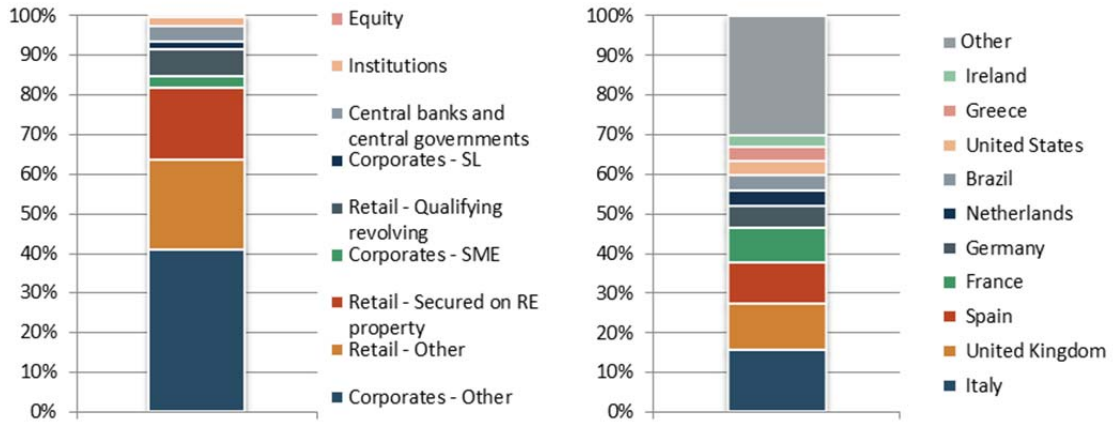
Due to one-off effects in 2013 and the adjustment of impairments as result of the asset quality reviews credit losses, i.e. impairments, on these defaulted exposures stay roughly constant from 2013 to 2014 while the baseline shows a significant reduction. In total, EUR 492BN of additional credit losses including securitisations are reported under the adverse scenario, almost double the amount projected in the baseline scenario (-440bps impact on CET1 Capital ratio). The impact shows a broad dispersion across countries ranging from approximately -130bps to more than -1,400bps.

Figure 16: Evolution of absolute credit losses (impairment of financial assets other than instruments designated at fair value through P&L, EUR BN) and evolution relative to starting point (2013 = 100)



Credit losses are fairly evenly split between Corporate and Retail exposure classes. It is worth noting that Central Banks and Central Governments account for EUR 19BN of additional losses (-20bps impact on CET1 Capital ratio). With respect to the country of the counterparty, Italy accounts for the highest share of credit losses. Counterparties in Italy, the United Kingdom, Spain, France and Germany combined contribute more than half of credit losses while the next largest losses are reported for the Netherlands, Brazil, the United States and Greece.

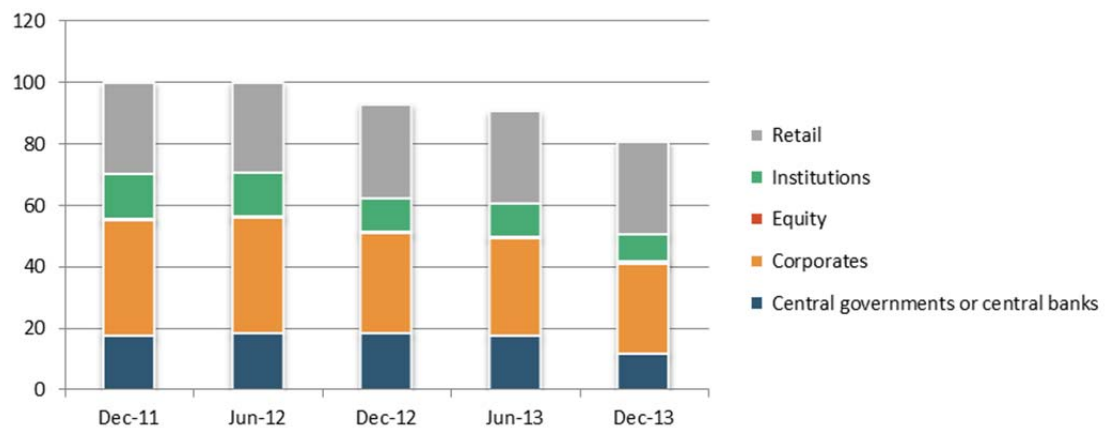
Figure 17: Contribution to cumulative credit losses (impairments of financial assets other than instruments designated at fair value through P&L) in the adverse scenario – by regulatory exposure class and for selected countries of the counterparty<sup>24</sup>



Box 3: Evolution of credit risk exposure

From December 2011 to December 2013<sup>25</sup> credit risk exposure has decreased by 19% reflecting banks deleveraging. Retail has become the largest contributor of exposure across the sample maintaining lending amounts, but increasing the contribution from 30% to 38% due to the overall decreasing exposure. On the other hand banks have reduced the exposure to Corporates by 9% followed by of exposures towards Institutions and Central Governments by 6%, each, the latter only in the last 6 months' period.

Figure 18: Evolution of credit exposure by exposure class (2011=100)

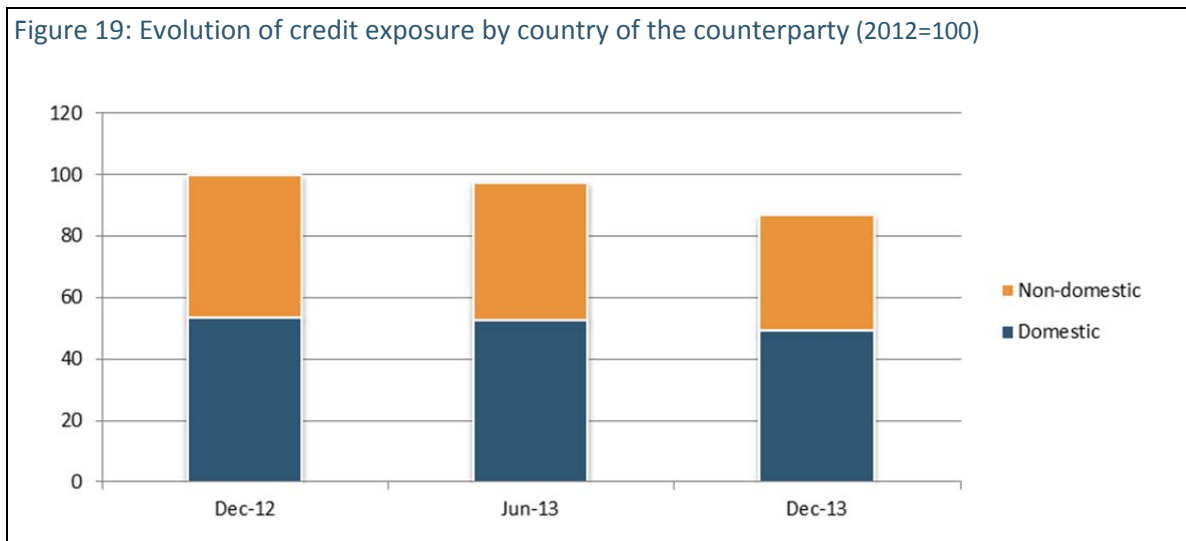


With respect to the country of the counterparty data shows that the exposure to domestic counterparties slightly increased over the last year, from 54% in 2012 to 57% in 2013. Domestic and non-domestic exposure both decrease in absolute terms.

<sup>24</sup> Countries with the largest credit losses shown

<sup>25</sup> Based on comparable data from the common sample of 59 institutions present in all EBA data collections (i.e. Recapitalisation 2012, Transparency 2013 and 2014 EU-wide Stress Test) covering 83% of the selected classes in the 2014 EU-wide Stress Test

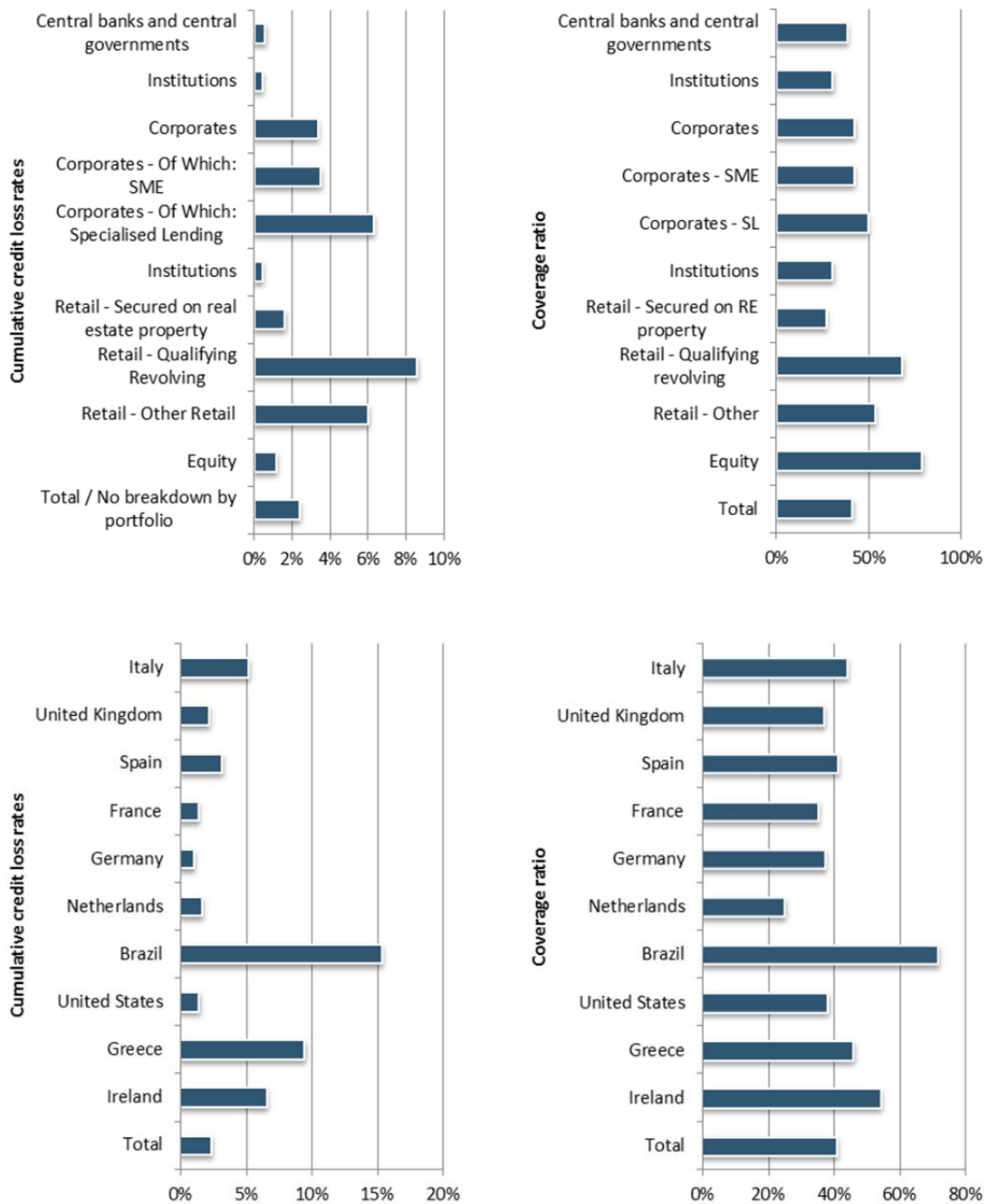
Figure 19: Evolution of credit exposure by country of the counterparty (2012=100)



A further drill-down in the credit losses, i.e. impairments, relative to exposure for different exposure classes and countries of the counterparty shows a significant dispersion of the impact. Cumulative credit loss rates measured as cumulative credit losses, i.e. impairments, relative to starting non-defaulted exposure range from 0.4% for Institutions to close to 9% for Qualifying Revolving Retail. The riskiest segments as characterised by loss rates are generally Retail exposures not secured by real estate property and Corporate SME. Additional credit losses, i.e. impairments, realized in the P&L lead to an increasing stock of provisions for defaulted exposure. The resulting coverage of defaulted exposure with provisions in 2016 ranges from 31% for Retail secured by real estate property to 68% for Qualifying Revolving Retail and to over 70% for Equity.

Regarding the breakdown by countries, cumulative impairments relative to exposure also show a wide dispersion. The cumulative credit losses as a percentage of exposures are particularly material for counterparties located in Greece, Ireland and Italy in the EU as well as in Brazil. On the other hand, coverage ratios are broadly similar across countries, with the exception of counterparties in Brazil, where the coverage of defaulted exposures is above 70%.

Figure 20: Cumulative credit losses (impairments of financial assets other than instruments designated at fair value through P&L) relative to December 2013 exposure and coverage of defaulted exposures with provisions 2016 in the adverse scenario – by regulatory exposure class and for selected countries of the counterparty<sup>26</sup>



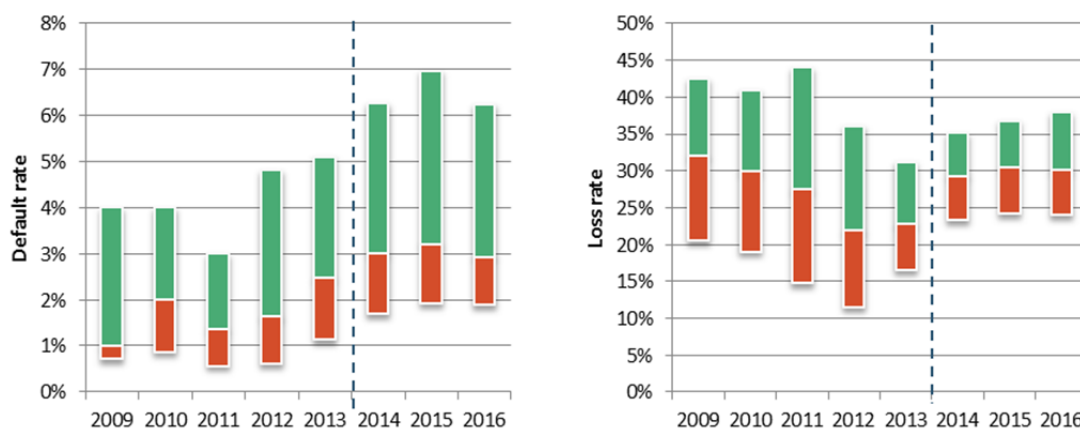
<sup>26</sup> Countries with largest contribution to impairments selected

#### Box 4: Evolution of risk parameters

Starting point and projected risk parameters generally show a high dispersion across banks. This will be illustrated with default rates, i.e. annual default flow relative to starting performing exposure, and loss rates, i.e. impairments relative to default flow, for aggregate Corporate exposures across banks.

Looking at the historical evolution of both default and loss rates<sup>27</sup>, they show a downward trend in the years before 2013 and a following upward shift of the distribution that can be explained by one-off effects regarding the balance sheet clean-up and the results of the asset quality review. Also visible is the large dispersion of risk parameters that even increases for projected stress parameters. Projected default rates gradually increase over the three years with a median increase of 35% in 2016. The distribution of loss rates also shifts significantly upwards.

Figure 21: Distribution of default rates and loss rates<sup>28</sup> in the adverse scenario across banks – interquartile range and median for both historical and stress test data



The stress test requires banks to apply as far as possible regulatory approved models for their loss projections. In addition, risk parameters estimated by banks were the key parameters to be validated by competent authorities during the quality assurance process against various benchmarks, including those supplied by the EBA. Still, the above analysis shows the difficulties when comparing risk parameters across banks and the cross-sectional dispersion.

The EBA has already published reports on the consistency of risk weighted assets, i.e. on the comparability of the outcomes of IRB approach. The EBA is now mandated by the CRR/CRD to coordinate annual supervisory benchmarking of internal models for credit and market risk.<sup>29</sup>

<sup>27</sup> Source for historical risk parameters: EBA risk parameters disclosure of EU banks - <http://www.eba.europa.eu/risk-analysis-and-data/risk-dashboard>

<sup>28</sup> Point-in-time PD and point-in-time LGD as defined in the Methodological Note EU-wide stress test 2014

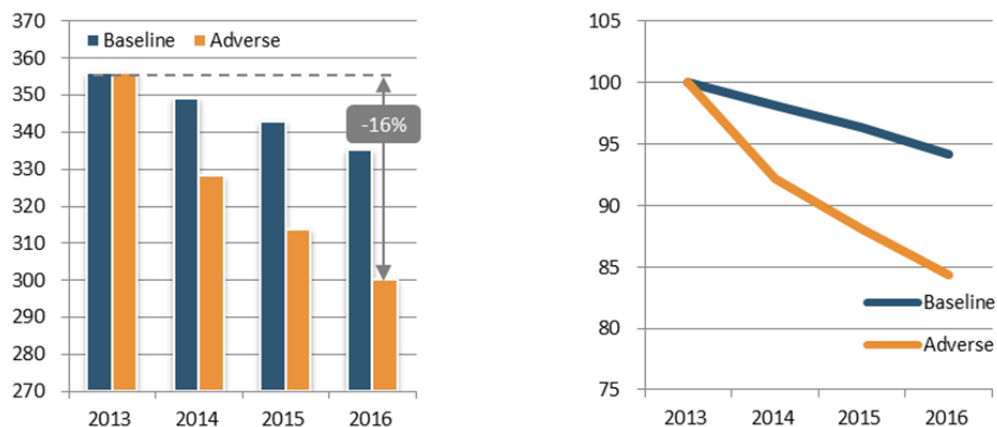
<sup>29</sup> <http://www.eba.europa.eu/risk-analysis-and-data/review-of-consistency-of-risk-weighted-assets>



### 3.4.2 Cost of funding and Net Interest Income

The adverse scenario of the EU-wide stress test includes an upwards shift in short-term and long-term interest rates and government bond spreads. The methodology specifies how banks should project an increase in funding costs based on this scenario while also limiting the possibility to pass through increasing funding costs to lending. Net interest income across the sample decreases compared to the 2013 level not just in the adverse but also in the baseline scenario. Over the three years of the stress test time horizon, more assets and liabilities are assumed to be replaced depending on their maturities therefore leading to a more severe effect. By 2016 net interest income in the adverse scenario falls by EUR 56BN, i.e. by 16%, from 2013 which corresponds to a cumulative decrease of EUR 86BN of profits compared to the baseline scenario.

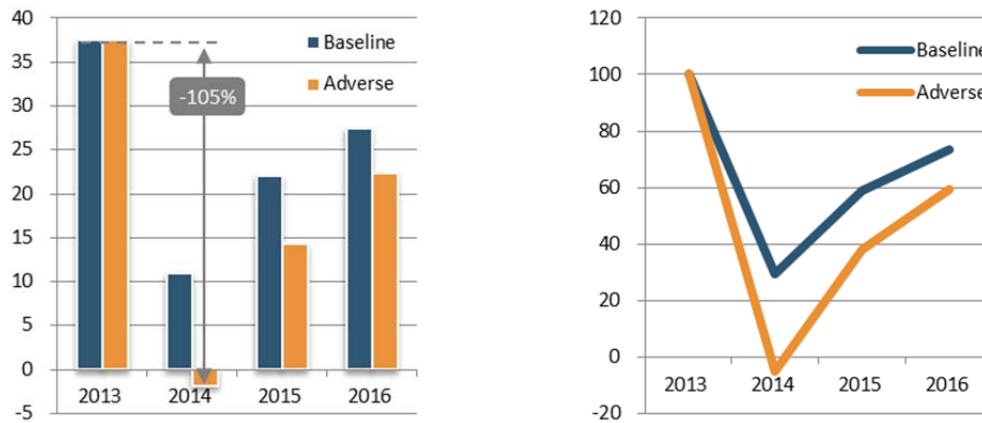
Figure 22: Evolution of absolute net interest income (EUR BN) and evolution relative to starting point (2013 = 100)



### 3.4.3 Market risk

The market risk methodology prescribes how banks should translate given market risk scenarios into P&L and capital impacts. The core element of this is the impact on net trading income, although the methodology covers all positions. Banks were either subject to a simplified approach, based on historical losses, or had to carry out a full revaluation of their portfolios for various market risk scenarios including historical shocks. Due to this approach the baseline scenario already assumes a reduction in net trading income. Another core element of the methodology is the realisation of the market shocks over the three years of the stress test. An average starting value for net trading income is reduced by 50% for 2014, 30% for 2015 and 20% for 2016. Consequently the largest impact is in 2014 where the full net trading income in the sample is wiped out. In the following two years net trading income recovers in line with the prescribed methodology and as evidenced by the small net positive contribution made by trading income to the outcome, although this is 19% or EUR 26BN lower than the baseline.

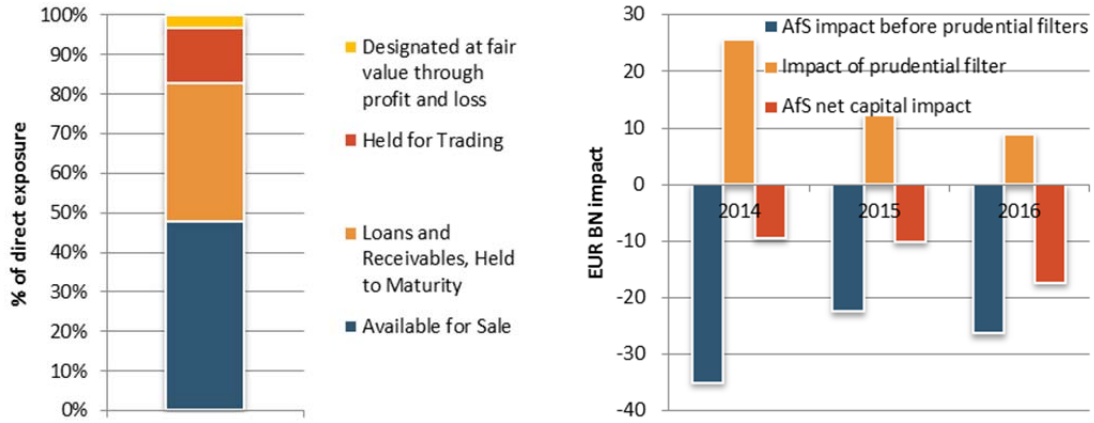
Figure 23: Evolution of aggregate net trading income (EUR BN) and evolution relative to starting point (2013 = 100)



### 3.4.4 Sovereign risk

The stress test required a specific treatment of sovereign exposures. In particular, fixed valuation haircuts were prescribed for all EU countries in the adverse scenario to take into account the credit and interest rate risk of direct sovereign exposures. Other sovereign exposures, i.e. exposure to other countries and all derivative positions, were to be stressed consistently based on the market risk scenario. In total, more than EUR 2,700BN of direct sovereign exposure were in scope of the stress test. 48% of direct exposures are held as Available for Sale for which haircuts had to be applied to project the impact on capital via other comprehensive income. The second biggest accounting category with 35% – Loans and Receivables and Held to Maturity was subject to the credit risk methodology. Other categories for which the same treatment as for Available for Sale applied are less significant, i.e. 14% Held for Trading and 3% designated at fair value through profit and loss. The total impact on capital is driven first by the valuation haircuts which have the highest effect in 2014 and second by the common phase out of prudential filters which led to an increasing realisation of losses in capital until 2016. The net effect on capital in the adverse scenario is a reduction by EUR 17BN (-20bps impact on CET1 Capital ratio) in 2016. It should be noted that the stress impact was not limited to losses due to valuation effect. As described in section 3.4.1, cumulative effects due to the prescribed credit risk stress for sovereign exposure account for another EUR 19BN of impairments (-20bps impact on CET1 Capital ratio).

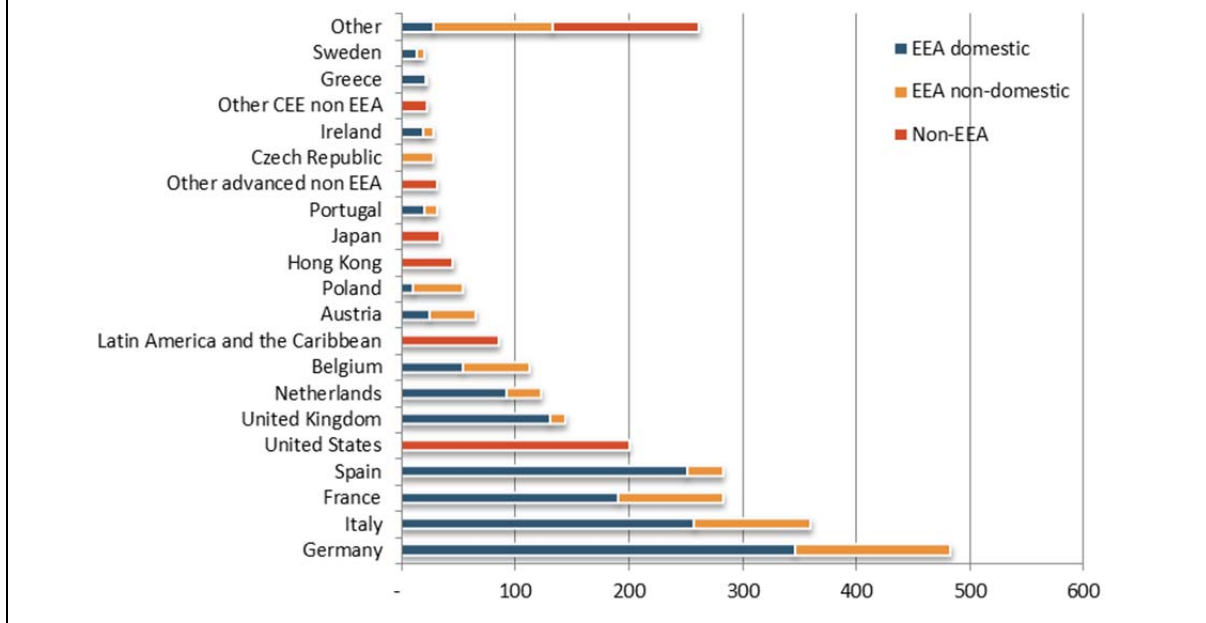
Figure 24: Direct net sovereign exposure by accounting book December 2013 (%) and capital impact of AfS exposure in the adverse scenario (EUR BN)



Box 5: Distribution and evolution of sovereign exposure

The bulk of direct sovereign exposure is concentrated towards Germany and Italy which account for more than 30% of exposure. More than half of direct sovereign exposure is held by domestic banks, which gradually but consistently increased their share since December 2010 by close to 10%. Also the share of exposure booked as Available for Sale has increased by approximately 10% since December 2010.<sup>30</sup>

Figure 25: Direct net sovereign exposure (EUR BN) held by domestic bank and held by non-domestic banks December 2013 in the sample of the EU-wide stress test



<sup>30</sup> Historical evolution based on comparable data from the common sample of 58 institutions present in EBA data collections (i.e. Recapitalisation 2011, Recapitalisation 2012, Transparency 2013 and 2014 EU-wide Stress Test) covering 78% of the exposure of the 2014 EU-wide Stress Test.

## 3.5 Supervisory reaction function

### 3.5.1 Process and communication

Supervisory actions to be taken are the responsibility of the competent authorities and not covered in this report. Supervisory actions will be communicated by each competent authority shortly after the publication of the stress test results. Some common building blocks were agreed across participating countries:

- The stress test will inform supervisory actions on a range of banks and not just those who “fail” the stress test as measures by defined capital thresholds.
- The stress test can be used to understand a range of potential weaknesses in banks and therefore can inform a range of supervisory actions. In some cases these may be capital related. Some capital actions could be raising capital in the short term to cover shortfalls but in other cases weaknesses in capital plans may lead to other types of capital strengthening including restrictions on dividends. However, there is a broad range of other actions that might be considered including changes to banks’ strategies, reducing concentrations, cost reduction and continued cleaning or reduction of balance sheets by disposing of non-performing and other assets.

The ECB already announced that all banks that face a capital shortfall on the basis of the results of the comprehensive assessment will be requested to submit capital plans within two weeks after the disclosure of the results, detailing how the shortfalls will be covered within the foreseen time frame. Banks will be expected to cover shortfalls arising from the AQR, or the baseline scenario of the stress test, within six months, and shortfalls arising from the adverse scenario of the stress test within nine months. The overall amount of capital to be raised by a bank will be the maximum of the shortfall under the AQR, the baseline scenario and the adverse scenario of the stress test, whenever it appears over the three-year horizon. For other countries the communication of supervisory reaction functions differs. No bank from non-SSM countries reported a shortfall based on the stress test. Additional actions might still form part e.g. of the usual SREP process for a bank. It should also be noted that the supervisory reaction function for UK banks will draw on both the EU-wide and UK variant stress tests, and will be communicated as part of the publication of the UK stress test variant in December. In particular, any supervisory reactions will not only take into account the stress test result given as Common Equity Tier 1 Capital ratios but also any mitigation actions already taken by the banks as well as other context to the bank’s situation, e.g. losses already realised in 2014, existing restructuring plans and the assessment of forward-looking capital plans to meet future capital targets like fully phased-in CRR/CRD IV requirements.

### 3.5.2 Capital actions

Banks already took actions that mitigate the stress test capital impact and shortfall across the sample. Overall EUR 53.6BN of Common Equity Tier 1 Capital was raised or resulted from the conversion of hybrid instruments by banks in the sample between January and September 2014

(EUR 39.2 net of repayments and buybacks). The additional capital raised by banks with a shortfall in 2014 reduces the capital needs for those banks to EUR 9.5BN and the number of banks with a shortfall to 14.

Figure 26: Major capital measures impacting Common Equity Tier 1 eligible capital from 1 January 2014 to 30 September 2014 and net CET1 Capital raised and converted by country (EUR BN)

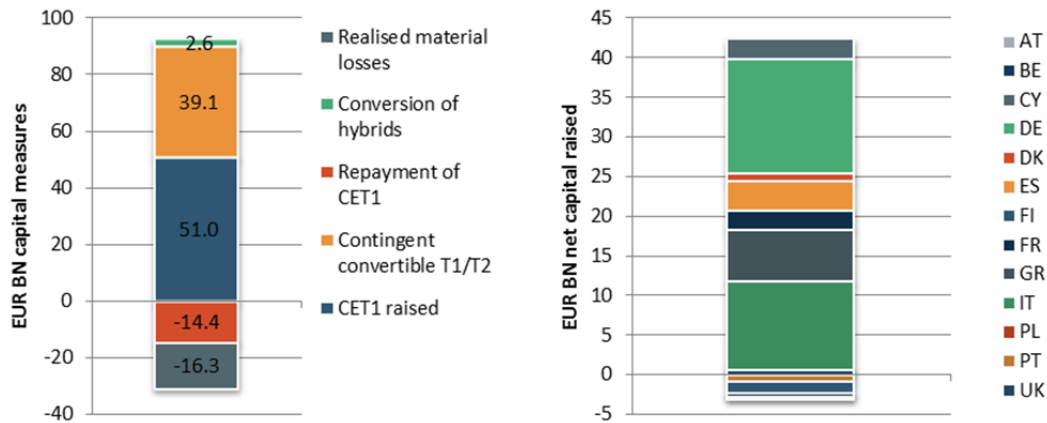
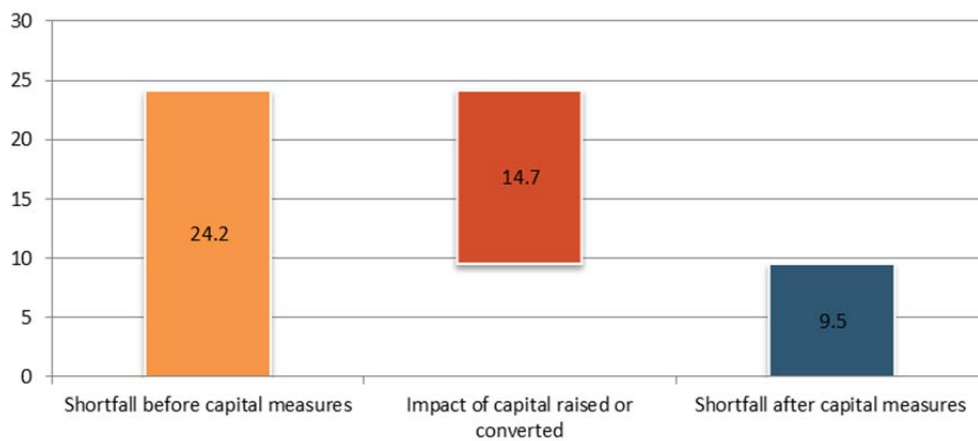


Figure 27: Impact of net capital raised and converted on capital shortfall 2016 under the adverse scenario



In addition banks raised EUR 39.1BN of additional Tier 1 and Tier 2 contingent convertible instruments in the same period. This additional capital could be taken into account when assessing banks' results. On the other hand, banks have recognised EUR 16.3BN losses during the same period, e.g. due to realised fines and litigation costs net of provisions or due to other material realised losses, that need to be taken into account by supervisors. Banks also report EUR 34.1BN of convertible capital instruments already present in December 2013.

Table 3: Shortfall for individual banks 2016 under the adverse scenario, capital raised or converted in 2014 and net shortfall (EUR BN)

Bank	Shortfall adverse 2016 <sup>31</sup>	Net CET1 raised or converted <sup>32</sup>	Shortfall adverse 2016 after capital raised
AT Österreichische Volksbanken-AG with credit institutions affiliated according to Article 10 of the CR	0.86	-	0.86
BE AXA Bank Europe SA	0.20	0.14	0.07
BE Dexia NV <sup>33</sup>	0.34	-	0.34
CY Bank of Cyprus Public Company Ltd	0.92	1.00	-
CY Co-operative Central Bank Ltd	1.17	1.50	-
CY Hellenic Bank Public Company Ltd	0.28	0.10	0.18
DE Münchener Hypothekenbank eG	0.23	0.41	-
FR C.R.H. - Caisse de Refinancement de l'Habitat	0.00	0.25	-
GR Eurobank Ergasias	4.63	2.86	1.76
GR National Bank of Greece	3.43	2.50	0.93
GR Piraeus Bank	0.66	1.00	-
IE Permanent tsb plc.	0.85	-	0.85
IT Banca Carige S.P.A. - Cassa di Risparmio di Genova e Imperia	1.83	1.02	0.81
IT Banca Monte dei Paschi di Siena S.p.A.	4.25	2.14	2.11
IT Banca Piccolo Credito Valtellinese	0.38	0.42	-
IT Banca Popolare Dell'Emilia Romagna - Società Cooperativa	0.13	0.76	-
IT Banca Popolare Di Milano - Società Cooperativa A Responsabilità Limitata	0.68	0.52	0.17
IT Banca Popolare di Sondrio	0.32	0.34	-
IT Banca Popolare di Vicenza - Società Cooperativa per Azioni	0.68	0.46	0.22
IT Banco Popolare - Società Cooperativa	0.43	1.76	-
IT Veneto Banca S.C.P.A.	0.71	0.74	-
PT Banco Comercial Português	1.14	-0.01	1.15
SI Nova Kreditna Banka Maribor d.d. <sup>34</sup>	0.03	-	0.03
SI Nova Ljubljanska banka d. d. <sup>34</sup>	0.03	-	0.03
Sum	24.19	17.90	9.52

### 3.5.1 Impact of restructuring plans approved after December 2013

A significant proportion of the shortfall, i.e. EUR 8.7BN of EUR24.2BN in the adverse scenario, is due to 3 banks from Greece that have a restructuring plan approved by the European Commission after the reference date for the stressed test, 31/12/2013. Therefore, these banks were assessed based on the static balance sheet assumption under the stress test exercise, but were also allowed to submit, as additional information, results based on their approved restructuring plans. Considering the restructuring plans for these banks, only 1 of them would finally report a shortfall of EUR 0.02BN.

<sup>31</sup> Maximum shortfall is given in 2016 for all banks; two banks with higher shortfall in the baseline scenario: C.R.H. - Caisse de Refinancement de l'Habitat (EUR 0.1BN) and Banco Popolare - Società Cooperativa (EUR 0.7BN); both banks have not shortfall after considering capital raised; Liberbank excluded since it has a CET1 ratio below 8% only for 2013

<sup>32</sup> This does not include any contingent convertible instruments not converted.

<sup>33</sup> Taking into account the orderly resolution plan of this institution, which benefits from a state guarantee, there is no need to proceed with capital raising following the comprehensive assessment result.

<sup>34</sup> The impact on 2014 of the restructuring measures already taken to improve structural profitability and the maintenance of retained earnings in banks will cover the shortfalls identified.

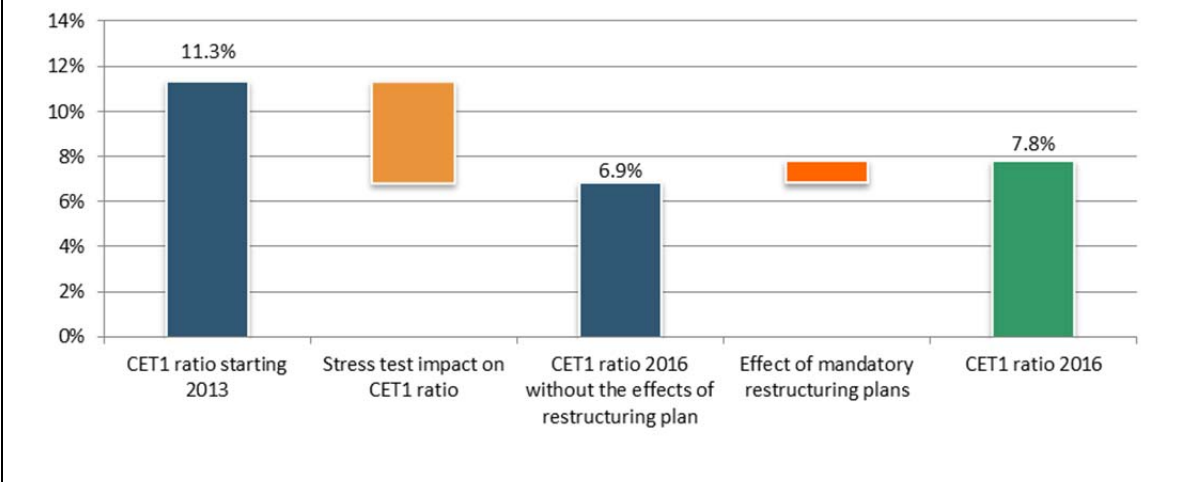
Table 4: Shortfall for banks with restructuring plans approved after 31/12/2013 (EUR BN)

NCA	Bank	Shortfall 2016 static balance sheet	Shortfall 2016 dynamic balance sheet
GR	Eurobank Ergasias	4.6	0.02
GR	National Bank of Greece	3.4	-
GR	Piraeus Bank	0.7	-
	Sum	8.7	0.02

#### Box 6: Impact of the dynamic balance sheet approach for banks with restructuring plans approved before December 2013

In total, 26 banks were exempted from the static balance sheet assumptions because of restructuring plans approved by the European Commission before the 31/12/2013. These banks provided information on the impact of their restructuring plans both on CET1 capital and on total risk exposure amount. This information was disclosed as part of the transparency exercise. According to the information provided, restructuring plans led by December 2016 to an increase of 5% in the amount of CET1 capital and to a decrease of 8% of the risk exposure amount. As a result, the Common Equity Tier 1 ratio for these banks as of December 2016 under the adverse scenario is 90bps higher than under a static balance sheet assumption.

Figure 28: Impact on CET1 ratio of restructuring plans on those banks with a plan approved before December 2013 under the adverse scenario from 2013 to 2016



## Annex 1: EU-wide stress test sample of banks and bank-level results

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The following table lists key stress test result for all 123 individual banks.<sup>35</sup> For each bank it is indicated if the bank has a restructuring plan approved before the reference date of 31/12/2013 and if it was granted an exemption from the static balance sheet assumption.<sup>36</sup> It is also shown if the bank has a restructuring plan that was approved after the reference date so that for these banks results are shown based on the static balance sheet assumption, i.e. the restructuring plan is not taken into account but the banks could provide additional results based on the dynamic balance sheet assumption.<sup>37</sup> For each bank the transitional Common Equity Tier 1 ratio is shown for the starting point and the value for 2016 under the baseline and the adverse scenario. It should be noted that hurdle rates are defined for this transitional Common Equity Tier 1 ratio so that only this metrics applied for assessing the need for supervisory actions. In addition and to enhance comparability the fully loaded CRR/CRD IV ratio for 2016 is also included as a memo item only.<sup>38</sup>

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<sup>35</sup> The list of banks taking part in the 2014 EU-wide stress test was updated to accommodate the following changes since April 2014: Banco Ceiss and Unicaja (MPCA Ronda, Cádiz, Almería, Málaga, Antequera y Jaén): Following the acquisition of Banco Ceiss by Unicaja, the stress test is being performed at the level of the merged entity (Unicaja). Banco Espirito Santo: Following the recent resolution decision applied to Banco Espirito Santo that led to the creation of Novo Banco, the stress test exercise for Novo Banco has been postponed. Wüstenrot & Württembergische AG: This bank will be treated at a sub-consolidated level, which means that the stress test and the publication of results will be conducted separately for the two bank entities of the group, Wüstenrot Bank AG Pfandbriefbank and Wüstenrot Bausparkasse AG.

<sup>36</sup> Banks with an approved restructuring plan that did not apply for an exemption: Bayerische Landesbank, HSH Nordbank AG, IKB Deutsche Industriebank AG, Nova Ljubljanska banka d. d., Nova Kreditna Banka Maribor d.d., Banco BPI

<sup>37</sup> Banks with restructuring plan after 31/12/2013: Co-operative Central Bank Ltd, Alpha Bank, S.A., Eurobank Ergasias, S.A., National Bank of Greece, S.A., Piraeus Bank, S.A., Allied Irish Banks plc – no submission of second dynamic calculation by Cooperative Central Bank Ltd

<sup>38</sup> The results of the Polish banks in the EU-wide stress test exercise do not include AQR adjustments, due to late submission by the Polish Authorities who will provide further details at the Polish Financial Supervision Authority website. Including the AQR would have the following effect on banks' CET1 ratios: ALIOR BANK SA (-1.3pp), BANK BPH SA (-0.1pp), BANK HANDLOWY W WARSZAWIE SA (-0.5pp), BANK OCHRONY SRODOWISKA SA (-2.2pp), GETIN NOBLE BANK SA (-1.1pp), POWSZECHNA KASA OSZCZEDNOSCI BANK POLSKI S.A. (PKO BANK POLSKI) (-0.9pp).



Table 5: Application of restructuring plans and selected results for individual banks

NSA	Bank	Approved restructuring plan		Balance sheet	CET1 ratio			Memo item: Fully loaded CET1 ratio <sup>39</sup>	
		Before Dec-2013	After Dec-2013		Starting 2013	Baseline 2016	Adverse 2016	Baseline 2016	Adverse 2016
AT	BAWAG P.S.K. Bank für Arbeit und Wirtschaft und Österreichische Postsparkasse AG			Static	14.3%	11.9%	8.5%	7.5%	4.5%
AT	Erste Group Bank AG			Static	10.0%	11.2%	7.6%	10.6%	6.8%
AT	Raiffeisen Zentralbank Österreich AG			Static	9.7%	9.5%	7.8%	5.6%	3.9%
AT	Raiffeisenlandesbank Niederösterreich-Wien AG			Static	16.8%	17.2%	11.8%	17.2%	11.4%
AT	Raiffeisenlandesbank Oberösterreich AG			Static	10.3%	11.3%	7.9%	11.5%	7.5%
AT	Österreichische Volksbanken-AG with credit institutions affiliated according to Article 10 of the CR	Yes		Dynamic	10.3%	7.2%	2.1%	5.2%	0.0%
BE	AXA Bank Europe SA			Static	14.7%	12.7%	3.4%	12.7%	3.0%
BE	Belfius Banque SA	Yes		Dynamic	13.5%	11.0%	7.3%	10.5%	6.5%
BE	Dexia NV <sup>40</sup>	Yes		Dynamic	15.8%	10.8%	5.0%	10.8%	5.0%
BE	Investar (Holding of Argenta Bank- en Verzekeringsgroep)			Static	24.1%	20.1%	14.7%	20.1%	14.7%
BE	KBC Group NV	Yes		Dynamic	12.7%	12.4%	8.3%	10.9%	6.3%
CY	Bank of Cyprus Public Company Ltd	Yes		Dynamic	7.3%	12.9%	1.5%	12.9%	1.5%
CY	Co-operative Central Bank Ltd		Yes	Static	-3.7%	0.5%	-8.0%	0.5%	-8.0%
CY	Hellenic Bank Public Company Ltd			Static	5.2%	9.1%	-0.5%	9.0%	-1.3%
DE	Aareal Bank AG			Static	16.4%	16.5%	11.8%	16.2%	11.4%
DE	Bayerische Landesbank	Yes		Static	13.2%	12.4%	9.4%	9.7%	7.0%
DE	Commerzbank AG	Yes		Dynamic	10.8%	11.7%	8.0%	10.6%	6.9%
DE	DZ Bank AG Deutsche Zentral-Genossenschaftsbank			Static	9.0%	8.7%	6.0%	7.8%	4.9%
DE	DekaBank Deutsche Girozentrale			Static	14.0%	12.3%	8.0%	11.8%	7.5%
DE	Deutsche Apotheker- und Ärztebank eG			Static	16.4%	18.4%	14.7%	18.4%	14.6%
DE	Deutsche Bank AG			Static	13.4%	12.6%	8.9%	10.5%	7.0%
DE	HASPA Finanzholding			Static	12.5%	12.5%	10.7%	12.5%	10.7%
DE	HSH Nordbank AG	Yes		Static	10.0%	9.4%	6.1%	8.3%	4.8%
DE	Hypo Real Estate Holding AG	Yes		Dynamic	16.5%	21.2%	10.8%	21.2%	10.8%

<sup>39</sup> The fully loaded Common Equity Tier 1 ratio reported in the context of the EU-wide stress test is based on the same phase-in schedule for sovereign gains/losses from the Available-for-Sale portfolio as described in section 2.2.3, i.e. including 60% of unrealised gains/losses.

<sup>40</sup> Taking into account the Orderly Resolution Plan of this institution, which benefits from a state guarantee, there is no need to proceed with capital raising following the comprehensive assessment result.

NSA	Bank	Approved restructuring plan		CET1 ratio			Memo item: Fully loaded CET1 ratio <sup>39</sup>		
		Before Dec-2013	After Dec-2013	Balance sheet	Starting 2013	Baseline 2016	Adverse 2016	Baseline 2016	Adverse 2016
DE	IKB Deutsche Industriebank AG	Yes		Static	9.0%	8.8%	6.5%	8.1%	6.1%
DE	KfW IPEX-Bank GmbH			Static	12.8%	12.3%	9.4%	11.9%	9.0%
DE	Landesbank Baden-Württemberg	Yes		Dynamic	13.5%	12.3%	7.4%	11.1%	5.5%
DE	Landesbank Berlin Holding AG			Static	9.9%	10.5%	6.8%	10.1%	6.5%
DE	Landesbank Hessen-Thüringen Girozentrale			Static	12.2%	11.6%	8.2%	10.9%	7.7%
DE	Landeskreditbank Baden-Württemberg-Förderbank			Static	13.5%	14.5%	11.2%	14.5%	11.2%
DE	Landwirtschaftliche Rentenbank			Static	16.9%	17.7%	12.9%	17.7%	12.9%
DE	Münchener Hypothekenbank eG			Static	6.9%	5.8%	2.9%	5.7%	2.9%
DE	NRW.Bank			Static	37.4%	33.8%	31.5%	33.4%	31.1%
DE	Norddeutsche Landesbank-Girozentrale	Yes		Dynamic	10.1%	12.9%	9.2%	12.3%	8.5%
DE	Volkswagen Financial Services AG			Static	9.4%	10.4%	7.0%	10.3%	6.5%
DE	WGZ Bank AG Westdeutsche Genossenschafts-Zentralbank			Static	10.0%	9.7%	7.3%	6.9%	4.6%
DE	Wüstenrot Bank AG Pfandbriefbank			Static	8.6%	8.0%	6.5%	8.0%	6.5%
DE	Wüstenrot Bausparkasse AG			Static	10.6%	9.7%	6.9%	9.7%	6.9%
DK	Danske Bank			Static	13.7%	14.5%	11.7%	14.0%	11.1%
DK	Jyske Bank			Static	14.9%	18.6%	13.6%	18.4%	13.3%
DK	Nykredit			Static	15.5%	16.6%	10.9%	16.6%	10.9%
DK	Sydbank			Static	13.7%	15.5%	12.9%	15.5%	12.9%
ES	Banco Bilbao Vizcaya Argentaria			Static	10.5%	10.6%	9.0%	10.0%	8.2%
ES	Banco Financiero y de Ahorros	Yes		Dynamic	10.6%	14.3%	10.3%	12.0%	8.6%
ES	Banco Mare Nostrum	Yes		Dynamic	9.0%	11.5%	8.1%	11.1%	7.6%
ES	Banco Popular Español			Static	10.1%	10.9%	7.6%	9.8%	6.4%
ES	Banco Santander			Static	10.4%	12.0%	8.9%	10.6%	7.3%
ES	Banco de Sabadell	Yes		Dynamic	10.3%	10.2%	8.3%	9.8%	7.8%
ES	Bankinter			Static	11.7%	12.9%	11.0%	12.4%	10.5%
ES	Caja de Ahorros y M.P. de Zaragoza	Yes		Dynamic	10.0%	10.6%	7.9%	9.6%	6.7%
ES	Caja de Ahorros y Pensiones de Barcelona	Yes		Dynamic	10.3%	11.6%	9.3%	9.6%	7.5%
ES	Cajas Rurales Unidas			Static	9.9%	10.2%	8.0%	10.1%	7.6%
ES	Catalunya Banc	Yes		Dynamic	12.2%	12.5%	8.0%	12.5%	8.0%
ES	Kutxabank			Static	12.1%	13.1%	11.9%	12.1%	10.7%
ES	Liberbank	Yes		Dynamic	7.8%	9.4%	5.6%	7.0%	2.9%
ES	MPCA Ronda	Yes		Dynamic	10.9%	11.9%	8.9%	10.8%	7.3%
ES	NCG Banco	Yes		Dynamic	10.2%	13.9%	9.1%	14.0%	9.0%

NSA	Bank	Approved restructuring plan		Balance sheet	CET1 ratio			Memo item: Fully loaded CET1 ratio <sup>39</sup>	
		Before Dec-2013	After Dec-2013		Starting 2013	Baseline 2016	Adverse 2016	Baseline 2016	Adverse 2016
FI	OP-Pohjola Group			Static	16.4%	17.6%	12.0%	16.8%	11.2%
FR	BNP Paribas			Static	10.5%	10.5%	8.1%	10.4%	7.6%
FR	BPI France (Banque Publique d'Investissement)			Static	30.4%	32.9%	30.7%	34.3%	31.7%
FR	Banque PSA Finance			Static	14.1%	14.2%	12.8%	13.9%	12.5%
FR	C.R.H. - Caisse de Refinancement de l'Habitat			Static	5.7%	5.7%	5.5%	5.7%	5.5%
FR	Groupe BPCE			Static	10.0%	10.1%	7.0%	9.9%	6.4%
FR	Groupe Crédit Agricole			Static	10.8%	11.9%	8.8%	11.8%	8.6%
FR	Groupe Crédit Mutuel			Static	13.8%	15.7%	12.9%	15.6%	12.8%
FR	La Banque Postale			Static	10.0%	10.7%	9.2%	11.0%	9.4%
FR	RCI Banque			Static	11.7%	12.1%	9.1%	12.1%	9.1%
FR	Société Générale			Static	10.7%	10.6%	8.1%	9.7%	7.1%
FR	Société de Financement Local	Yes		Dynamic	23.3%	25.8%	13.2%	25.5%	13.0%
GR	Alpha Bank		Yes	Static (add. dynamic)	14.0%	13.8%	8.1%	9.0%	1.3%
GR	Eurobank Ergasias		Yes	Static (add. dynamic)	7.8%	2.0%	-6.4%	-9.3%	-18.0%
GR	National Bank of Greece		Yes	Static (add. dynamic)	7.5%	5.7%	-0.4%	-0.3%	-7.3%
GR	Piraeus Bank		Yes	Static (add. dynamic)	10.0%	9.0%	4.4%	4.3%	-1.5%
HU	OTP Bank Ltd			Static	15.9%	17.0%	11.9%	17.1%	12.0%
IE	Allied Irish Banks plc		Yes	Static (add. dynamic)	14.6%	12.4%	6.9%	1.7%	-3.6%
IE	Permanent tsb plc.			Static	12.8%	8.8%	1.0%	6.3%	-2.8%
IE	The Governor and Company of the Bank of Ireland	Yes		Dynamic	11.8%	13.2%	9.3%	7.9%	2.9%
IT	Banca Carige S.P.A. - Cassa di Risparmio di Genova e Imperia			Static	3.9%	2.3%	-2.4%	1.4%	-4.7%
IT	Banca Monte dei Paschi di Siena S.p.A.	Yes		Dynamic	7.0%	6.4%	-0.1%	5.3%	-3.5%
IT	Banca Piccolo Credito Valtellinese			Static	7.5%	7.1%	3.5%	7.1%	3.3%
IT	Banca Popolare Dell'Emilia Romagna - Società Cooperativa			Static	8.4%	8.3%	5.2%	8.1%	5.0%
IT	Banca Popolare Di Milano - Società Cooperativa A Responsabilità Limitata			Static	6.9%	6.9%	4.0%	6.9%	3.9%
IT	Banca Popolare di Sondrio			Static	7.4%	7.4%	4.2%	7.3%	4.0%
IT	Banca Popolare di Vicenza - Società Cooperativa per Azioni			Static	7.6%	7.7%	3.2%	7.7%	2.8%

NSA	Bank	Approved restructuring plan		Balance sheet	CET1 ratio			Memo item: Fully loaded CET1 ratio <sup>39</sup>	
		Before Dec-2013	After Dec-2013		Starting 2013	Baseline 2016	Adverse 2016	Baseline 2016	Adverse 2016
IT	Banco Popolare - Società Cooperativa			Static	7.9%	6.7%	4.7%	5.6%	3.6%
IT	Credito Emiliano S.p.A.			Static	10.9%	11.0%	8.9%	10.5%	8.4%
IT	Iccrea Holding S.p.A			Static	10.7%	11.2%	7.4%	11.2%	7.3%
IT	Intesa Sanpaolo S.p.A.			Static	11.7%	11.2%	8.3%	10.8%	7.8%
IT	Mediobanca - Banca di Credito Finanziario S.p.A.			Static	8.4%	9.2%	6.2%	9.3%	6.2%
IT	UniCredit S.p.A.			Static	9.6%	9.6%	6.8%	9.3%	6.5%
IT	Unione Di Banche Italiane Società Cooperativa Per Azioni			Static	11.8%	10.9%	8.2%	10.6%	7.9%
IT	Veneto Banca S.C.P.A.			Static	5.7%	5.9%	2.7%	5.8%	2.4%
LU	Banque et Caisse d'Epargne de l'Etat			Static	17.0%	16.8%	12.8%	22.8%	17.6%
LU	Precision Capital S.A. (Holding of Banque Internationale à Luxembourg and KBL European Private Bankers S.A.)			Static	14.0%	12.5%	8.3%	13.3%	8.1%
LV	ABLV Bank			Static	9.8%	10.5%	7.7%	10.5%	7.7%
MT	Bank of Valletta plc			Static	10.7%	13.2%	8.9%	12.8%	8.6%
NL	ABN AMRO Bank N.V.			Static	12.1%	13.6%	9.1%	13.5%	8.8%
NL	Bank Nederlandse Gemeenten N.V.			Static	21.8%	22.3%	17.3%	22.7%	17.4%
NL	Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.			Static	12.0%	11.2%	8.4%	10.4%	7.1%
NL	ING Bank N.V.			Static	10.1%	11.4%	8.7%	11.1%	8.2%
NL	Nederlandse Waterschapsbank N.V.			Static	72.5%	73.2%	54.0%	73.0%	53.8%
NL	SNS Bank N.V.	Yes		Static	14.9%	16.0%	6.8%	15.0%	4.9%
NO	DNB Bank Group			Static	11.3%	14.4%	11.3%	14.4%	11.3%
PL	ALIOR BANK SA			Static	13.0%	15.0%	8.1%	15.0%	8.1%
PL	BANK BPH SA			Static	14.0%	14.4%	10.8%	14.4%	10.8%
PL	BANK HANDLOWY W WARSZAWIE SA			Static	16.9%	16.2%	15.4%	16.2%	15.4%
PL	BANK OCHRONY SRODOWISKA SA			Static	10.8%	10.5%	8.0%	10.7%	8.0%
PL	GETIN NOBLE BANK SA			Static	8.6%	10.2%	7.4%	10.2%	7.4%
PL	POWSZECHNA KASA OSZCZEDNOSCI BANK POLSKI S.A. (PKO BANK POLSKI)			Static	14.2%	17.5%	14.3%	17.5%	14.3%
PT	Banco BPI	Yes		Static	15.2%	14.9%	11.6%	13.4%	9.5%
PT	Banco Comercial Português	Yes		Dynamic	10.3%	8.8%	3.0%	6.8%	-0.3%
PT	Caixa Geral de Depósitos	Yes		Dynamic	10.4%	9.4%	6.1%	8.4%	4.9%
SE	Nordea Bank AB (publ)			Static	13.6%	15.2%	12.0%	15.2%	12.0%
SE	Skandinaviska Enskilda Banken AB (publ) (SEB)			Static	14.7%	15.0%	13.0%	15.0%	13.0%

NSA	Bank	Approved restructuring plan		Balance sheet	CET1 ratio			Memo item: Fully loaded CET1 ratio <sup>39</sup>	
		Before Dec-2013	After Dec-2013		Starting 2013	Baseline 2016	Adverse 2016	Baseline 2016	Adverse 2016
SE	Svenska Handelsbanken AB (publ)			Static	18.7%	22.2%	16.9%	22.2%	16.9%
SE	Swedbank AB (publ)			Static	18.2%	19.3%	16.3%	19.3%	16.3%
SI	Nova Kreditna Banka Maribor d.d. <sup>41</sup>	Yes		Static	15.7%	12.8%	4.4%	12.4%	3.9%
SI	Nova Ljubljanska banka d. d. <sup>41</sup>	Yes		Static	14.6%	12.8%	5.0%	12.8%	4.8%
SI	SID - Slovenska izvozna in razvojna banka			Static	22.8%	25.3%	14.5%	25.3%	14.5%
UK	Barclays plc			Static	9.1%	9.8%	7.1%	9.8%	7.1%
UK	HSBC Holdings plc			Static	10.8%	12.0%	9.3%	12.0%	9.3%
UK	Lloyds Banking Group plc	Yes		Dynamic	10.2%	13.6%	6.2%	13.6%	6.0%
UK	Royal Bank of Scotland Group plc	Yes		Dynamic	8.6%	9.7%	6.7%	9.7%	6.7%

<sup>41</sup> The impact on 2014 of the restructuring measures already taken to improve structural profitability and the maintenance of retained earnings in banks will cover the shortfalls identified.

## Annex 2: Basic methodological background for reading the report

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This report focusses on aggregate EU-wide or country level information. Aggregate metrics are generally computed as weighted averages so that aggregate metrics are identical with the corresponding metrics on the combined balance sheet of the sample. For example the weighted average CET1 Capital ratio is calculated as the sum of CET1 Capital over the sample relative to the sum of total risk exposure amount over the sample. All metrics are generally reported for the full sample unless otherwise specified for specific analyses for restructuring bank that are exempted from the static balance sheet assumption. Key analyses are shown for all years of the exercise and for the baseline as well as the adverse scenario. More detailed analyses are shown for the adverse scenario and for the last year of the exercise only.

It should be noted that all results reported in this document are based on the combined effect of stress test and assets quality reviews. Consequently, data shown for the starting point 2013 may already have been adjusted based on results of the asset quality review and may therefore be different from data externally reported by banks.

This report is based on the full data set submitted from banks to the EBA in the EU-wide stress test template and is not limited to information disclosed by the EBA on a bank-by-bank basis.

Details on the methodology applied and the definition of stress test metrics, e.g. exposure and exposure classes, can be found in the Methodological Note EU-wide Stress Test 2014.<sup>42</sup>

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<sup>42</sup> <https://www.eba.europa.eu/documents/10180/669262/Methodological+Note.pdf>

## Annex 3: Scenario overview

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The EU-wide stress test is based on an adverse macroeconomic scenario provided by the ECB/ESRB in close collaboration with NCAs, the ECB and the EBA covering the years from 2014 to 2016. The baseline scenario was provided by the European Commission based on the winter forecast by extended by one year. The adverse scenario provides forward-looking paths for key macroeconomic and financial variables for all EU countries and a large number of non-EU countries.<sup>43</sup>

It reflects the systemic risks that were assessed as representing the most pertinent threats to the stability of the EU banking sector:

- an increase in global bond yields amplified by an abrupt reversal in risk assessment, especially towards emerging market economies;
- a further deterioration of credit quality in countries with feeble demand;
- stalling policy reforms jeopardising confidence in the sustainability of public finances; and
- an increase in banks' funding costs and the lack of necessary bank balance sheet repair to maintain affordable market funding.

The negative impact of the shocks, which include also a stress in the real estate sector, as well as a foreign exchange shock in Central and Eastern Europe, is substantially global. In the EU, the scenario leads overall to a cumulative deviation of EU GDP from its baseline level by -2.2% in 2014, by -5.6% in 2015, and -7.0% in 2016. The EU unemployment is higher than its baseline level, by 0.6pp in 2014, by 1.9pp in 2015 and by 2.9pp in 2016.

For most advanced economies, including Japan and the United States, the scenario results in a negative response of GDP ranging between 5-6% in cumulative terms compared to the baseline.

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<sup>43</sup> <https://www.eba.europa.eu/-/eba-publishes-common-methodology-and-scenario-for-2014-eu-banks-stress-test>

## Annex 4: Monitoring of EBA capital preservation recommendation

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On the 22nd of July 2013 the EBA published a Recommendation on the preservation of Core Tier 1 capital. The recommendation, addressed to competent authorities in all EEA member states, was issued with the aim to preserve the enhanced capital base and capital buffers that credit institutions built by 30 June 2012 in response to the EBA's recapitalisation exercise and the EBA December 2011 Recommendation on the creation and supervisory oversight of temporary capital buffers to restore market confidence.<sup>44</sup>

Competent authorities were recommended to ensure that a credit institutions maintain the nominal level of Core Tier 1 capital<sup>45</sup> (nominal floor) corresponding to the amount of capital needed as at 30 June 2012 to meet the requirements set out in the EBA December 2011 Recommendation.<sup>46</sup>

The sample of institutions under the scope of the capital preservation recommendation initially included the 61 banks that were finally assessed in October 2012, based on June 2012 data, in the framework of the EBA December 2011 recommendation. Nevertheless, 2 authorities, Bank of Slovenia and Central Bank of Cyprus, notified to the EBA their intention not to comply<sup>47</sup> with the capital preservation recommendation. Furthermore, regarding Banco Espírito Santo, and following the recent split-up of the bank into two separate entities, Novo Banco and an entity envisaged to wind down troubled assets, data is not currently available. Therefore, the list of institutions that are actually being assessed under this report includes 56 banks listed in a separate Annex.

In those cases where an institution's CT1 capital falls below the nominal floor level, banks were expected to produce credible plans for its restoration. Only limited waivers may be granted on a case by case basis, after in depth discussion within colleges of supervisors, when it is envisaged that the bank is or will be unable in the near future to keep the minimum level of CT1 capital, and will not be able to restore this floor. Under these circumstances, waivers may be granted either to accommodate restructuring plans; or where there is capital in excess to meet on a continuous

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<sup>44</sup> EBA/REC/2011/1

<sup>45</sup> CT1 defined to include the following deductions without transitional period: Goodwill: 100% deducted; IRB shortfall: 50% deducted from CT1 and 50% from Tier 2; holdings of financial sector entities: 50% deducted from CT1 and 50% from Tier 2; Deferred tax assets that rely on future profitability: no deduction; defined benefit pension fund assets: no deduction

<sup>46</sup> 9% Core Tier 1 capital of the June 2012 RWAs plus the sovereign capital buffer, EBA definition of Core Tier 1 capital as per envisaged in the December 2011 recommendation

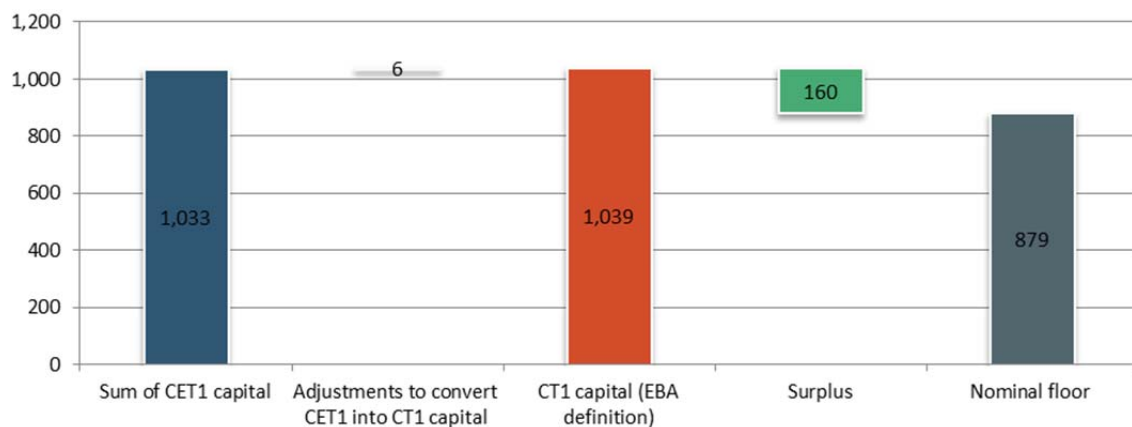
<sup>47</sup> Both national competent authorities explained their decision based on the deep restructuring process that their banks are undergoing triggered during the implementation of the EBA December 2011 recommendation due to the fact, among others, that their banks were unable to comply with that recommendation.



basis the minimum Common Equity Tier 1 requirements plus the capital conservation buffer required under fully implemented CRD/CRR rules (7% CET1 capital ratio).

On an aggregate basis, the 56 banks being assessed report a core tier 1 amount of capital of EUR 1,039BN as of end of December 2013, which represents a surplus of EUR 160BN compared to the aggregate nominal floor of EUR 879BN, i.e. a 18% surplus above the floor. It should be noted that compliance with the recommendation as of December 2013 is being assessed on the actual December 2013 CET1 capital data reported by each bank on a transitional basis as the starting point for the stress test.

Figure 2: Aggregate 2013 transitional Common Equity Tier 1 capital, EBA Core Tier 1 capital and required level of EBA Core Tier 1 nominal floor (EUR BN)



Out of the list of 56 banks in the sample of the recommendation, 9 banks report as of December 2013 nominal levels of CT1 capital below the nominal floor. 3 of these banks are undergoing deep restructuring processes and were granted a waiver on this basis. 5 banks show as of December 2013 a fully loaded CET1 capital ratio above 7%, and were granted a waiver on this basis. In the case of one bank, the bank presented a capital plan for the restoration of its nominal level of CT1 capital above the minimum floor, capital plan that is being implementing during 2014.

## Annex 5: Banks covered in the capital preservation recommendation

Table 6: Banks' compliance with capital preservation recommendation

NSA	Bank	Compliance with the recommendation as of 31/12/2013	Kind of waiver granted
AT	Erste Group Bank AG	Yes	
AT	Raiffeisen Zentralbank Österreich AG	Yes	
BE	KBC Group NV	Yes	
DE	Deutsche Bank AG	Yes	
DE	Commerzbank AG	Yes	
DE	Landesbank Baden-Württemberg	Yes	
DE	DZ Bank AG Deutsche Zentral-Genossenschaftsbank	Yes	
DE	Bayerische Landesbank	Yes	
DE	Norddeutsche Landesbank-Girozentrale	Waiver granted	Fully loaded CET1 ratio above 7%
DE	Hypo Real Estate Holding AG	Waiver granted	Fully loaded CET1 ratio above 7%
DE	HSH Nordbank AG	Waiver granted	Fully loaded CET1 ratio above 7%
DE	Landesbank Hessen-Thüringen Girozentrale	Yes	
DE	Landesbank Berlin Holding AG	Waiver granted	Fully loaded CET1 ratio above 7%
DE	DekaBank Deutsche Girozentrale	Yes	
DE	WGZ Bank AG Westdeutsche Genossenschafts-Zentralbank	Yes	
DK	Danske Bank	Yes	
DK	Jyske Bank	Yes	
DK	Sydbank	Yes	
DK	Nykredit	Yes	
ES	Banco Santander	Yes	
ES	Banco Bilbao Vizcaya Argentaria	Yes	
ES	Caja de Ahorros y Pensiones de Barcelona	Yes	
ES	Banco Popular Español	Waiver granted	Fully loaded CET1 ratio above 7%
FI	OP-Pohjola Group	Yes	
FR	BNP Paribas	Yes	
FR	Groupe Crédit Agricole	Yes	
FR	Groupe BPCE	Yes	
FR	Société Générale	Yes	
HU	OTP Bank Ltd	Yes	
IE	Allied Irish Banks plc	Yes	
IE	The Governor and Company of the Bank of Ireland	Yes	
IE	Permanent tsb plc.	Yes	
IT	Intesa Sanpaolo S.p.A.	Yes	
IT	UniCredit S.p.A.	Waiver granted	Fully loaded CET1 ratio above 7%

NSA	Bank	Compliance with the recommendation as of 31/12/2013	Kind of waiver granted
IT	Banca Monte dei Paschi di Siena S.p.A.	Waiver granted	Bank under restructuring
IT	Banco Popolare - Società Cooperativa	No, the bank is in the process of implementing capital measures to restore the floor	
IT	Unione Di Banche Italiane Società Cooperativa Per Azioni	Waiver granted	Fully loaded CET1 ratio above 7%
LU	Banque et Caisse d'Epargne de l'Etat	Yes	
MT	Bank of Valletta plc	Yes	
NL	ING Bank N.V.	Yes	
NL	Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.	Yes	
NL	ABN AMRO Bank N.V.	Yes	
NL	SNS Bank N.V.	Yes	
NO	DNB Bank ASA	Yes	
PL	POWSZECHNA KASA OSZCZEDNOSCI BANK POLSKI S.A. (PKO BANK POLSKI)	Yes	
PT	Caixa Geral de Depósitos	Waiver granted	Bank under restructuring
PT	Banco Comercial Português	Waiver granted	Bank under restructuring
PT	Banco BPI	Waiver granted	Fully loaded CET1 ratio above 7%
SE	Nordea Bank AB (publ)	Yes	
SE	Skandinaviska Enskilda Banken AB (publ) (SEB)	Yes	
SE	Svenska Handelsbanken AB (publ)	Yes	
SE	Swedbank AB (publ)	Yes	
UK	Royal Bank of Scotland Group plc	Yes	
UK	HSBC Holdings plc	Yes	
UK	Barclays plc	Yes	
UK	Lloyds Banking Group plc	Yes	