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25 November 2015

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Report

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# Report – 2015 EU-wide transparency exercise

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Revised version published on the 25<sup>th</sup> of November  
after recalculation of aggregate EU and country figures  
of fully loaded common equity tier 1 (CET1) ratio

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# Abbreviations

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<b>AT1</b>	Additional tier 1
<b>bp</b>	Basis points
<b>BN</b>	Billion
<b>BRRD</b>	Bank Recovery and Resolution Directive
<b>COREP</b>	Reporting on own funds and own funds requirements
<b>CT1</b>	Core tier 1
<b>CET1</b>	Common equity tier 1
<b>CoE</b>	Cost of equity
<b>CRD</b>	Capital Requirements Directive
<b>CRR</b>	Capital Requirements Regulation
<b>CVA</b>	Credit valuation adjustment
<b>CV</b>	Coefficient of variation
<b>DTAs</b>	Deferred tax assets
<b>EBA</b>	European Banking Authority
<b>ECB</b>	European Central Bank
<b>EU</b>	European Union
<b>FINREP</b>	Reporting on financial information
<b>GAAP</b>	Generally accepted accounting principles
<b>GDP</b>	Gross domestic product
<b>IFRS</b>	International Financial Reporting Standard(s)
<b>IRB</b>	Internal rating-based
<b>ITS</b>	Implementing technical standards
<b>NII</b>	Net interest income
<b>NPE</b>	Non-performing exposure
<b>Pp</b>	Percentage points
<b>P&amp;L</b>	Profit and Losses
<b>RoRC</b>	Return on regulatory capital
<b>RWA</b>	Risk-weighted assets (risk exposure amounts)
<b>SSM</b>	Single Supervisory Mechanism
<b>T1</b>	Tier 1
<b>T2</b>	Tier 2
<b>TLAC</b>	Total loss absorbing capacity
<b>TOI</b>	Total operating income
<b>TN</b>	Trillion

## Executive Summary

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The EBA 2015 EU-wide transparency exercise, which provides detailed bank-by-bank data, is designed to improve understanding of the EU banking sector and foster market discipline in the single market. The disclosure complements banks' own Pillar 3 disclosures.

The 2015 transparency exercise is based, for the first time, on existing supervisory reporting data submitted to the EBA on a quarterly basis insofar as is possible. This approach reduces the burden on banks, avoids ad hoc data collection, and ensures harmonised and fully comparable figures across the EU.

The 2015 transparency exercise covers 105<sup>1</sup> banking groups from 21 countries across the EU and Norway, with a total of about EUR 30 TN assets covering more than 67% of total EU banking assets. The 2015 EU-wide transparency exercise is coordinated by the EBA across the EU and is carried out in cooperation with the competent authorities from all relevant national jurisdictions and, when relevant, the ECB-SSM.

The EBA's website contains granular data for each bank, which is available in form of interactive tools downloadable from the EBA website<sup>2</sup> and designed to facilitate analysis and visualisation of key data points in relative terms. This report is a complement to that data and summarises the aggregate results of the exercise to give an overview of developments in the single market<sup>3</sup>.

In general, EU banks have continued to strengthen their capital positions, mainly through raising additional equity and retaining earnings. This process has led to aggregate improvements in CET1 ratio, T1 ratio and total capital ratio (12.8%, 14.0% and 16.7% respectively, as of June 2015), all of which are above legal minima and compare favourably with levels in large banks globally. The fully loaded CRD IV/CRR CET1 ratio reached 12.0% and the impact of the transitional adjustments has also become less relevant, facilitating comparability and levelling the playing field across banks.

Leverage ratios have benefited from capital improvements in recent years. The current aggregate leverage ratio is 4.9%, progressing towards meeting the requirements that will come into force in 2018.

On the back of strengthened capital bases, banks have been able to gradually increase lending into the real economy, with lending in the first-half of 2015 increasing towards retail and corporates. Banks' enhanced capacity to serve the recovery process suggests a change in impetus

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<sup>1</sup> Participating institutions are listed in Annex A

<sup>2</sup> <https://www.eba.europa.eu/risk-analysis-and-data/eu-wide-transparency-exercise/2015>

<sup>3</sup> Cut-off date for the data: 20 November 2015 – COB

from deleveraging to stabilisation and growth. An increase in cross-border lending is also evident. The increase in lending has been accompanied by a very gradual improvement of asset quality, although levels of non-performing exposures in EU banks remain a concern and a potential impediment to lending growth and profitability. Across the EU, non-performing loans are close to 6% of total loans and advances, and are 10% when only exposures towards non-financial corporations are considered. Smaller banks<sup>4</sup> report higher aggregate NPE ratios for loans and advances, at about 18%, compared to 9% for medium-sized banks and 4% for larger banks.

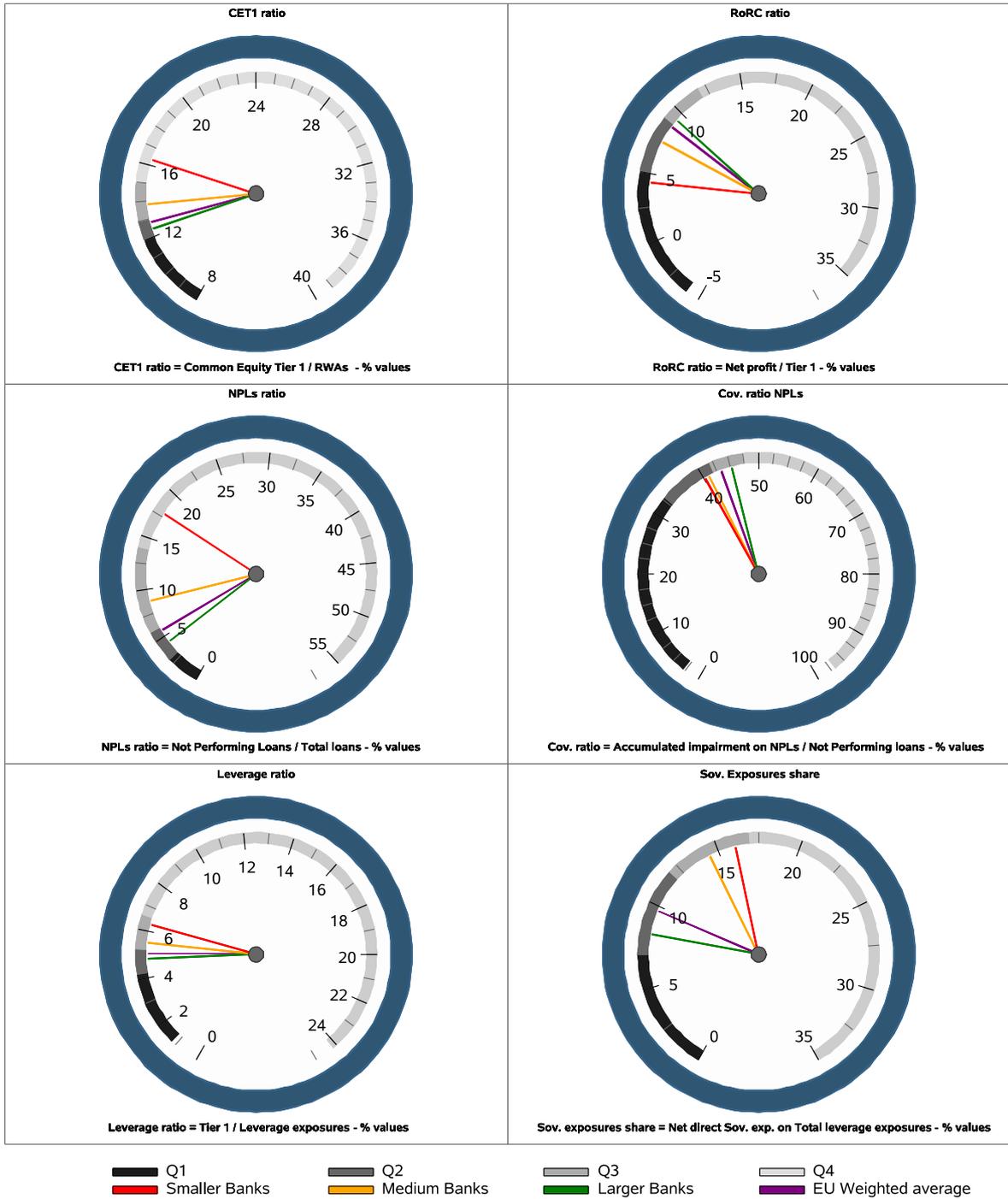
In terms of profitability, EU banks aggregate return on equity materially improved during the first half of 2015 (from 4.65% RoRC as of December 2014 to 9.1% as of June 2015), mainly driven by larger net income coming from trading activities and lower impairments, and partially explained by the seasonality of impairments. However, profitability remains weak by historical standards and relative to banks' estimated CoE. In addition, dispersion across countries remains high.

On sovereign exposures, the data show that a home bias when investing in sovereign debt is still relevant although gradually receding, as banks reported in June 2015 an increase in their holdings of non-domestic sovereign debt.

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<sup>4</sup> The group of small banks is defined as those banks in the fourth quartile of the sample of the transparency exercise in terms of total assets. Medium banks are those in the second and third quartiles, and large banks are those in the first quartile.

Figure 1: Key figures of the EBA 2015 EU-wide transparency exercise – quartile distribution of the indicators for the whole sample, EU weighted average and weighted average for large, medium and small banks (June 2015)



# 1. Rationale, purpose and main features of the EU-wide transparency exercise

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## 1.1 Rationale and purpose of the exercise

The EBA is mandated by its founding regulation (Regulation (EU) 1093/2010) to contribute to ensuring the integrity, transparency, efficiency and orderly functioning of EU financial markets, and the stability of the financial system in the EU. For this purpose, the authority has constructed a comprehensive risk infrastructure, including supervisory reporting, data collections, risk dashboards, semi-annual risk reports, and transparency and stress test exercises.

The EBA has been conducting transparency exercises at an EU-wide level on an annual basis since 2011, either linked to concurrent stress test exercises (2011 and 2014), to one-off exercises (like the 2011/2012 recapitalisation exercise), or to specific sole transparency exercises where non-stressed actual data were published for a sample of banks, as in 2013 and the current 2015 exercise.

Stress test and transparency are different types of exercises conducted by the EBA on a regular basis at an EU-wide level, with similarities but also relevant differences:

- both are conducted at an EU-wide level for the largest banks at their highest level of consolidation;
- both aim to promote market and supervisory discipline and provide transparency on banks' exposures in order to address any uncertainties that may exist;
- both disclose an important amount of bank-by-bank actual data on similar topics: capital, RWA, credit risk, market risk, and exposures towards sovereigns.

But also with essential differences:

- while a transparency exercise is a pure disclosure exercise where only bank-by-bank actual data are published, under a stress test exercise banks have to apply to the actual data shocks and different levels of stress defined in common scenarios with common constraints and project the results accordingly, in order to assess their resilience to adverse market developments;

- in the case of a stress test exercise, bank-by-bank disclosure goes beyond the actual data strictly published in a transparency exercise and includes projections estimated according to the scenarios and methodology prescribed.

Following its founding regulation, the EBA decides on a yearly basis whether or not to conduct a stress test exercise. On those years where a stress test exercise is not conducted, a transparency exercise is carried out.

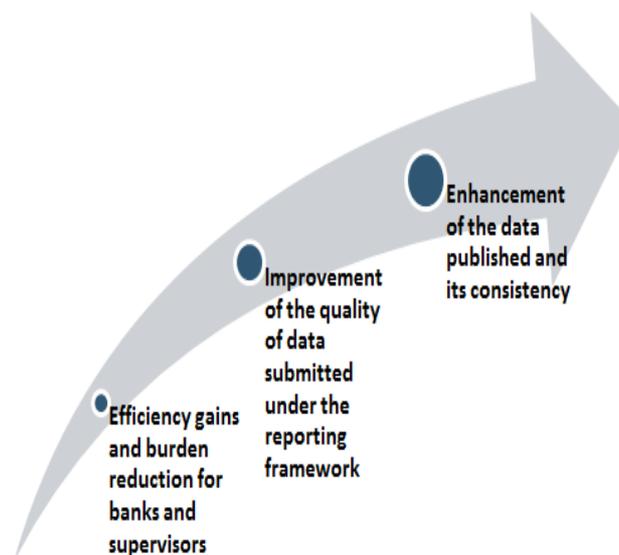
The transparency exercise is part of the EBA's ongoing efforts to foster transparency and market discipline in the EU internal market of financial services, and complements banks' own Pillar 3 disclosures, as set out in the EU CRD. It is designed to address uncertainties that may affect the EU banking sector as a whole.

## 1.2 Main features of the exercise

### 1.2.1 Reliance on supervisory reporting data

The EBA 2015 EU-wide transparency exercise has been conducted for the first time relying as much as possible on supervisory reporting information: COREP and FINREP, including non-performing exposures and forbearance. Templates were populated centrally by the EBA and submitted for verification by banks and supervisors, who are responsible for the accuracy of the data. Only in the case of two topics (sovereign exposures and leverage ratio), for which supervisory reporting data at the required level of detail are not available, was data collected ad hoc from banks as in previous exercises.

Figure 2: Advantages of using supervisory reporting data in the transparency exercise



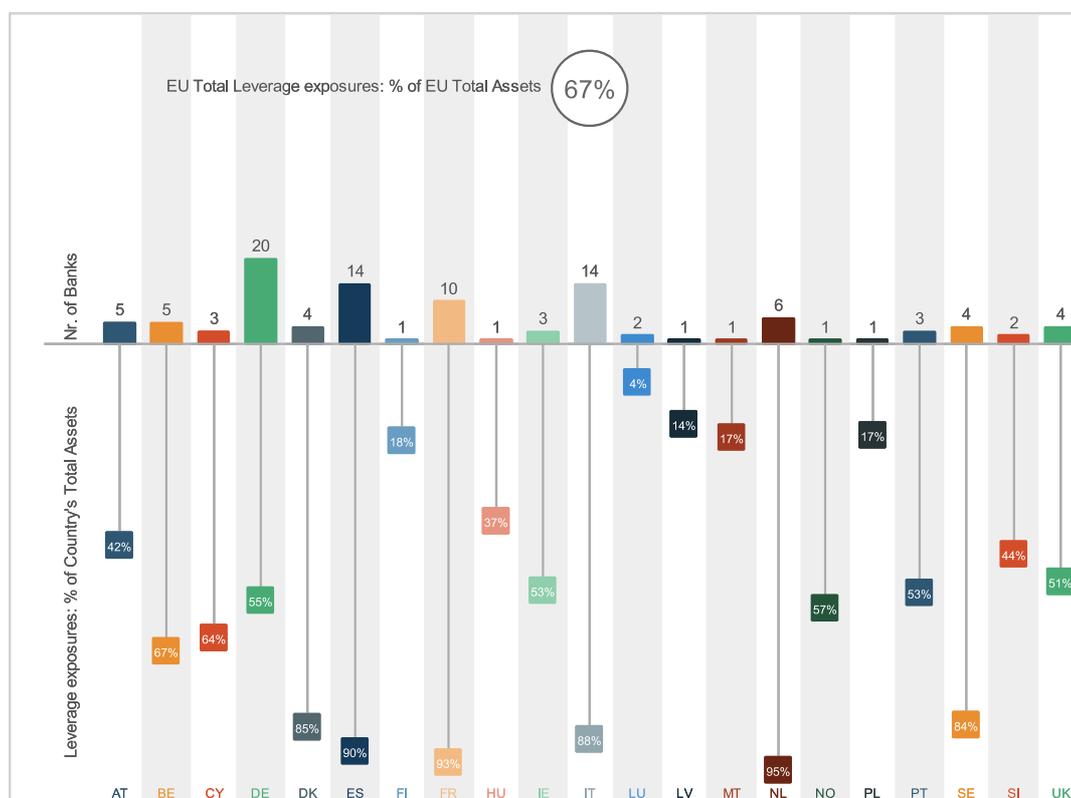
### 1.2.2 Sample of banks

The sample of banks comprises all the banks that took part in the 2014 EU-wide stress test whose supervisory reporting is being submitted to the EBA by competent authorities. The four Greek

banks<sup>5</sup> have been excluded on the grounds that, in parallel with the transparency exercise, they were undergoing a comprehensive assessment exercise conducted by the ECB.

The final sample includes 105 banks from 21 countries. Banks participate in the exercise at the highest level of consolidation (Figure 3). For the nine banks that do not report FINREP data since they either do not follow IFRS, instead following local GAAP, or do not report FINREP data on a consolidated level, only COREP templates are published.

**Figure 3: Sample of banks in the 2015 EU-wide transparency exercise – number of banks and percentage of total leverage exposures covered, by country of origin of the bank**

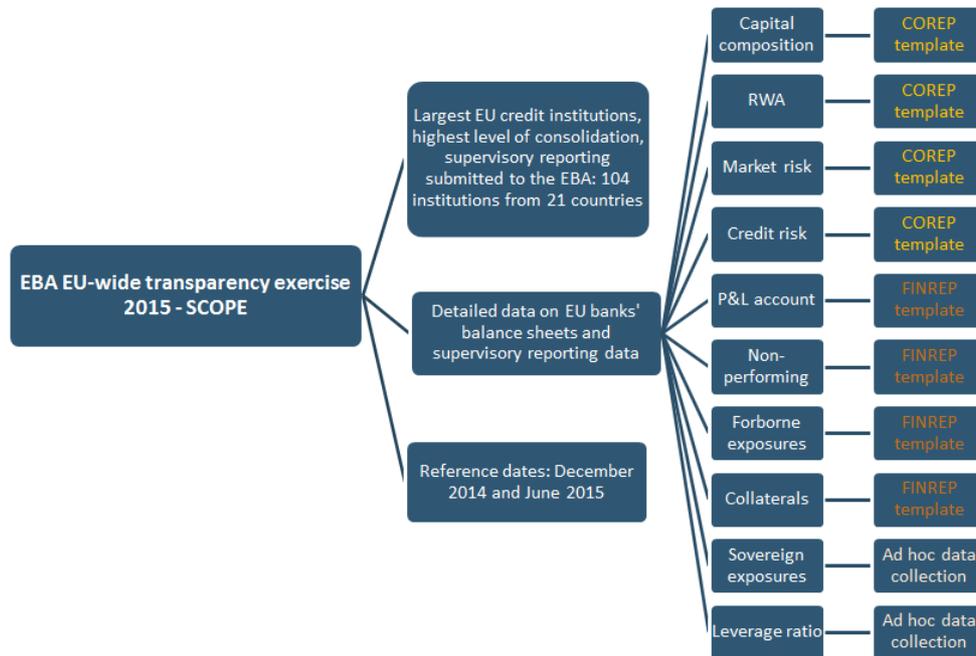


### 1.2.3 Scope of the transparency exercise and transparency templates

The EBA 2015 EU-wide transparency exercise covers 105 banks from 21 countries at the highest level of consolidation. Detailed bank-by-bank data on financial statements, own funds and risk exposure amounts (i.e. RWA) are being published for two reference dates: 31 December 2014 and 30 June 2015. The templates disclosed include information on capital, RWA, market and credit risk, asset quality (non-performing exposures, forbearance and collaterals), profitability, sovereign exposures, and leverage ratio.

<sup>5</sup> Alpha Bank AE, Eurobank, National Bank of Greece SA and Piraeus Bank SA.

Figure 4: Scope of the EBA 2015 EU-wide transparency exercise



The information disclosed in 2015 is in line with previous EBA EU-wide exercises, ensuring continuity. However, the 2015 exercise includes some relevant additions, taking advantage of the extension of the scope of the EBA supervisory reporting data, which now include information on non-performing exposures and forborne exposures. This data is reported by banks applying the EBA definitions envisaged in the EBA ITS on supervisory reporting on forbearance and non-performing exposures under Article 99(4) of Regulation (EU) No 575/2013 (CRR).

Figure 5: Data disclosed in the different EBA EU-wide exercises

2011 EU-wide stress test exercise	2011/2012 EU-wide capital exercise	2013 EU-wide transparency exercise	2014 EU-wide stress test Exercise	2015 EU-wide transparency exercise
<ul style="list-style-type: none"> <li>•Capital composition</li> <li>•Total RWA</li> <li>•Sovereign exposures</li> <li>•Credit risk exposures by exposure class and country of counterparty</li> </ul>	<ul style="list-style-type: none"> <li>•Capital composition</li> <li>•Total RWA</li> <li>•Composition of RWA</li> <li>•Sovereign exposures</li> </ul>	<ul style="list-style-type: none"> <li>•Capital composition</li> <li>•Total RWA</li> <li>•Composition of RWA</li> <li>•Sovereign exposures</li> <li>•Credit risk exposures by exposure class and country of counterparty</li> <li>•Market risk exposures</li> <li>•Securitisations</li> </ul>	<ul style="list-style-type: none"> <li>•Capital composition</li> <li>•Total RWA</li> <li>•Composition of RWA</li> <li>•Sovereign exposures</li> <li>•Credit risk exposures by exposure class and country of counterparty</li> <li>•Securitisations</li> <li>•Summary of P&amp;L account</li> <li>•Major pre-emptive capital measures</li> </ul>	<ul style="list-style-type: none"> <li>•Capital composition</li> <li>•Total RWA</li> <li>•Composition of RWA</li> <li>•Sovereign exposures</li> <li>•Credit risk exposures by exposure class and country of counterparty.</li> <li>•Market risk exposures</li> <li>•Summary of P&amp;L account</li> <li>•Non performing exposures</li> <li>•Forborne exposures</li> <li>•Leverage ratio</li> </ul>

## 2. Aggregate figures

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### 2.1 Capital position

#### **EU banks have continued to strengthen their capital positions, mainly through raising additional equity and retaining earnings**

The strengthening of banks' capital position as a result of the process of repairing the European banking sector is significant four years after its commencement in 2011. EU banks show a solid capital position in June 2015. The aggregate CET1 capital ratio for the 105 banks in the sample is 12.8%, with the T1 capital ratio at 14.0% and the total capital ratio reaching 16.7%. The fully loaded CET1 ratio, i.e. computed without the application of the transitional adjustments set out in Part Ten of the CRR, reached 12.0%.

#### **Box 1: Evolution of capital ratios for the balanced sample (December 2011 - June 2015)**

Since 2011, the EBA has been collecting and disclosing data on the capital positions of European banks. Based on data from a balanced sample,<sup>6</sup> which includes the 59 institutions with total assets of EUR 26 TN (approximately 88% of the total for the whole sample as of June 2015) that have taken part in all EBA EU-wide exercises since 2012, a longer time series analysis can be carried out. Since December 2011, the CET1 ratio<sup>7</sup> has increased by 280bp, from 9.7% to 12.6% (Figure 6), following the efforts of banks, supervisors and regulators to overcome banks' vulnerable capital position in the aftermath of the financial crisis. Since then, banks have taken actions to ensure the clean-up of their balance sheets and the strengthening of their solvency. The improvement of banks' capital levels has been achieved more through increases of capital than reductions of RWA. Major new regulatory requirements and other supervisory initiatives (i.e. regular stress tests, capital exercises, or supervisory recommendations to maintain the capital base through retained earnings) have produced very positive effects on banks' solvency.

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<sup>6</sup> List of institutions in the Balanced Sample is included in Annex A

<sup>7</sup> Capital ratios prior to the entry into force of the CRD IV/CRR, i.e. December 2011 and 2012, computed according to Core Tier 1 (CT1, defined to include the following deductions: 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)

Figure 6: Evolution of CET1 capital ratio, December 2011 - June 2015 (balanced sample)

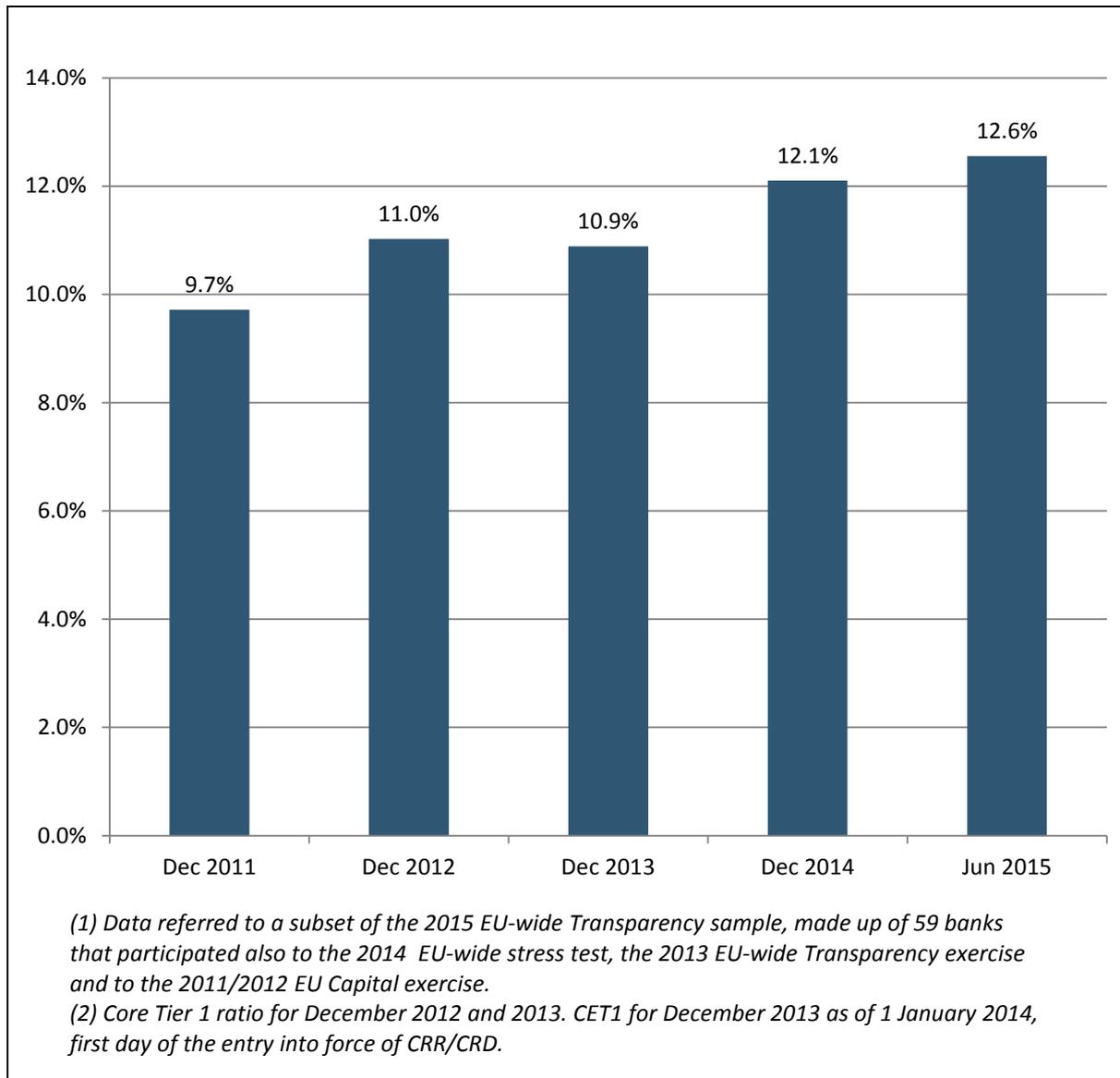
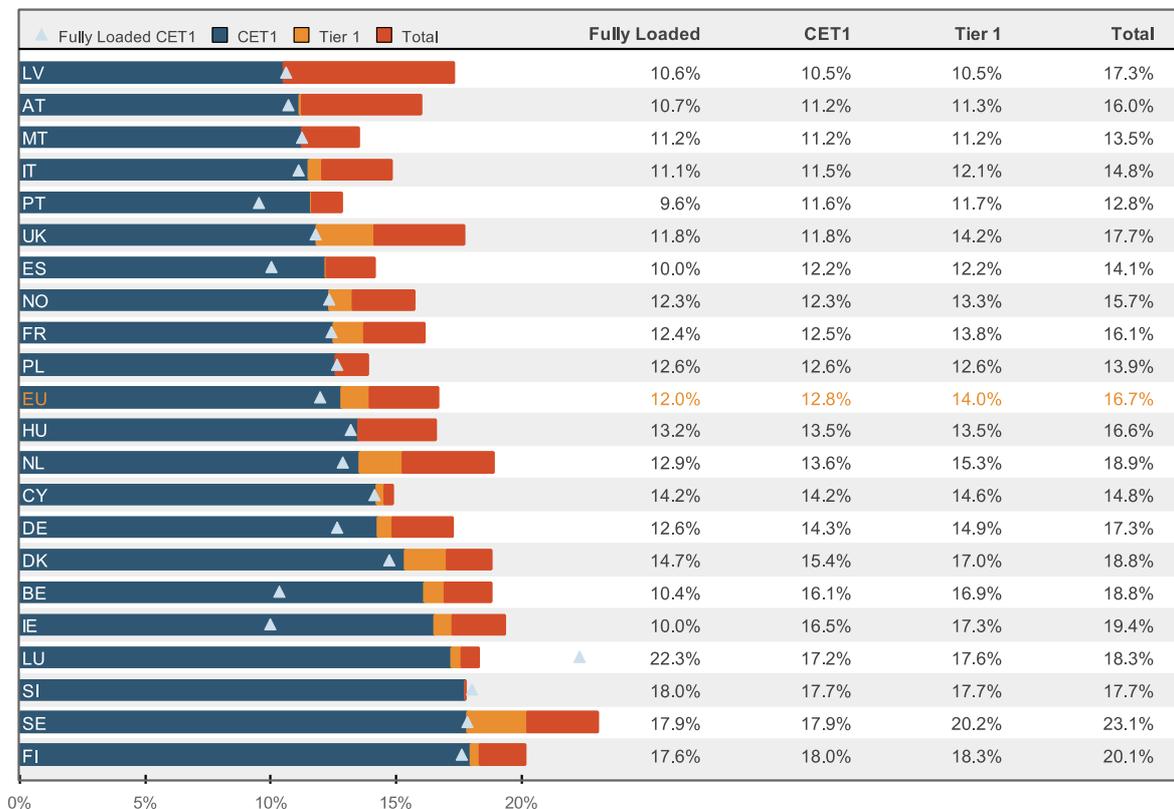


Figure 7 displays the dispersion of capital ratio values at country level, which is more notable for CET1 and T1 capital ratios than for total capital ratios. Capital ratios for all participating banks are comfortably above the CRD IV/CRR minima, with only four banks below 10% for the CET1 ratio considering transitional adjustments.

Figure 7: Capital ratios by banks' home country (June 2015)

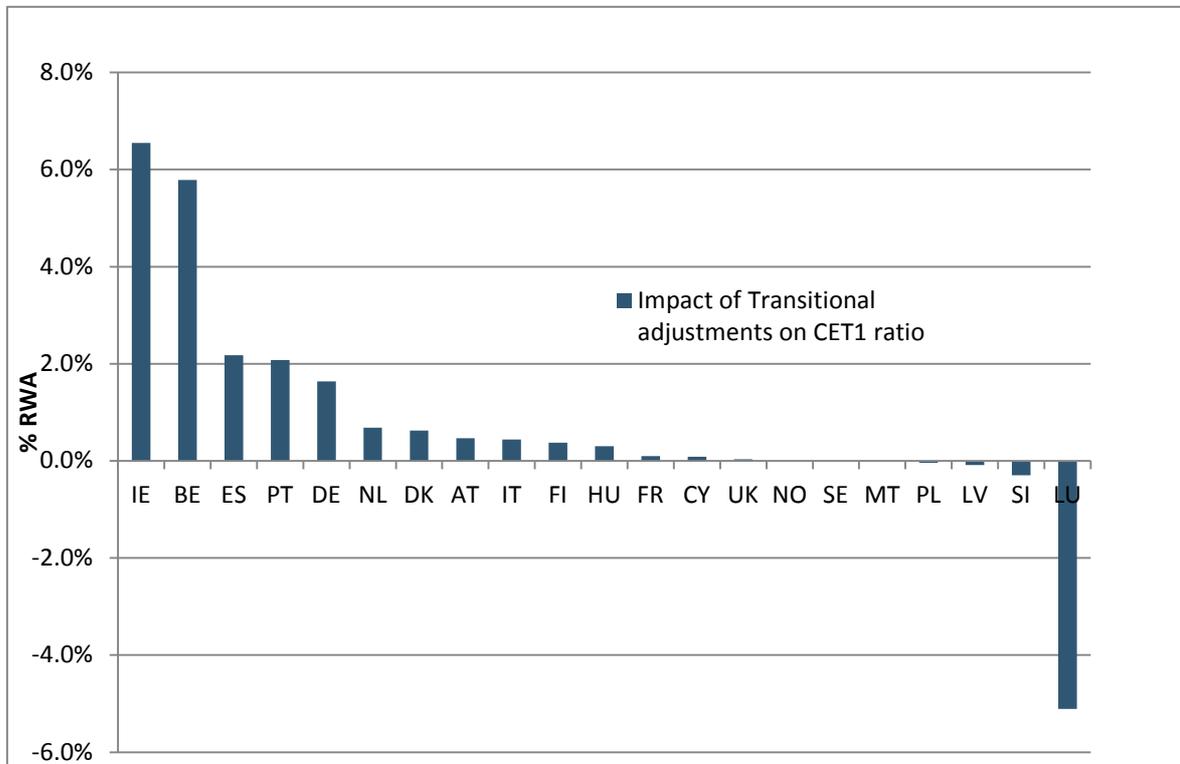


### Decreasing impact of transitional adjustments on banks' capital ratio

The reinforcement of banks' solvency in recent years has been accompanied by the harmonisation of the definition of regulatory capital by the CRD IV/CRR package. Nevertheless, capital positions still reflect some differences in the capital definition linked to the national discretions allowed in the context of the phase-in period of deductions and the grandfathering of capital instruments. To overcome this potential distortion the EBA is disclosing the bank-by-bank details of capital components, such as DTAs and minority interest, making computation of the fully loaded CET1 ratio possible.

Data as of June 2015, the mid-point of the transitional period for most of phased-in deductions, show that most of the transition has already been done. However, the dispersion is large and for some countries the effect of transitional adjustments is still relevant due to the importance of those elements for which the phase-in period can extend longer than five years if decided at a national level (e.g. DTAs) or due to grandfathered capital instruments. On the other hand, for some countries the effect is null due to the acceleration of the phase-in calendar. Figure 8 displays the impact of the remaining transitional adjustments by country, i.e. the difference between phased-in a fully loaded ratio.

Figure 8: Impact of transitional adjustments by country of banks (June 2015)



### CET1 capital has been banks' priority in their recapitalisation effort

The comparison of the different capital layers, both at an aggregate EU and country level, confirms the prominence of CET1 in the capital structure of banks. CET1 capital has been banks' priority in their recapitalisation efforts, also triggered by the CRD IV/CRR, which enforces the creation of regulatory capital with proven loss absorption capacity. Nevertheless, the remaining capital categories are also relevant in order to achieve a cost-efficient capital structure. Moreover, T1 capital is valid for both leverage and TLAC requirements, while T2 capital is also usable for the latter.

Data show how institutions have not yet fulfilled their potential in relation to T1 going concern capital, and report low levels of AT1. At an aggregate level, the gap between T1 and CET1 capital is only 120bp, indicating that, despite the increasing volume of AT1 instruments issuances, especially from 2013- current amounts are low for some banks.

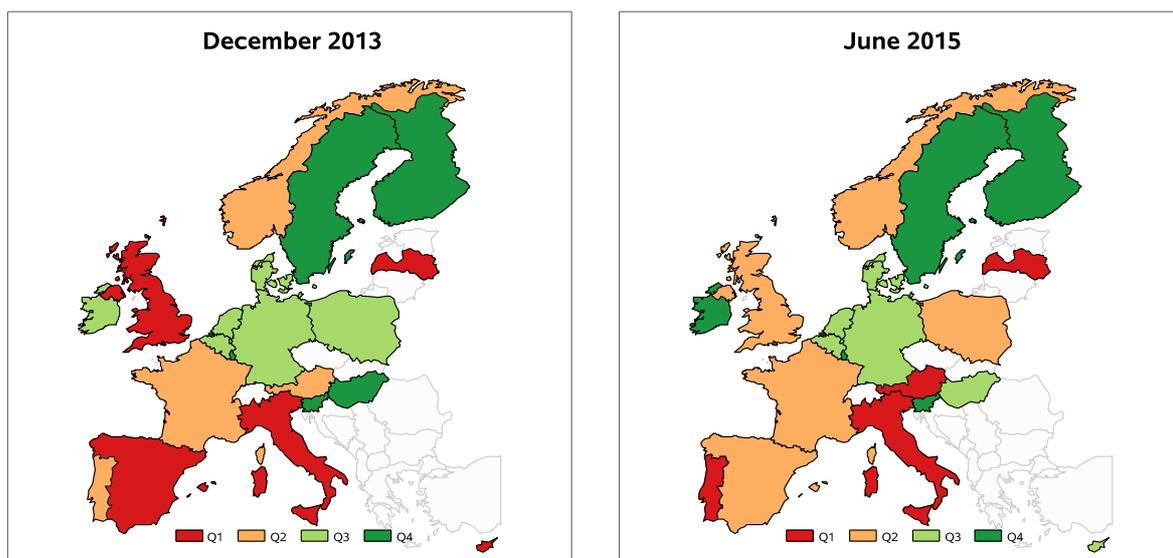
The analysis across countries (Figure 7) suggests that the presence of AT1 capital is dependent on the size of the country where the bank is domiciled. The market for AT1 instruments is less developed for small and peripheral countries. For just three countries the contribution of AT1 capital exceeded 2% of RWA, and only for three additional countries was it above 1%. The contribution for the remaining 16 countries was barely able to cover the correspondent deductions, including six countries with a null share.

Conversely, the aggregate contribution of T2 capital reached 2.7% of RWA, with a more even distribution among countries. Although a non-insignificant share can still relate to grandfathered elements, banks appear to have maintained similar levels to those observed before the adoption of the CRD IV/CRR.

### Growth in capital ratios has been accompanied by growth in RWA since 2013

The positive evolution of capital ratios has been based on a sustained increase of banks' capital base. On the other hand, RWA have undergone a mixed evolution across the period. Following an initial decrease in 2012 due to deleveraging practices by banks, this tendency has moved to a pattern of growth since 2013, largely supported by capital base growth. This growth trend suggests a more natural improvement of capital position compatible with lending and enhanced contribution to economic growth. Figure 9 shows the evolution of CET1 ratios by quartiles from December 2013 to June 2015 by country of the bank.

Figure 9: Evolution of CET1 ratio by country of banks (December 2013 - June 2015): relative position and allocation to quartiles of CET1 ratios distribution



A deeper dive into the evolution of capital for all the banks in the sample during the period December 2013-June 2015, shows that the CET1 ratio increase of 170bp was grounded by capital base improvements<sup>8</sup> (+190bp) while RWA increase detracted 10bp from CET1 ratio (Figure 10). On the drivers of the CET1 capital increase, 52% corresponded to augmented retained earnings, 24% to increase in other reserves, and 9% to the rise of capital instruments.

The analysis of the capital strengthening across countries for the same period shows that almost all the countries increased their CET1 capital, with increases ranging from 0.5% to 3.3%. In the

<sup>8</sup> A shift-and-share analysis has been carried out: the variation of the CET1 ratio between Dec\_2013 and Jun\_2015 =  $\Delta_{CET1\_ratio} = \frac{CET1_{Jun\_15}}{RWAs_{Jun\_15}} - \frac{CET1_{Dec\_13}}{RWAs_{Dec\_13}} = \left[ \frac{CET1_{Jun\_15} - CET1_{Dec\_13}}{RWAs_{Dec\_13}} \right] + CET1_{Dec\_13} \left[ \left( \frac{1}{RWAs_{Jun\_15}} \right) - \left( \frac{1}{RWAs_{Dec\_13}} \right) \right] + (CET1_{Jun\_15} - CET1_{Dec\_13}) \left[ \left( \frac{1}{RWAs_{Jun\_15}} \right) - \left( \frac{1}{RWAs_{Dec\_13}} \right) \right] = \text{Capital\_Effect} + \text{RWAs\_Effect} + \text{Combined\_effect}$ . Differences due to rounding effects should be considered when looking at the figures.

case of Cyprus, it should be noted that the hike in banks' capital ratios was driven by the recapitalisation of the financial sector in 2014.

**Figure 10: Distribution of CET1 ratio by country of banks (December 2013 - June 2015): decomposition of capital effect and RWA effect (% points)**

	Delta CET1 ratio (*)	Due to Capital	Due to RWAs	Combined effect
Cyprus	9.8%	9.1%	0.2%	0.5%
Ireland	3.3%	2.5%	0.7%	0.1%
Slovenia	2.9%	3.0%	-0.1%	0.0%
Sweden	2.6%	1.4%	1.1%	0.1%
Belgium	2.1%	1.3%	0.7%	0.1%
United Kingdom	2.1%	2.7%	-0.5%	-0.1%
Italy	2.0%	1.7%	0.3%	0.0%
Netherlands	2.0%	2.4%	-0.3%	-0.1%
Spain	1.8%	2.3%	-0.4%	-0.1%
Europe	1.7%	1.9%	-0.1%	0.0%
Finland	1.6%	2.0%	-0.3%	0.0%
Germany	1.4%	1.8%	-0.4%	0.0%
Luxembourg	1.4%	2.2%	-0.7%	-0.1%
France	1.3%	1.2%	0.1%	0.0%
Denmark	1.1%	1.4%	-0.3%	0.0%
Norway	1.0%	1.0%	0.0%	0.0%
Latvia	0.8%	2.6%	-1.4%	-0.4%
Austria	0.6%	-0.1%	0.7%	0.0%
Malta	0.5%	3.0%	-1.9%	-0.5%
Portugal	0.5%	0.3%	0.2%	0.0%
Poland	-1.6%	1.5%	-2.8%	-0.3%
Hungary	-2.4%	-3.8%	1.8%	-0.4%

### EBA 2014 EU-wide stress test prompted capital improvements

On the dynamics of the improvement of banks' capital position, banks in a relatively worse starting situation improved their solvency to a larger extent than the others, mostly by increasing their capital base rather than decreasing their RWA. Data displayed in Figure 11 show a positive impact of the 2014 EU-wide stress test exercise as a driver for capital improvements. Banks with a shortfall detected during the 2014 exercise or with the lowest ending CET1 capital under the adverse scenario have improved their CET1 ratio to a larger extent by increasing their capital base.

**Figure 11: Trend of CET1 ratio (December 2013-June 2015) according to 2014 EU- wide stress test results: decomposition of capital effect and RWA effect (mln EUR and %)**

	CET1 (mln Eur)		RWAs (mln Eur)		CET1 ratio (%)		Total (f) - (e)	Delta CT1 ratio		
	Dec-13	Jun-15	Dec-13	Jun-15	Dec-13	Jun-15		Due to Capital	Due to RWAs	Combined effect
	(a)	(b)	(c)	(d)	(e)	(f)		$[(b)-(a)]/(c)$	$(a) * [(d)^{-1} - (c)^{-1}]$	$[(b)-(a)] * [(d)^{-1} - (c)^{-1}]$
Group 1: Banks with a shortfall	42,892	56,852	503,778	470,033	8.5%	12.1%	3.6%	2.8%	0.6%	0.2%
Group 2: Other banks - I Quartile	294,959	355,603	3,018,355	2,935,821	9.8%	12.1%	2.3%	2.0%	0.3%	0.1%
Group 3: Other banks - II Quartile	386,090	433,283	3,456,918	3,496,456	11.2%	12.4%	1.2%	1.4%	-0.1%	0.0%
Group 4: Other banks - III Quartile	321,841	386,261	2,898,969	3,110,461	11.1%	12.4%	1.3%	2.2%	-0.8%	-0.2%
Group 5: Other banks - IV Quartile	156,777	172,704	920,094	928,119	17.0%	18.6%	1.6%	1.7%	-0.1%	0.0%
<b>Grand Total</b>	<b>1,202,558</b>	<b>1,404,702</b>	<b>10,798,114</b>	<b>10,940,892</b>	<b>11.1%</b>	<b>12.8%</b>	<b>1.7%</b>	<b>1.9%</b>	<b>-0.1%</b>	<b>0.0%</b>

**RWA changes**

Also during the December 2013 - June 2015 period, the denominator of the capital ratio, i.e. RWA, increased by 1.3%. This increase was primarily due to the credit risk component, whose growth over the period represented about 70% of the total increase. The other positive input came from operational risk (38.9%). On the other hand, market risk (including CVA) has remained basically stable (-0.8%) and other RWA (e.g. Basel 1 floor, macroprudential or large exposures requirements) contributed negatively by decreasing -8.9%. This tendency hints at a positive performance of lending across the period as discussed below in the credit risk section. It also suggests that the regulatory reform may have begun to generate a shift to more traditional business models, reducing the share of trading activities.

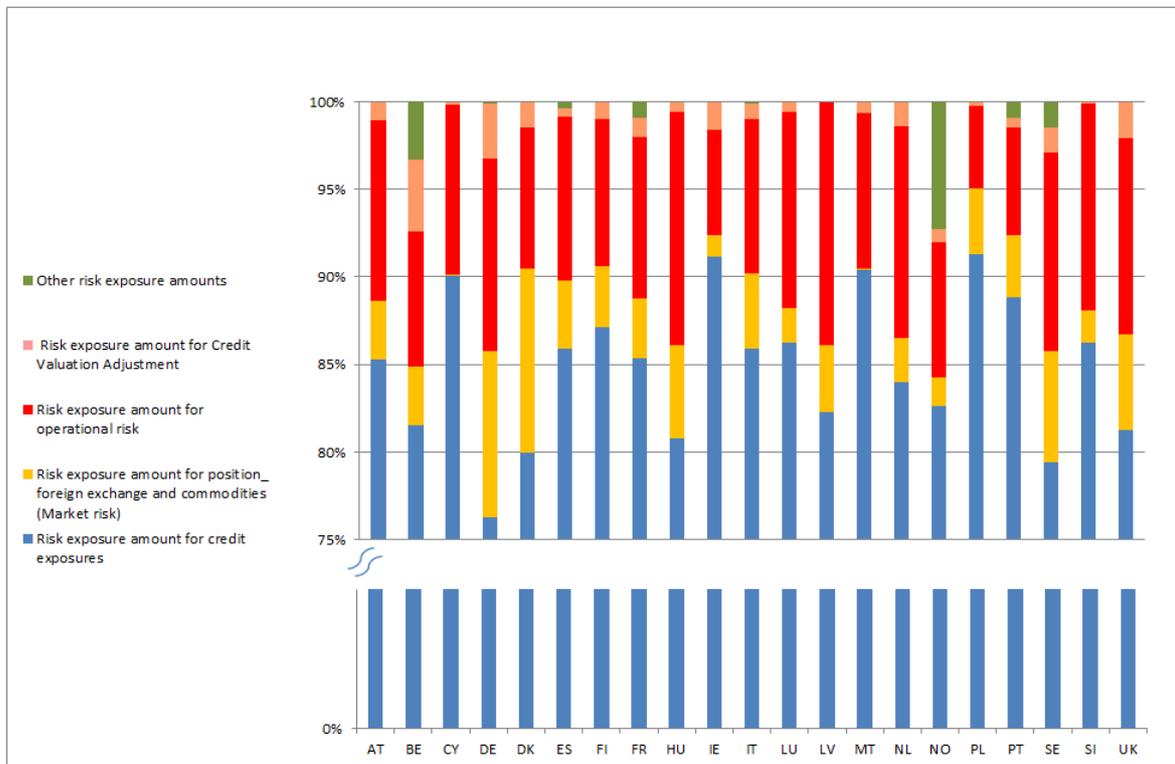
**Figure 12: Evolution of EU aggregate RWA by risk type, December 2013–June 2015 (% and BN EUR)**



The relevance of the different risks remained constant in the composition of RWA. As of June 2015, the major contribution to RWA stemmed from credit risk (83.1%), then operational risk (10.0%), and market risk and CVA (6.4%). This structure was, in general, common across countries. The major component of RWA was credit risk in all jurisdictions, ranging from 76% to

91% of share. Banks in 19 countries reported operational risk as the second largest contributor to RWA, while for banks in two countries (Germany and Denmark) market risk (including CVA) was in aggregate the second contributor (Figure 13).

Figure 13: Contribution of RWA by risk type per country (June 2015)

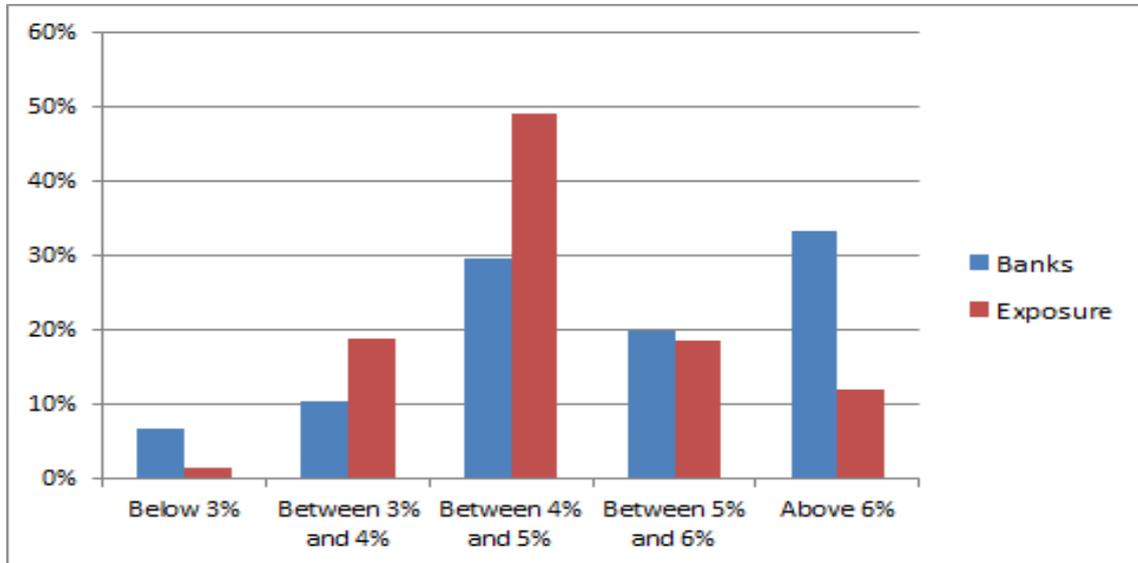


## 2.2 Leverage ratio

The new regulatory framework established by the CRD IV/CRR introduced a new leverage ratio requirement that will become binding from 1 January 2018. Until that date, banks are required to individually disclose their leverage ratio data starting on 1 January 2015 on a transitional or fully loaded basis. For the first time in an EBA disclosure exercise, a set of bank-by-bank data on the leverage ratio is published.

EU banks’ leverage ratios have also benefited from capital improvements in recent years. The aggregate leverage ratio, based on reported figures, was 4.9%. However, the distribution of the ratio across banks (Figure 14) showed that 7% of the banks (representing only 1% of total exposure) reported a leverage ratio still below 3%, and an additional 10% of the banks in the sample, representing 19% of the total exposure, reported a leverage ratio below 4%. The 30% of banks representing 49% of the total exposure reported a ratio between 4% and 5% in line with aggregate EU value. The remaining 53% of banks, and 31% of total exposure, enjoyed a leverage ratio above 5%.

Figure 14: Distribution of banks according to leverage ratio (June 2015)



## 2.3 Aggregate figures per risk type

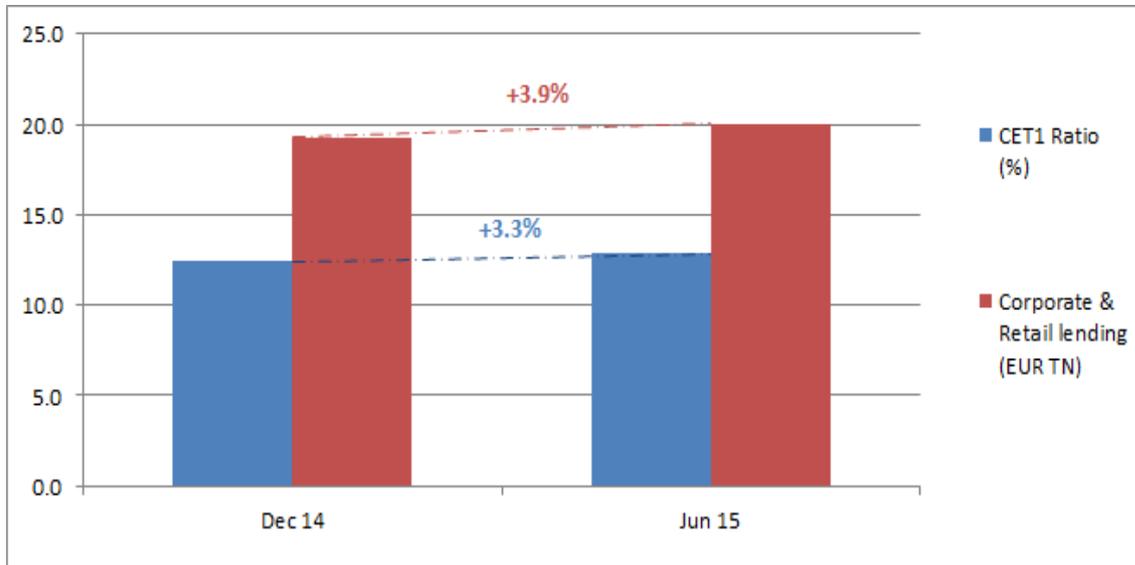
### 2.3.1 Credit risk

#### (i) Exposure value and risk exposure amounts

##### **Banks have gradually increased lending into the real economy**

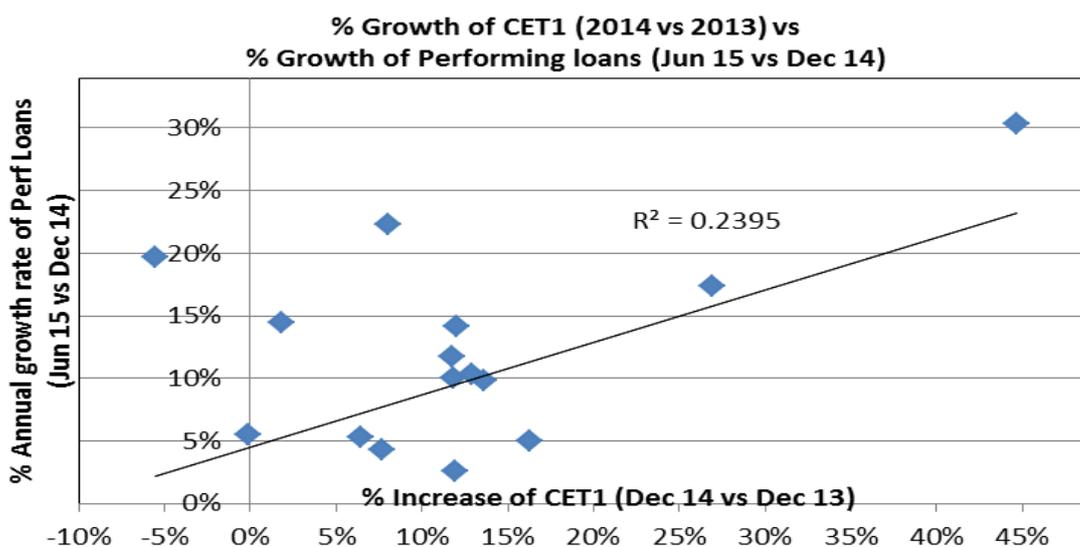
During the first half of 2015 the increase in banks' capital position has been accompanied by a notable growth in lending. During this period, the aggregate CET1 capital ratio increased by 3.3% (+41bp). In parallel, corporate and retail credit risk exposures for all the banks in the sample have increased by EUR 74 BN (3.9%) since the beginning of the year (Figure 15), confirming that increases in capital do not prevent banks from lending but are rather a precondition for it.

Figure 15: Evolution of CET1 ratios (%) and aggregate exposure value for corporate and retail portfolios (TN) (December 2014 - June 2015)



This underpins the idea that better capitalised banks are in a better position to increase the flow of lending to the real economy. Based on a univariate analysis (Figure 16), banks that increased the most capital between December 2013 and December 2014 are those that also granted more loans in the subsequent six months.

Figure 16: Evolution of CET1 (December 2014 vs December 2013) compared with evolution of performing loans (June 2015 vs Dec 2014)



**Lending growth has been accompanied by an increase in cross-border activity**

Lending growth has been accompanied by an increase in cross-border activity. Data also show a steady decrease in the share of exposures towards domestic lending, which is relatively uniform across countries (Figure 17).

Figure 17: Evolution of domestic lending by country of the bank (December 2013 – June 2015)<sup>9</sup>

Country of the bank*		Dec-13			Dec-14			Jun-15		
		Total			Total			Total		
		of which: to domestic counterparties			of which: to domestic counterparties			of which: to domestic counterparties		
		BN Eur	BN Eur	%	BN Eur	BN Eur	%	BN Eur	BN Eur	%
AT	Austria	456	196	43%	440	193	44%	445	195	44%
BE	Belgium	606	250	41%	652	257	39%	638	248	39%
CY	Cyprus	48	39	82%	45	36	80%	43	36	84%
DK	Denmark	564	359	64%	595	377	63%	552	364	66%
FI	Finland	92	82	90%	98	87	89%	103	90	87%
FR	France	4,974	3,123	63%	5,253	3,096	59%	5,399	3,161	59%
DE	Germany	3,382	2,002	59%	3,332	1,907	57%	3,403	1,923	57%
HU	Hungary	32	16	51%	34	20	59%	33	19	57%
IE	Ireland	312	206	66%	283	173	61%	278	163	59%
IT	Italy	1,614	987	61%	1,578	945	60%	1,623	938	58%
LV	Latvia	3	1	34%	4	1	25%	4	1	26%
LU	Luxembourg	67	33	49%	70	34	49%	74	34	46%
MT	Malta	7	6	83%	8	5	61%	9	5	61%
NL	Netherlands	1,959	1,147	59%	1,976	1,116	56%	2,045	1,133	55%
NO	Norway	230	167	73%	234	166	71%	238	169	71%
PT	Portugal	217	161	74%	206	148	72%	209	147	71%
SI	Slovenia	18	12	65%	16	10	66%	15	10	65%
ES	Spain	1,521	557	37%	1,687	560	33%	1,793	602	34%
SE	Sweden	1,140	497	44%	1,175	492	42%	1,247	524	42%
UK	United Kingdom	4,175	2,042	49%	4,682	2,130	45%	5,015	2,296	46%
<b>Total</b>		<b>21,419</b>	<b>11,884</b>	<b>55%</b>	<b>22,368</b>	<b>11,753</b>	<b>53%</b>	<b>23,167</b>	<b>12,060</b>	<b>52%</b>

(\*) based on the 78 institutions that reported credit risk exposures by country of counterparty for IRB or STA approach in the 2015 EU-wide Transparency exercise

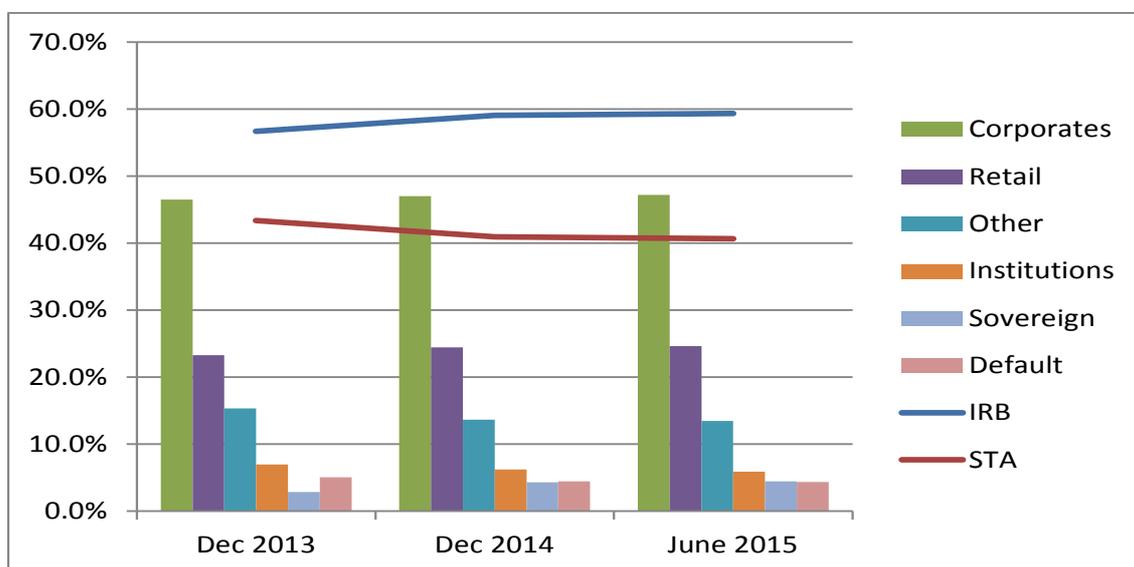
The distribution of credit risk RWA across both regulatory approaches and asset classes remained stable in the last 18-month period (Figure 18)

RWA for credit risk under IRB regulatory approaches amounted to nearly 60% of the total whereas those under the standardised approach remained somewhat above 40%. Although the situation is stable, a slight move towards IRB, which increased its share from 56.7% to 59.3% between December 2013 and June 2015, was registered.

Corporates remained the most prominent portfolio in terms of risk-weighted exposures, representing almost half of the total (47.2% in June 2015), followed by retail with nearly a quarter (24.6% for the same reference date). Both increased their share in the period December 2013-June 2015, by 46.5% and 23.3% respectively, in line with the exposures values as discussed above in the analysis on lending variation. Other risk exposures amounts -such as Basel 1 floor, macroprudential or large exposures requirements- ranked third, despite a slight decrease in the period, with institutions and sovereign (which includes central banks and central, regional and local governments) coming immediately after. The share of defaulted exposures, which marginally reduced over the period, equalled 4.4% as of June 2015.

<sup>9</sup> Securitisations and Other exposures (STA)/ Other non-credit obligation assets (IRB) excluded since not reported by country of counterparty.

Figure 18: Evolution of the share of RWAs across regulatory approaches and asset classes (December 2013 – June 2015)



## (ii) NPE and forbearance

Banks started reporting data on non-performing and forborne loans in September 2014, following the definitions in the EBA ITS on supervisory reporting on forbearance and non-performing exposures under Article 99(4) of Regulation (EU) No 575/2013 (CRR), which creates a uniform and conservative definition for the first time across the EU.

The uniform definitions for non-performing and forborne loans may mean there are differences between the disclosures in this exercise and the disclosures in banks' annual reports, where, for example, forbearance is reported, in line with IFRS 7, according to the way the banks themselves manage and report credit risk in their portfolios. It should also be noted that the new definitions are still in the early stages of implementation, involve substantial system changes for banks, and may initially require banks to make some assumptions about historic data.

Non-performing exposures are those that satisfy either one or both of the following criteria: (a) material exposures that are more than 90 days past-due; (b) the debtor is assessed as unlikely to pay its credit obligations in full without realisation of collateral, regardless of the existence of any past-due amount or of the number of days past due. Exposures that are impaired or defaulted according to the applicable accounting or regulatory frameworks shall always be considered non-performing exposures.

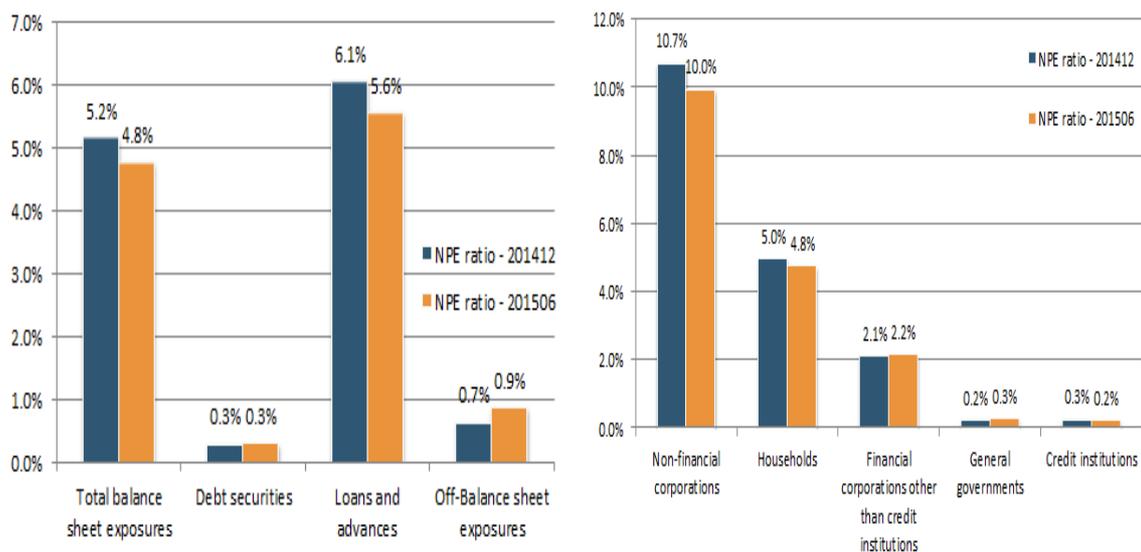
Forborne exposures are debt contracts in respect of which forbearance measures have been extended. Forbearance measures consist of concessions towards a debtor facing or about to face difficulties in meeting its financial commitments.

## Quality of assets remains a major concern in the EU

Although gradually improving, quality of assets remains a major concern in the EU and an impediment to new lending and banks' profitability, particularly in countries already under economic stress. The banks in the sample reported an aggregate weighted NPE ratio close to 5% for all on-balance-sheet debt instruments, 5.6% when considering only loans and advances, types of instrument that generated the majority share of non-performing exposures (Figure 19).

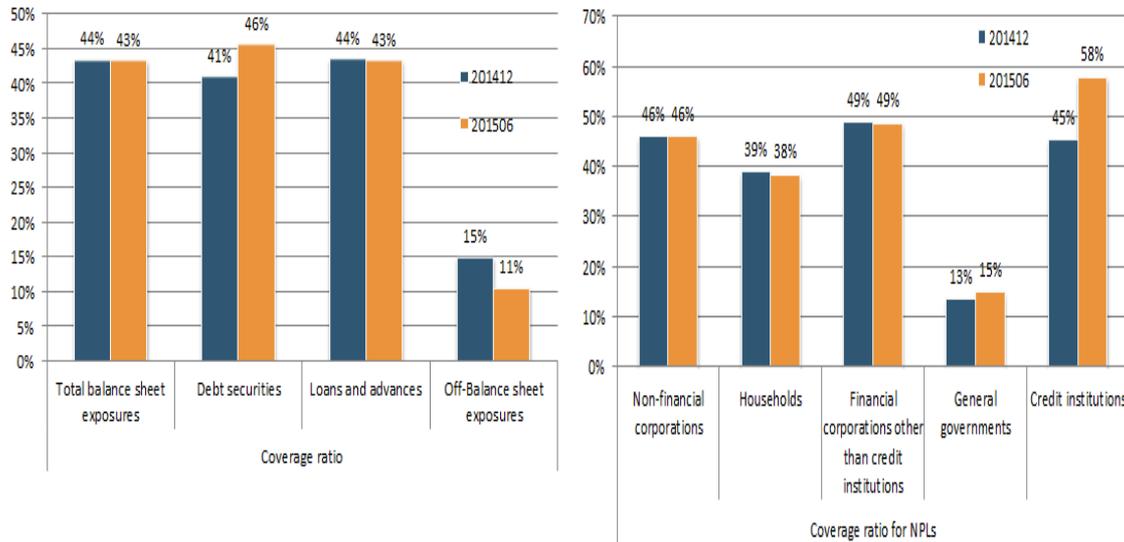
By type of counterparty, the NPE ratio was particularly high (10%) in the case of non-financial corporations, a category that includes but is not limited to small and medium-sized enterprises (SMEs). The ratio was close to 5% in the case of loans to households, and much lower, just above 2%, in the case of loans to financial corporates other than credit institutions. Aggregate EU exposures towards general governments and credit institutions show an NPE ratio of close to zero (Figure 19).

**Figure 19: EU aggregate NPE ratio - total balance sheet and per type of instrument (1) and EU aggregate NPE ratio for loans and advances per type of counterparty (2) (June 2015)**



The coverage ratio, estimated as the proportion of specific allowances for financial assets compared to their total non-performing gross carrying amount, was 43% at an aggregate weighted EU level (Figure 20), meaning that 57% of non-performing exposures have not been provisioned.

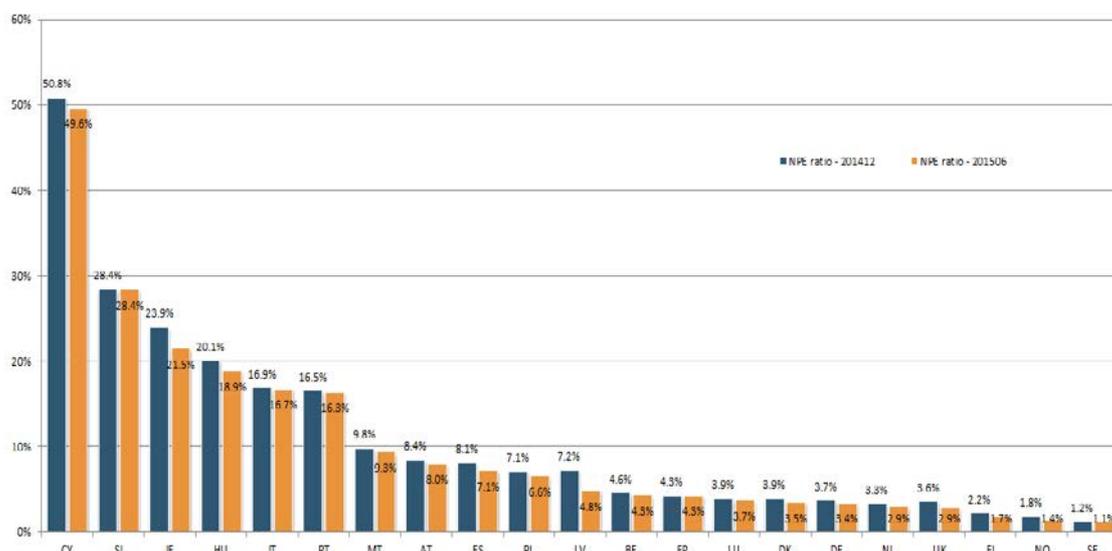
**Figure 20: EU aggregate coverage ratio - total balance sheet and per type of instrument (1) and EU aggregate coverage ratio for loans and advances per type of counterparty (2) (June 2015)**



**Great dispersion of NPE and coverage ratio across the different countries in the EU**

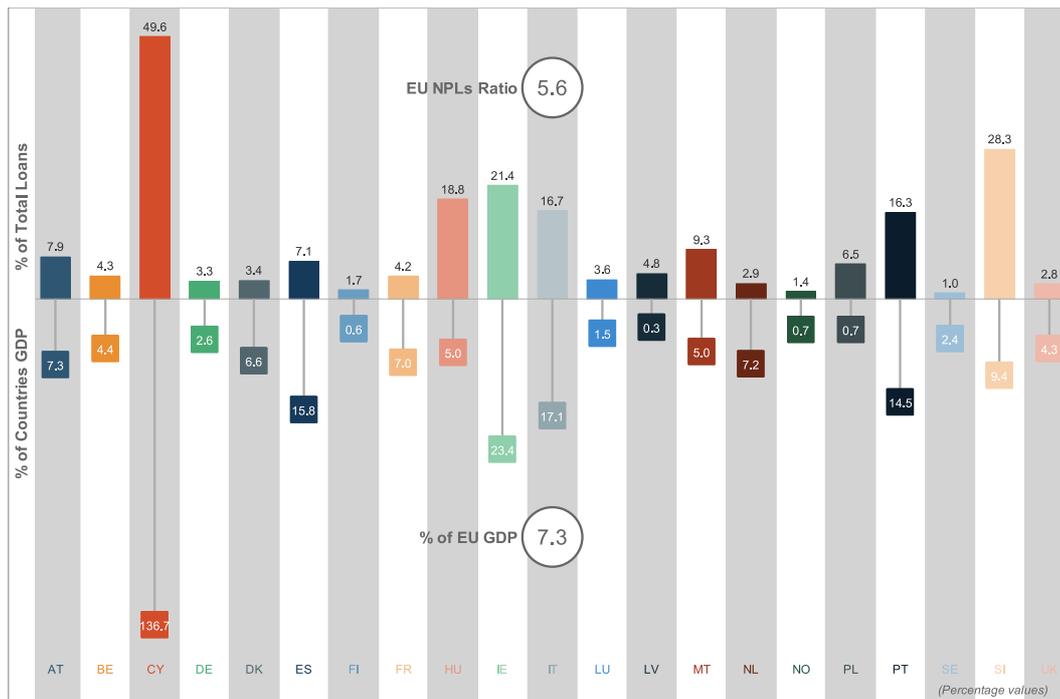
The geographical breakdown of the NPE ratio shows a great dispersion across the different countries in the European single market. NPE ratios as of June 2015 by banks’ country of origin range from 1% in Sweden to 46% in Cyprus, being 1% and 50% respectively if only loans and advances are taken into account. In general, banks in those countries that had been subject to more financial and/or economic stress report higher levels of non-performing exposures (Figure 21). The heterogeneity in the level of NPE might also be due to the different historical recourse to public support measures in the different countries (e.g. bail-out or bad-bank with public resources involvement), especially before the adoption of the BRRD.

**Figure 21: Weighted average NPE ratio for loans and advances per banks’ country of origin**



In terms of GDP, the total of non-performing loans in the reporting banks represented 7.5% of total GDP (Figure 22).<sup>10</sup>

Figure 22: Weighted average NPE ratio for loans and advances per banks' country of origin compared to country's GDP (June 2015)

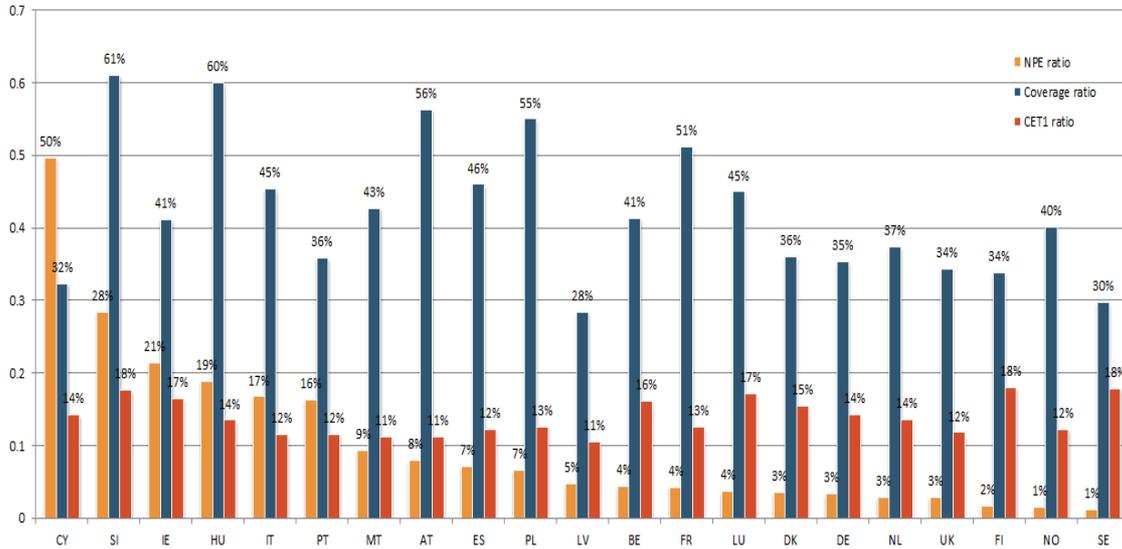


The comparison of NPE ratio and coverage ratio by country of the bank also shows large variability across jurisdictions (Figure 23). Banks with higher NPE ratios do not always report larger coverage through specific allowances of their non-performing exposures. In those countries where banks suffer a high level of impaired loans coupled with a low coverage ratio, banks may struggle to address asset quality concerns and clean up their balance sheets: low coverage ratios may result in a reluctance to resolve non-performing loans through their disposal or recovery due to material differences between potential transaction prices and net book values,<sup>11</sup> leading to losses. In contrast, high coverage ratios mean that a big share of the losses has already been recognised in banks' financial statements, and this may encourage banks to dispose of their non-performing exposures and achieve lower levels of NPE ratios. A deeper insight into the reasons behind low coverage ratios should consider other factors like whether the NPE are collateralised and the value of the collaterals. The level of capital of the bank should be taken into account when assessing the level of provisions.

<sup>10</sup> NPE/GDP ratio will be influenced by the country's banking sector size to GDP when comparing individual countries.

<sup>11</sup> Net book value is defined as the exposure gross carrying amount (according to FINREP) net of Accumulated impairment, accumulated changes in fair value due to credit risk and provisions (FINREP definition).

**Figure 23: Weighted average NPE ratio, coverage ratio for loans and CET1 ratio advances per banks' country of origin (June 2015)**

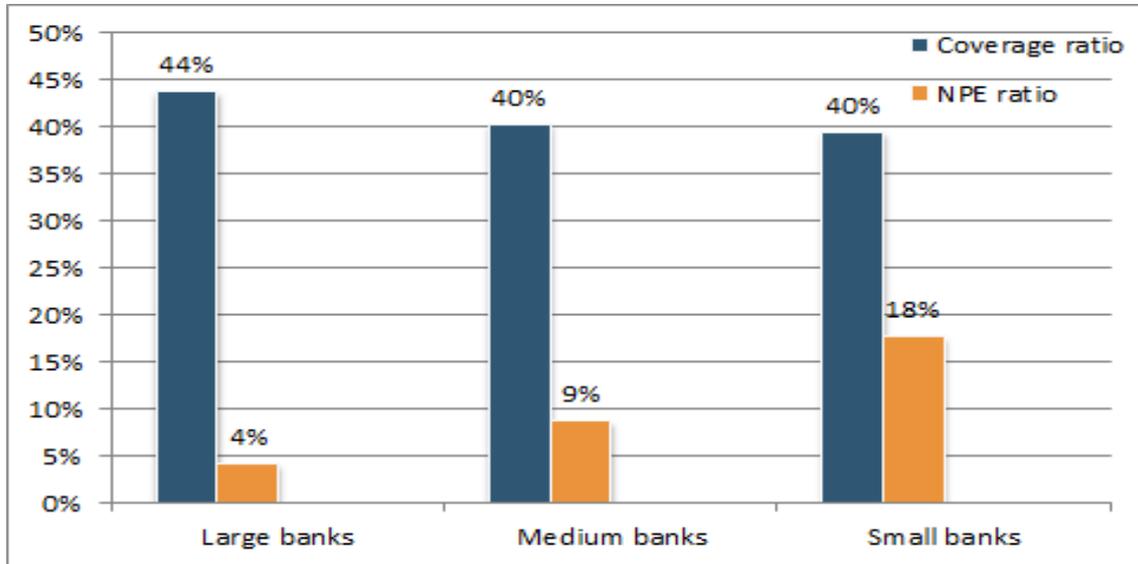


**NPE ratios vary depending on the size of the banks<sup>12</sup>**

Data show that smaller banks struggle with higher levels of non-performing loans, 18% of total loans, compared to 9% of total loans in medium banks and 4% of total loans in large banks. Small banks, at the same time, reported the lowest level of non-performing exposures covered through specific allowances, which, in line with the explanation above, can be an obstacle to these banks' efforts to resolve their bad loans and improve asset quality, as they do not have an incentive to dispose of these loans because of the higher gap between the net book value of these exposures and the price they can obtain (Figure 24).

<sup>12</sup> The large banks group include the 25% largest banks in the sample of the exercise; the small banks group include the 25% smallest banks in the sample; the middle banks group includes those in the interquartile range in terms of size.

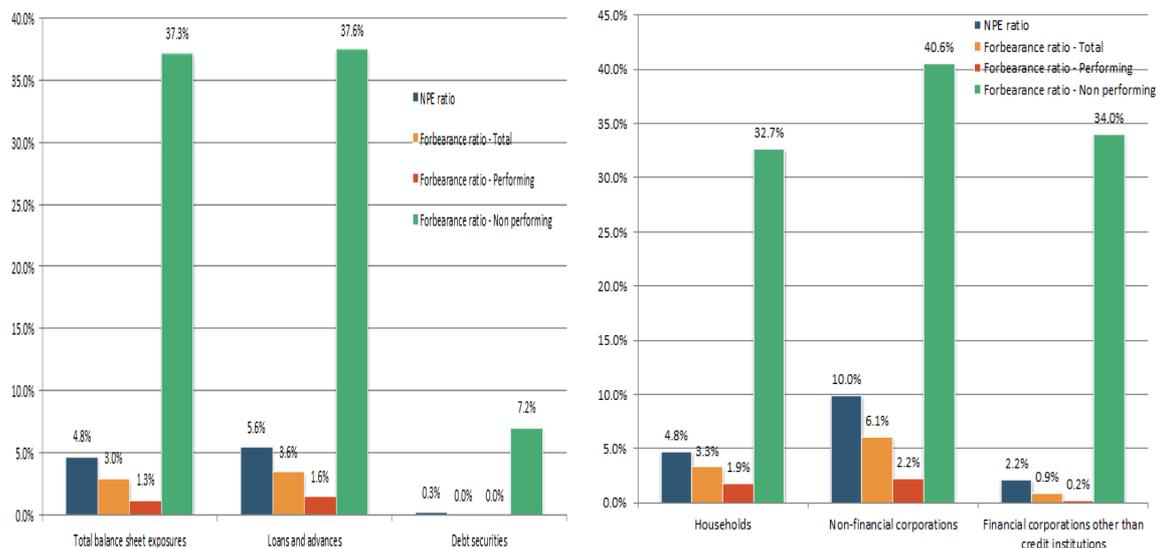
Figure 24: NPE ratio and coverage ratio for loans and advances (June 2015)



**Forbearance ratio is much higher among non-performing exposures**

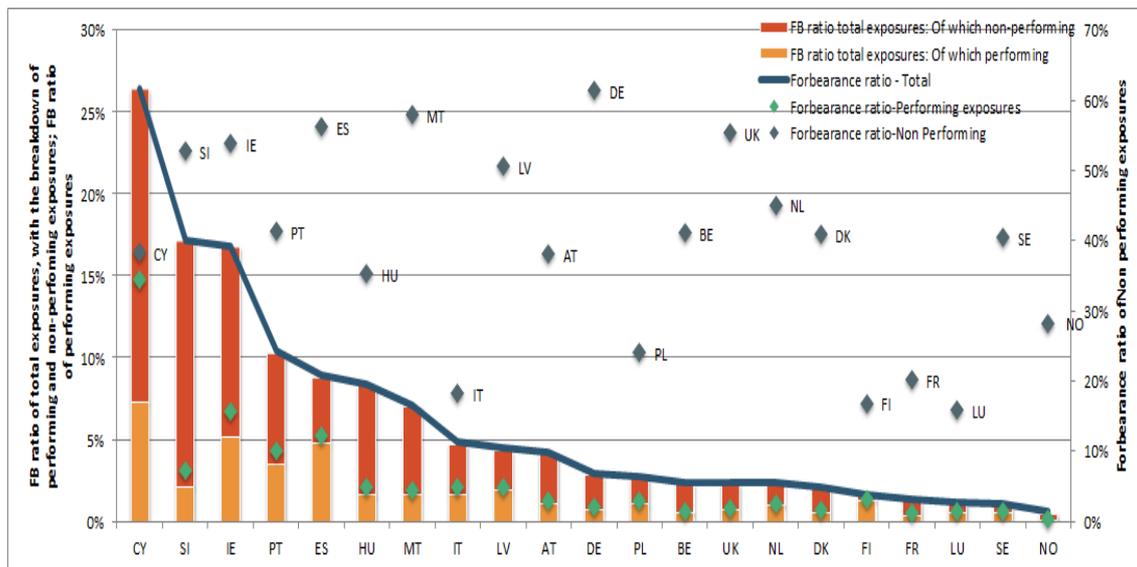
When introducing forbore exposures to the analysis, it is clear that the proportion of forbore exposures is much more significant in the case of exposures that are classified as non-performing compared to those exposures that are still performing. The forbearance ratio is more than 37% in the former, compared to a ratio below 2% in the latter. Again, exposures towards non-financial corporations (including SMEs) show the worst performance in terms of forbearance ratio (Figure 25).

Figure 25: Weighted average NPE ratio and forbearance ratios - total balance sheet and per type of instrument (1) and weighted average NPE ratio and forbearance ratios for loans and advances per type of counterparty (2) (June 2015)



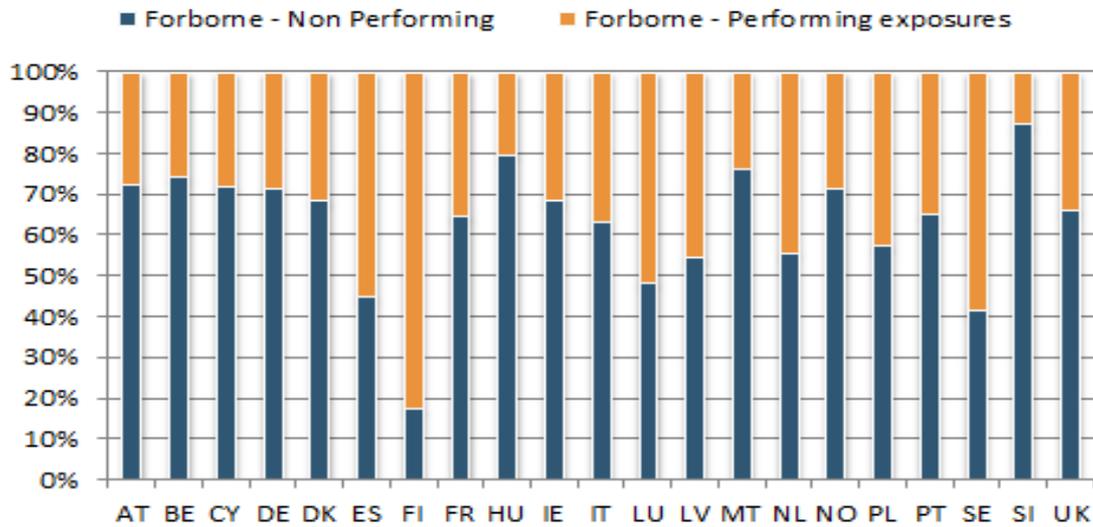
The country-by-country analysis comparing NPE ratios and forbearance ratios for loans and advances shows that, in some jurisdictions, banks reported heightened levels of forbearance for performing exposures, well above the EU aggregate 1.6% weighted average. A high level of performing forbore loans may indicate that forbearance is considered at an early stage at which loans are ‘not yet’ non-performing; or early restructuring efforts of the banks to pre-emptively address their customers’ financial difficulties; or a higher tendency to reclassify forbore loans from non-performing to performing. But the use of modifications of debt contracts without reporting the loan as forbore might also indicate a certain delay in recognising problematic loans as non-performing, an issue that should be promptly identified and addressed by supervisors (Figure 26).

**Figure 26: Weighted average forbearance ratio for loans and advances per banks’ home country – total forbore exposures (including the breakdown of performing and non-performing) to total exposures; forbore performing exposures to total performing exposures; and forbore non-performing exposures to total non-performing exposures (June 2015)**



In most of the countries, more than 50% of the forborne exposures were classified as non-performing (Figure 27).

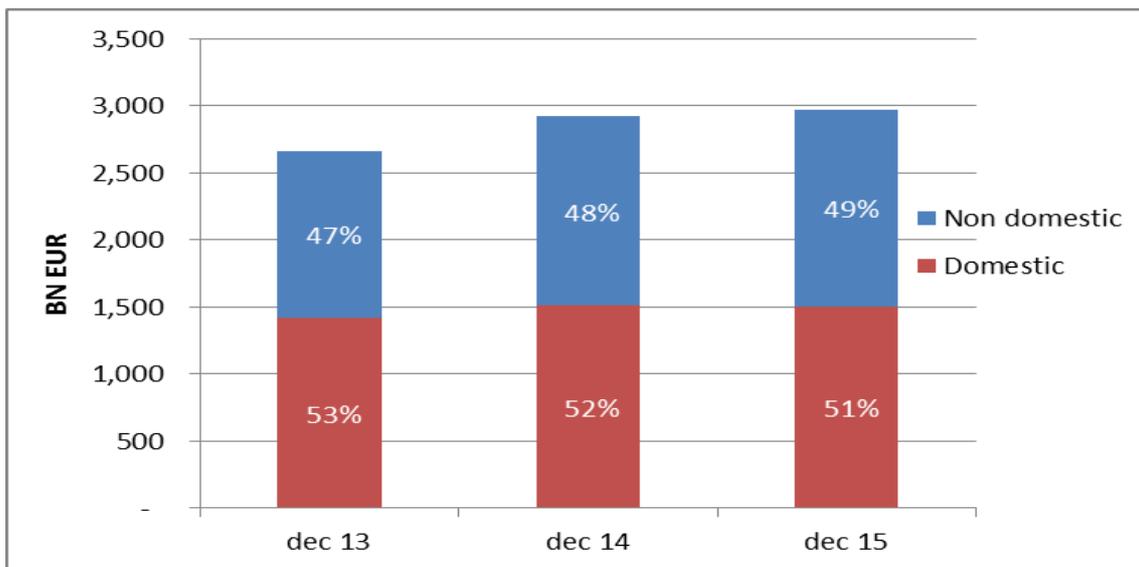
Figure 27: Breakdown of forborne exposures for loans and advances by banks' country of origin (June 2015)



### 2.3.2 Sovereign risk

The data below show that the home bias when coming to investing in sovereign exposures is still relevant although gradually improving, as banks reported in June 2015 an increase in their holdings of non-domestic sovereign debt in June 2015 ( Figure 28).

Figure 28: Domestic and non-domestic holdings of sovereign exposures – EU aggregate (June 2015)



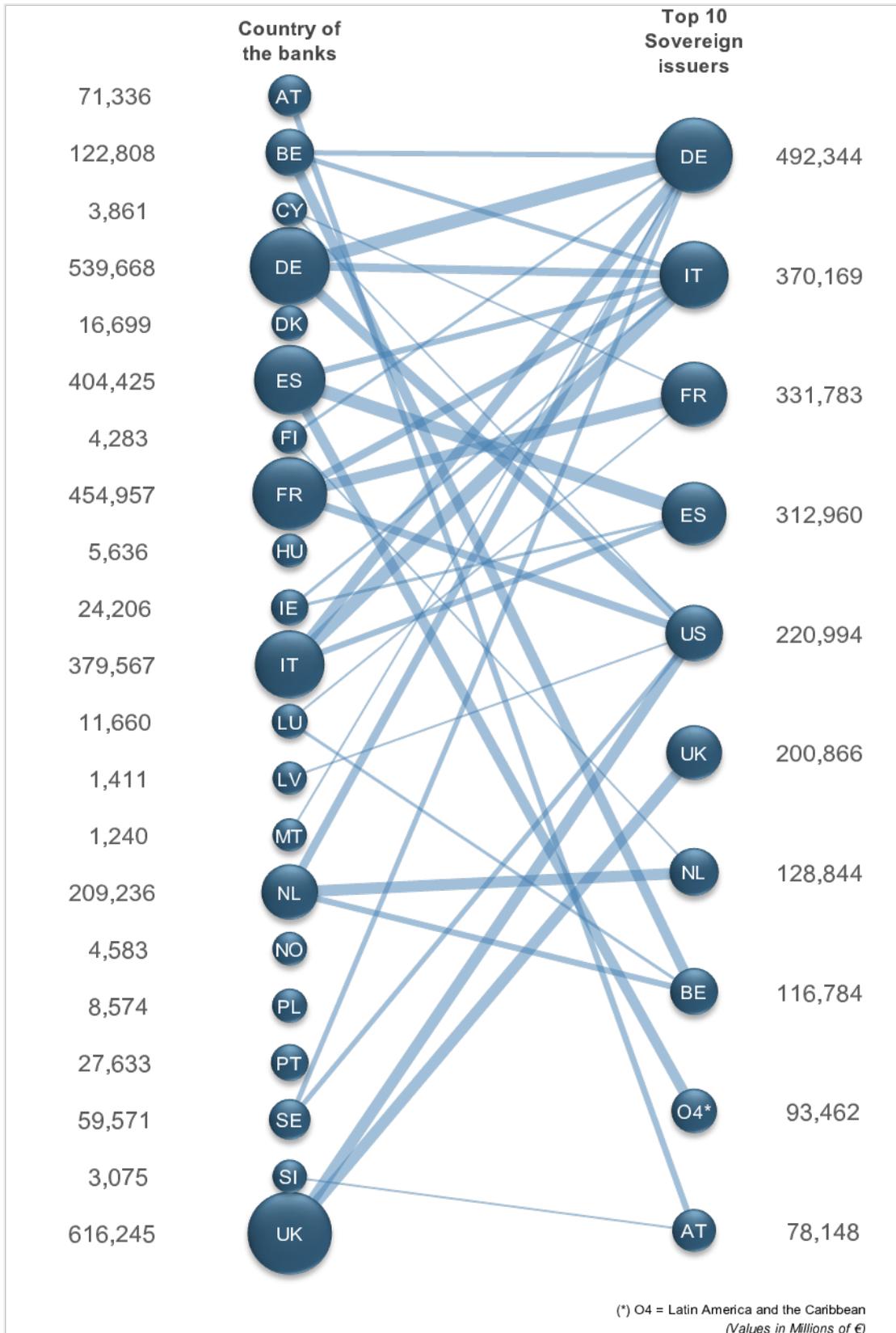
There is a large dispersion across countries on the percentage of sovereign debt held by domestic versus non-domestic institutions. In some countries, more than 70% of their issuances of debt

were still held by domestic banks as of June 2015. Among the reasons behind the home bias in the holding of sovereign debt can be risk aversion by non-domestic investors, but also the prominent position in the national financial system of domestic versus non-domestic credit institutions (Figure 29 and Figure 30).

**Figure 29: Banks' net direct positions - by sovereign issuer (total positions and positions held by domestic banks)**

Sovereign issuer		Dec-13			Dec-14			Jun-15		
		Total			Total			Total		
		mln Eur	of which: Domestic		mln Eur	of which: Domestic		mln Eur	of which: Domestic	
mln Eur	%		mln Eur	%		mln Eur	%			
AT	Austria	64,250	24,307	38%	75,601	24,822	33%	78,148	24,811	32%
BE	Belgium	112,244	53,635	48%	117,089	50,005	43%	116,784	48,511	42%
CY	Cyprus	4,865	4,765	98%	3,989	3,889	97%	3,116	3,017	97%
DK	Denmark	16,678	4,911	29%	18,570	9,408	51%	16,566	9,946	60%
FI	Finland	16,003	199	1%	24,926	742	3%	25,847	835	3%
FR	France	282,550	191,160	68%	316,250	235,123	74%	331,783	234,251	71%
DE	Germany	481,213	343,792	71%	505,427	333,496	66%	492,344	336,254	68%
HU	Hungary	17,932	3,410	19%	14,101	4,113	29%	15,694	4,898	31%
IE	Ireland	28,059	19,314	69%	27,699	20,794	75%	25,565	17,799	70%
IT	Italy	354,921	253,996	72%	385,871	253,439	66%	370,169	246,266	67%
LV	Latvia	1,323	20	1%	857	183	21%	1,080	216	20%
LU	Luxembourg	9,402	2,650	28%	7,467	4,104	55%	7,823	3,869	49%
MT	Malta	1,617	888	55%	1,591	871	55%	1,643	829	50%
NL	Netherlands	122,662	92,702	76%	124,982	90,971	73%	128,844	92,220	72%
NO	Norway	16,564	11,100	67%	10,285	3,797	37%	10,059	3,667	36%
PL	Poland	47,160	3,473	7%	52,013	7,226	14%	57,276	8,574	15%
PT	Portugal	31,440	20,323	65%	36,374	17,251	47%	38,688	17,097	44%
SI	Slovenia	4,237	1,946	46%	4,778	1,957	41%	4,734	1,785	38%
ES	Spain	271,837	241,287	89%	311,318	263,603	85%	312,960	255,182	82%
SE	Sweden	20,496	13,548	66%	25,633	15,261	60%	25,745	16,834	65%
UK	United Kingdom	144,549	130,471	90%	186,458	166,000	89%	200,866	176,068	88%
	Other Countries	613,809			670,588			704,939		
	<i>Of which:</i>									
	<i>US United States</i>	200,504			201,331			220,994		
	<i>JP Japan</i>	34,349			47,246			51,099		
	<i>O4 Latin America and the Caribbean</i>	85,625			100,698			93,462		
	<i>O2 Other Central and eastern Europe countries non EEA</i>	18,586			13,676			13,081		
<b>Total</b>		<b>2,663,812</b>	<b>1,417,897</b>	<b>53%</b>	<b>2,921,866</b>	<b>1,507,055</b>	<b>52%</b>	<b>2,970,674</b>	<b>1,502,928</b>	<b>51%</b>

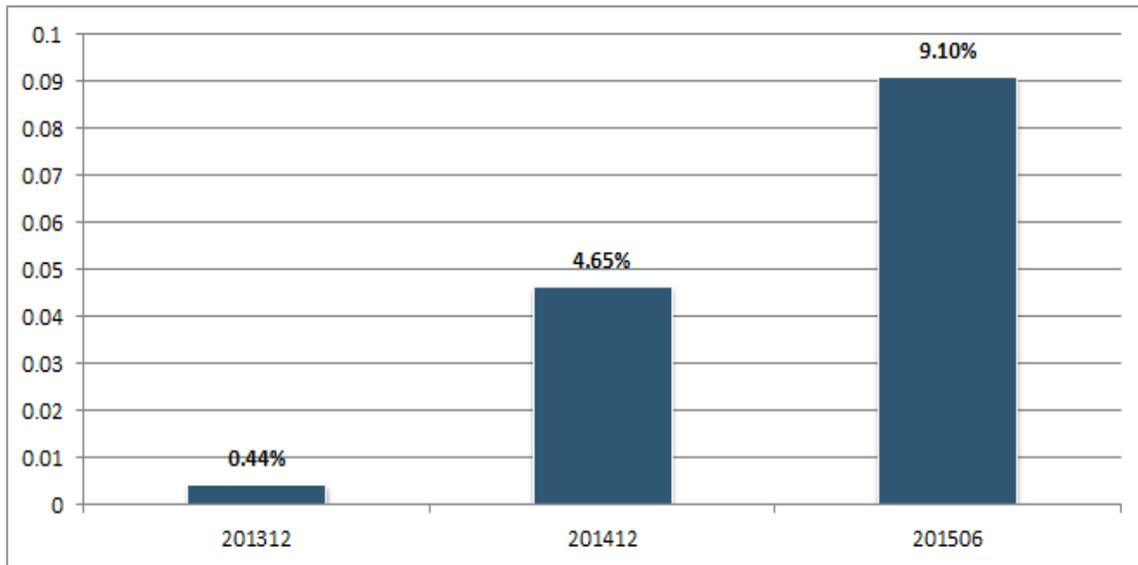
Figure 30: Cross-country holdings of sovereign debt (June 2015)



## 2.4 Profitability

The banks in the sample of the transparency exercise reported an aggregate weighted average RoRC<sup>13</sup> of 9.1% as of June 2015. This figure represents a sharp increase compared to December 2014 (4.65%), and especially compared to December 2013 (0.44%) (Figure 31).

Figure 31: RoRC ratio (weighted average at EU level - June 2015)

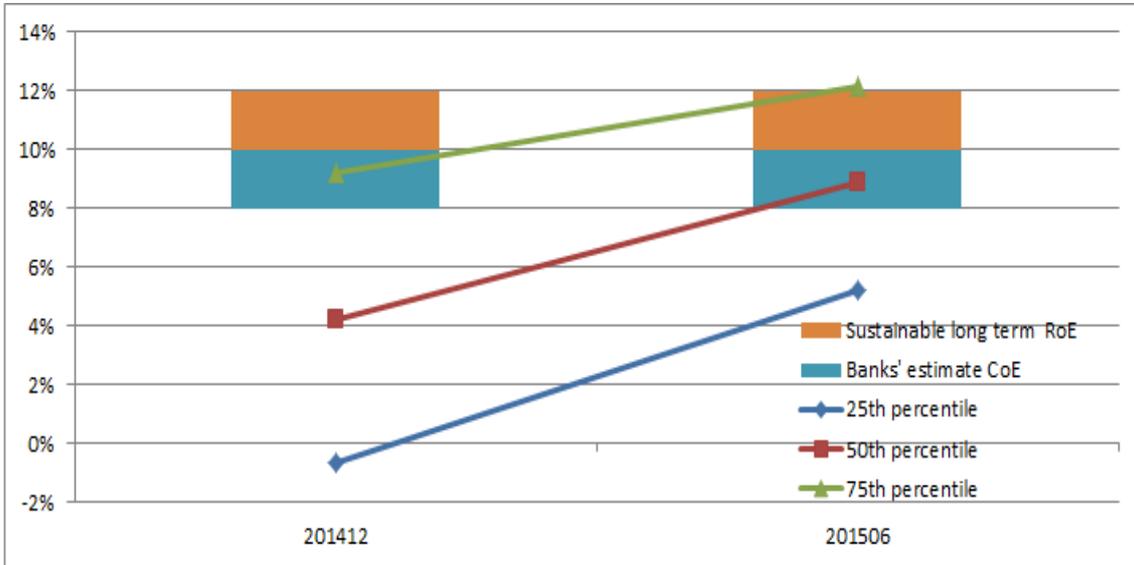


The increase in RoRC is an important step towards aligning banks' profitability with the estimated CoE, above 8% according to banks' own estimates, above 9% on average according to the EBA calculation<sup>14</sup>, and with the level that EU banks consider a long-term sustainable levels of RoE (Figure 32, taking data from the EBA June 2015 risk assessment report of the European banking system).

<sup>13</sup> RoRC is estimated as the proportion of net operating income (total operating income, net, according to the FINREP definition) compared to regulatory T1 capital. Regulatory T1 capital is used for the calculation of this ratio in substitution of accounting equity, as equity figures are not being disclosed as part of the transparency exercise.

<sup>14</sup> Please refer to the EBA June 2015 risk assessment report on the European banking system, where the CoE was estimated according to the capital asset pricing model (CAPM) approach for the top 30 EU-listed banks and where the views of the banks on their estimated CoE are reflected.

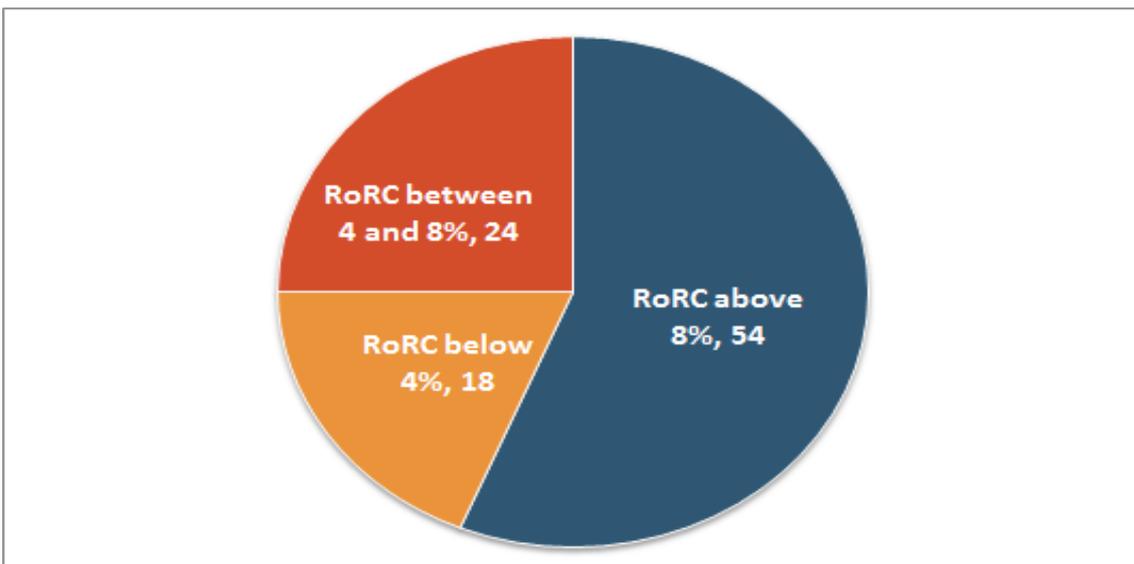
Figure 32: Percentile distribution of RoRC compared to banks' own estimates of CoE and sustainable levels of RoE (June 2015)



**Profitability remains a source of concern**

However, there is significant dispersion across banks, with 42 banks showing levels of RoRC below 8% as of June 2015 and 18 banks showing levels of RoRC below 4% (Figure 33), and significant seasonality in the numbers, with Q4 results tending to be much lower and coming to, for instance, 4.65% RoRC in Q4 2014.

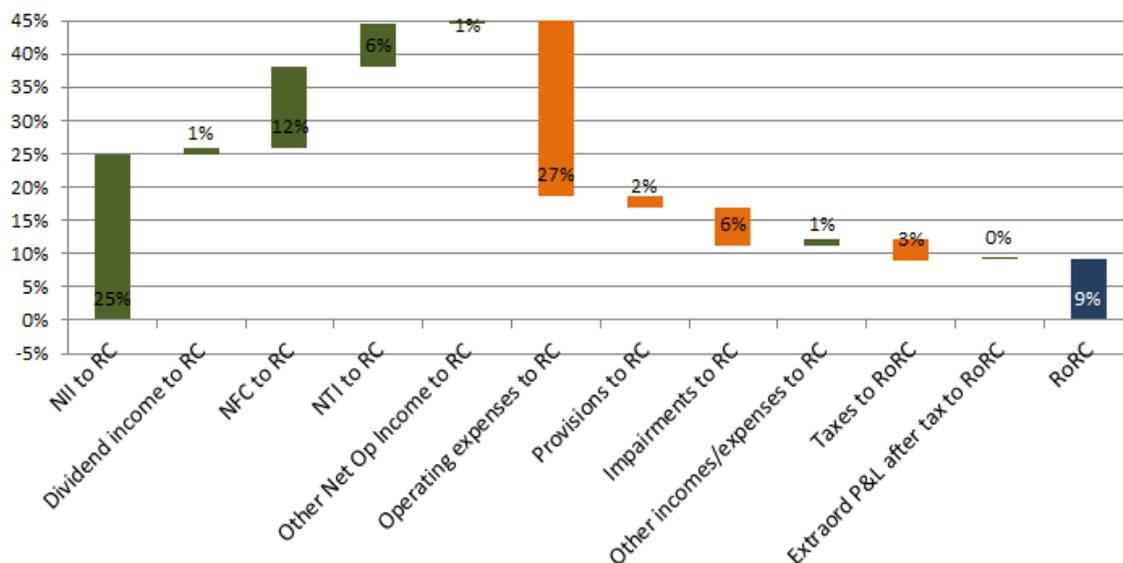
Figure 33: Number of banks per RoRC range as of June 2015



Considering the seasonal effects that can lead to an overestimation of RoRC as of June 2015, profitability remains a source of concern. There are several drivers that explain these low returns (Figure 34):

- the context of continued low interest rates squeezes banks' interest margins, which remain unable to lead banks' profits up to higher levels of returns. The June 2015 weighted average NII to RoRC is 25% for the entire sample and remains constant compared to December 2014;
- with the quality of assets still being an issue in many countries, impairments remain an important toll for banks. Impairment losses represented on average 6% of banks' regulatory capital in June 2015, and absorbed more than 11% of their total net operating income;
- limited efficiency gains also contribute to dragging down banks' net profits. The average cost-to-income ratio was above 59% as of June 2015;
- finally, provisions linked, among other things, to conduct risk issues are still relevant especially in certain countries, pushing down net profits. On average, provisions represented almost 2% of banks' RoRC as of mid-2015, consuming almost 4% of banks' total net operating income.

Figure 34: June 2015 RoRC cascade whole sample



### Return on regulatory capital – breakdown per country of origin of the bank

In order to obtain a deeper understanding of the drivers of the Capital yield at country level, RoRC has been decomposed according to the following formula:

- $\text{RoRC} = \text{NoP}/\text{Assets} \times \text{Assets}/\text{Equity} \times \text{Ebit}/\text{NoP} \times \text{NP}/\text{Ebit}$

Where:

- $\text{NoP}/\text{Assets}$  = Net operating profit/Total leverage ratio exposures =  
= Net asset yield contribution

- Assets/Equity = Total leverage ratio exposures/T1 capital =  
= 1/Leverage contribution
- EBIT/NoP = Profit or loss before tax/Net operating profit =  
= Non-operating incomes or expenses contribution
- NP/Ebit = Net profit/Profit or (-) loss before tax =  
= Tax effect on the capital yield = 1 – Tax rate

Looking at the country aggregated results (Figure 35), while RoRC ranged from a minimum of 3.4% to a maximum of 35.4%, with a coefficient of variation (CV – standard deviation/average) of 58%, the dispersion of the asset yield contribution was much narrower, ranging from a minimum of 1.3% to a maximum of 4.5%, with a CV of 36%. The increase in the dispersion of the profitability indicators is partially explained by discrepancies in the countries' tax rates, which absorbed on average 26% of banks' net profits. Along with the exogenous effect of the taxation, banks' business models and levels of efficiency played a key role in explaining the variability of RoRC. Regarding the business models, assuming for all countries leverage levels equal to the EU-weighted average, the difference between the minimum and the maximum of RoRC would decrease from 31.9% to 21.3%. The remaining dispersion in profitability is related to the impact of non-operating incomes and expenses, which measures what remains of the net operating income after staff expenses, impairments, and other non-operating incomes and expenses.

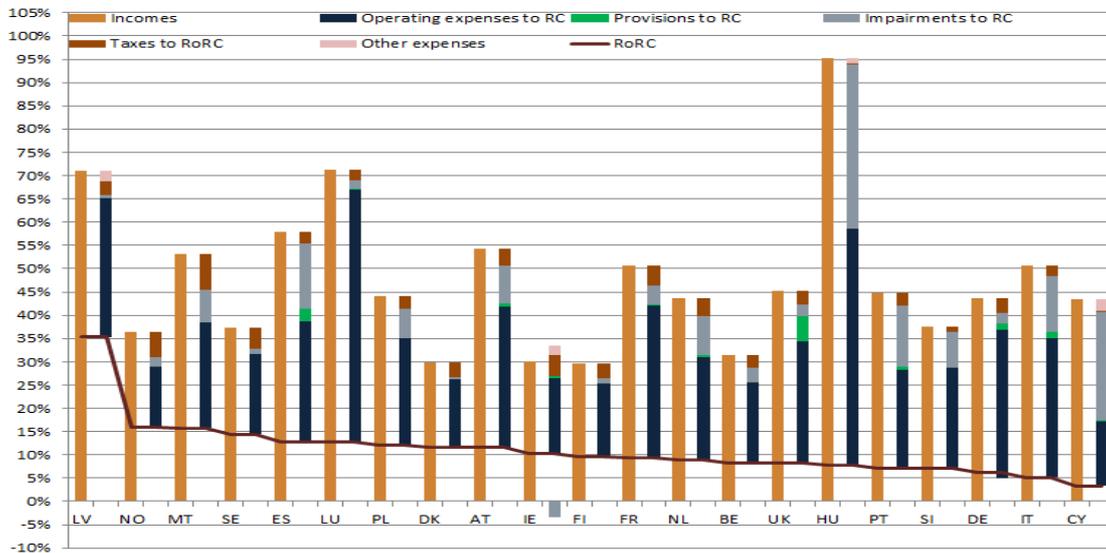
Figure 35: June 2015 profitability decomposition per country of origin of the bank

Return on Regulatory Capital	Asset yield contribution	Leverage contribution	Non-Operating contribution	Tax rate
LV 35.3%	3.1%	4.4%	54.3%	7.7%
NO 15.9%	1.9%	5.3%	58.5%	25.6%
MT 15.8%	2.6%	5.2%	46.1%	32.8%
SE 14.4%	1.6%	4.3%	51.0%	23.6%
ES 12.8%	3.1%	5.6%	27.7%	15.4%
LU 12.8%	3.0%	4.2%	21.2%	14.8%
PL 12.0%	4.0%	9.1%	34.0%	18.7%
DK 11.6%	1.3%	4.3%	50.9%	21.7%
AT 11.6%	3.0%	5.7%	29.0%	24.0%
IE 10.2%	2.4%	7.8%	47.5%	30.3%
FI 9.7%	2.0%	6.8%	43.5%	24.5%
FR 9.3%	2.2%	4.6%	27.8%	31.2%
EU 9.1%	2.2%	4.9%	27.1%	26.4%
NL 8.9%	1.7%	4.0%	30.6%	30.2%
BE 8.4%	1.5%	5.0%	35.9%	23.2%
UK 8.3%	2.3%	5.1%	25.1%	25.9%
HU 7.7%	4.9%	8.3%	13.5%	2.6%
PT 7.2%	2.8%	6.4%	22.6%	27.3%
SI 7.2%	3.6%	9.9%	22.4%	12.8%
DE 6.2%	1.9%	4.4%	21.9%	33.8%
IT 5.1%	2.8%	5.6%	15.3%	31.9%
CY 3.4%	4.5%	10.7%	8.6%	8.8%

### Low efficiency and high level of impairments continue to drag profitability down in many countries

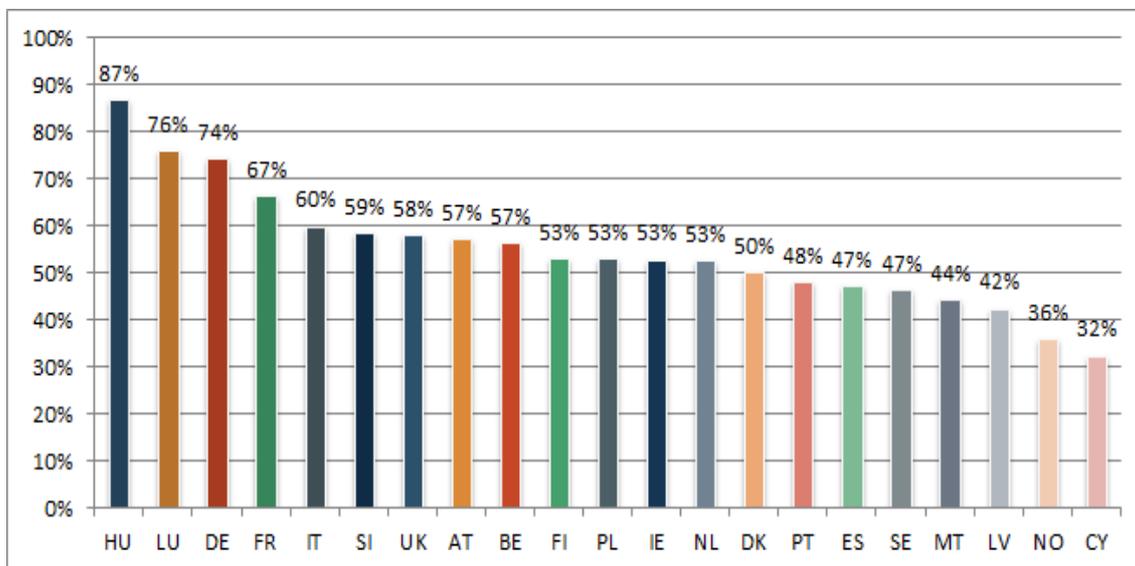
Regarding the composition of both incomes and expenses, there was also high variability across the different jurisdictions. While in certain countries banks were able to compensate for lower levels of incomes with contained costs and achieved returns above the EU average, in other countries low efficiency and/or a high level of impairments kept dragging profitability down, despite, in some cases, a high volume of incomes (Figure 36).

Figure 36: RoRC per country of origin of the bank: incomes and expenses (June 2015)



In terms of efficiency, only banks in eight countries report cost-to-income ratios on or below 50%. In five countries, banks apply more than 60% of their net operating income to cover their operating expenses; more than 70% in the case of banks in three countries (Figure 37).

Figure 37: Cost-to-income ratio by country of origin of the bank (June 2015)



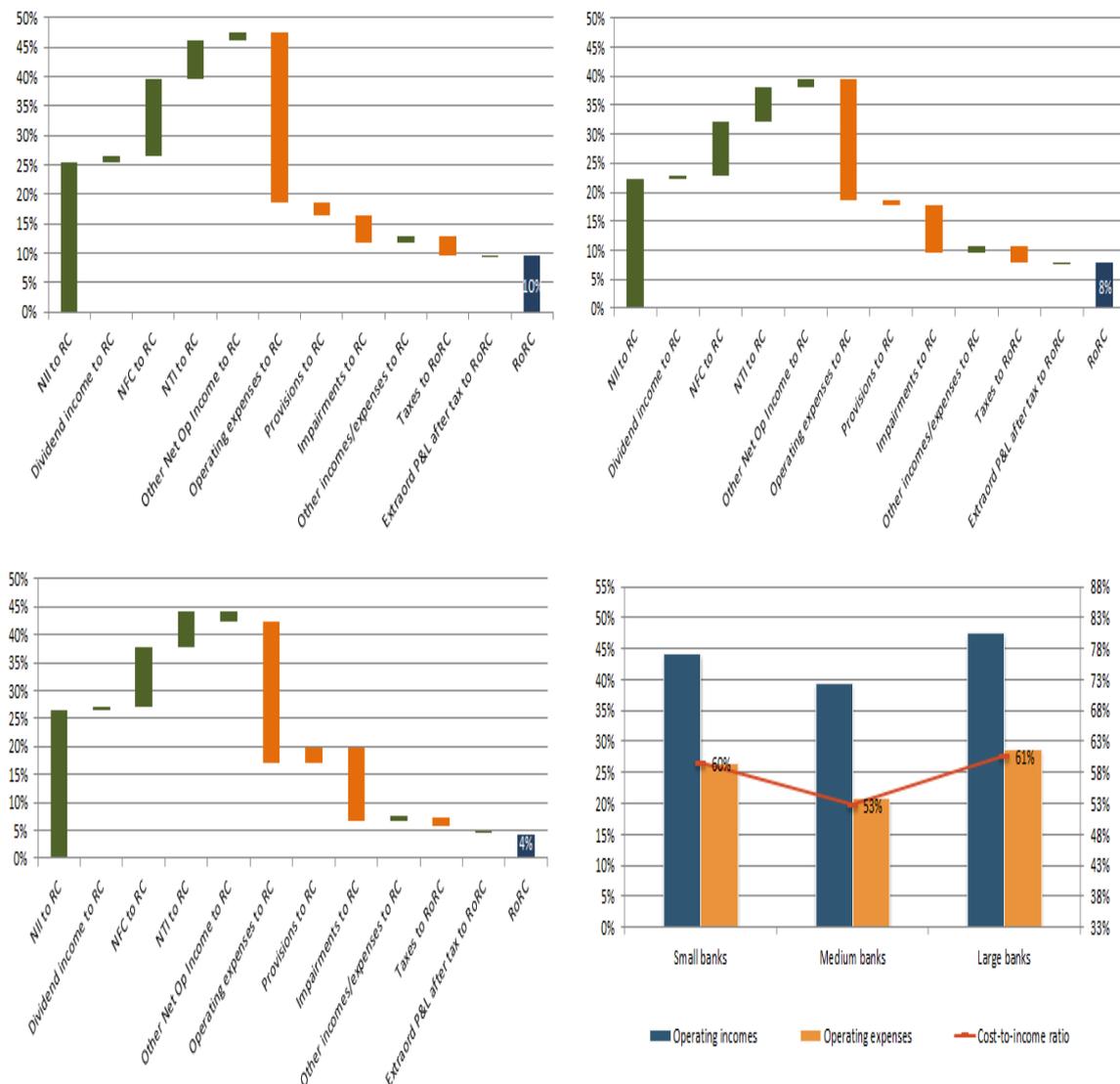
**Large banks reported higher profitability, although lower efficiency, compared to medium banks, while small banks performed worse in terms of both profitability and efficiency**

Large banks in the sample benefited from their size to produce larger volumes of incomes, not only interest income, but also fees and commission and trading income, and reported lower impairments. Large banks nevertheless incurred higher operating expenses, compared to medium banks, to produce their revenues, which translated into an average cost-to-income ratio almost 8pp higher than medium banks. Business volume and lower impairments were able to

compensate for poorer efficiency, leading large banks to higher RoRC (10%) compared to medium banks (8%) (Figure 38).

Small banks in the sample incurred higher impairments and appeared to struggle with efficiency improvements. In particular, the level of impairments, which represented 14% of the banks' regulatory capital, compared to 5% of large and 8% of medium banks, appeared to be the differentiating factor that dragged down profitability in small banks. This is a consequence of the large amount of non-performing exposures in these banks and low coverage ratios. At the same time, small banks were not able to compensate for a higher volume of impairments with efficiency and lower operating costs; they report a cost-to-income ratio of close to 60% (Figure 38).

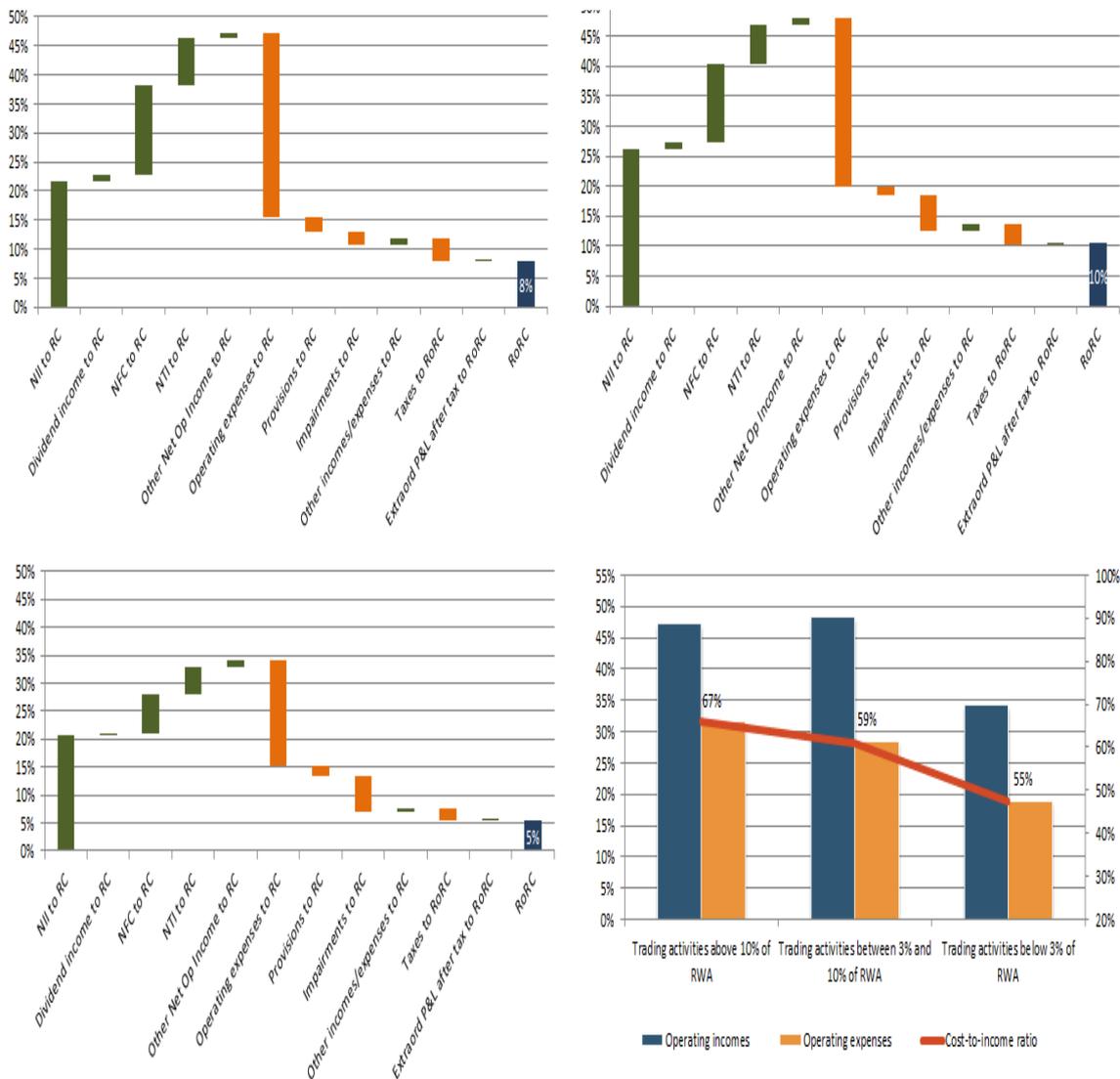
**Figure 38: RoRC cascade – large banks (1), medium banks (2) and small banks (3) and cost-to-income ratio by banks' size (4) (June 2015)**



### A minimum degree of trading activity helps to boost profitability

Regarding banks' business models, an analysis based on the relevance of banks' market RWA (including CVA exposure amount) compared to total RWA shows that a minimum degree of trading activity helps to boost profitability; however above certain levels of trading, the operating expenses necessary to support these activities exceed the marginal profit obtained, redounding in lower net profits (Figure 39).

**Figure 39: RoRC cascade – trading activities above 10% of RWA (1), trading activities between 3% and 10% RWA (2) and trading activities below 3% RWA (3), and cost to income ratio by relevance of trading activities (4) (June 2015)**



Trading activities translate into trading income and also higher fees and commissions' income. On the other hand, they require skilled staff, appropriate technical resources, and strict controls; these will increase operating expenses and the cost-to-income ratio. A level of trading activity that produces a good balance between related income and related operating expenses (market risk RWA represent between 3% and 10% of total RWA) appears to push net profits up.

## Annex A – Sample of banks

Country	Bank Name	Balanced Sample
AT	Erste Group Bank AG	Yes
	Promontoria Sacher Holding N.V.	
	Raiffeisen-Landesbanken-Holding GmbH	Yes
	Raiffeisen-Holding Niederösterreich-Wien registrierte Genossenschaft mit beschränkter Haftung	
	Raiffeisenbankengruppe OÖ Verbund eGen	
BE	AXA Bank Europe SA	
	Belfius Banque SA	
	Dexia NV	
	Investar	
	KBC Group NV	Yes
CY	Bank of Cyprus Public Company Limited	Yes
	Co-operative Central Bank Ltd	
	Hellenic Bank Public Company Ltd	
DE	Aareal Bank AG	
	Bayerische Landesbank	Yes
	Commerzbank AG	Yes
	DekaBank Deutsche Girozentrale	Yes
	Deutsche Apotheker-und Ärztebank eG	Yes
	Deutsche Bank AG	
	Deutsche Zentral-Genossenschaftsbank AG	Yes
	Erwerbsgesellschaft der S-Finanzgruppe mbH & Co. KG	Yes
	HASPA Finanzholding AG	
	HSH Nordbank	Yes

Country	Bank Name	Balanced Sample
	Hypo Real Estate Holding AG <sup>15</sup>	Yes
	Landesbank Baden-Württemberg	Yes
	Landesbank Hessen-Thüringen Girozentrale	Yes
	Landeskreditbank Baden-Württemberg-Förderbank	
	Landwirtschaftliche Rentenbank	
	Münchener Hypothekenbank eG	
	NORD/LB Norddeutsche Landesbank Girozentrale	Yes
	NRW.BANK, Düsseldorf	
	VW Financial Services AG	
	WGZ BANK AG, Westdeutsche Genossenschafts-Zentralbank	Yes
<b>DK</b>	Danske Bank	Yes
	Jyske Bank	Yes
	Nykredit Realkredit	Yes
	Sydbank	Yes
<b>ES</b>	Abanca Holding Hispania	
	Banco Bilbao Vizcaya Argentaria SA	Yes
	Banco de Crédito Social Cooperativo SA	
	Banco de Sabadell, SA	
	BFA Tenedora De Acciones SA	
	Banco Mare Nostrum	
	Banco Popular Español SA	Yes
	Banco Santander SA	Yes
	Bankinter SA	
	Ibercaja Banco	
	Criteria Caixa Holding SA	Yes

<sup>15</sup> Since mid-July 2015 Deutsche Pfandbriefbank Group (pbb Group) is no longer part of Hypo Real Estate Holding Group (HRE Group).

Country	Bank Name	Balanced Sample
	Kutxabank	
	Liberbank	
	Unicaja Banco SA	
<b>FI</b>	OP-Pohjola Group	Yes
<b>FR</b>	BNP Paribas SA	Yes
	Bpifrance (Banque Publique d'Investissement)	
	CRH (Caisse de Refinancement de l'Habitat)	
	Groupe BPCE	Yes
	Crédit Agricole Group	Yes
	Crédit Mutuel Group	
	La Banque Postale	
	RCI Banque (Renault Crédit Industriel)	
	SFIL (Société de Financement Local)	
	Société Générale SA	Yes
<b>HU</b>	OTP Bank Nyrt.	Yes
<b>IE</b>	Allied Irish Banks, Plc	Yes
	Permanent TSB Group Holdings Plc	Yes
	Bank of Ireland	Yes
<b>IT</b>	Banca Carige SpA - Cassa di Risparmio di Genova e Imperia	
	Banca Monte dei Paschi di Siena SpA	Yes
	Banca Popolare dell'Emilia Romagna SC	
	Banca Popolare di Milano Scarl	
	Banca Popolare di Sondrio	
	Banca Popolare di Vicenza SCpA	
	Banco Popolare Società Cooperativa	Yes
	Credito Emiliano Holding SpA	
	ICCREA Holding	

Country	Bank Name	Balanced Sample
	Intesa Sanpaolo SpA	Yes
	Mediobanca - Banca di Credito Finanziario SpA	
	UniCredit SpA	Yes
	Unione di Banche Italiane SCpA	Yes
	Veneto Banca SCpA	
<b>LU</b>	Banque et Caisse d'Epargne de l'Etat, Luxembourg	Yes
	Precision Capital SA	
<b>LV</b>	ABLV Bank	
<b>MT</b>	Bank of Valletta Plc	Yes
<b>NL</b>	ABN AMRO Groep N.V.	Yes
	Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.	Yes
	ING Groep N.V.	Yes
	N.V. Bank Nederlandse Gemeenten	
	Nederlandse Waterschapsbank N.V.	
	SNS REAAL N.V.	Yes
<b>NO</b>	DNB ASA	Yes
<b>PL</b>	Powszechna Kasa Oszczędności Bank Polski SA	Yes
<b>PT</b>	Banco BPI SA	Yes
	Banco Comercial Português SA	Yes
	Caixa Geral de Depósitos SA	Yes
<b>SE</b>	Nordea Bank	Yes
	Skandinaviska Enskilda Banken	Yes
	Svenska Handelsbanken	Yes
	Swedbank	Yes
<b>SI</b>	Nova Kreditna Banka Maribor d.d.	Yes
	Nova Ljubljanska Banka d. d.	Yes
<b>UK</b>	Barclays Plc	Yes

<b>Country</b>	<b>Bank Name</b>	<b>Balanced Sample</b>
	HSBC Holdings Plc	Yes
	Lloyds Banking Group Plc	Yes
	The Royal Bank of Scotland Group Public Limited Company	Yes