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Finance for Europe

Prudential data report

EU GSIBs prudential capital and liquidity

Q1: 2016

Association for Financial Markets in Europe
www.afme.eu

Contents

Highlights

European systemically important banks (or EU-GSIBs[1]) have improved their capital, leverage and liquidity positions in compliance with the Basel III accord (or CRDIV in Europe).

The CRDIV rules comprise minimum requirements on capital adequacy, liquidity and leverage positions, which seek to enhance the soundness of bank's balance sheets.

Notwithstanding the unfounded market turbulence during the first quarter of 2016, EU GSIBs' capital and liquidity ratios remained resilient in times of stress and above the minimum requirements set by the CRDIV rules.

"EU GSIBs increased their Common Equity Tier 1 Capital ratio (CET1 ratio) from 10% in 4Q13 to 11.9% in 1Q16."

Among the main findings of this report are:

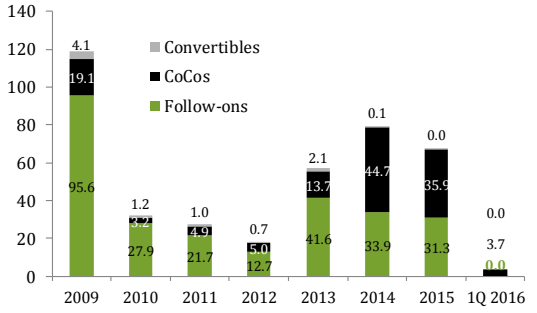
- EU GSIBs have increased their end-point Common Equity Tier 1 Capital ratio (CET1 ratio) to 11.9% in 1Q16, from 10.0% in 2013.
- End-point Tier 1 ratios increased to 13.1% in 1Q16, from 10.7% in 2013.
- Leverage ratios calculated on an end-point basis have improved over the last three years, to 4.6% in 1Q16 from 3.7% in 2013.
- Available information indicates the weighted average[2] Liquidity Coverage Ratio (LCR) stood at 127.5% in 1Q16, above the minimum required by 1 January 2018 (100%).

Capital and liquidity ratios and fresh capital raised by EU banks (as at 31 March 2016)[3]

		2013	2014	2015	1Q 2016
EU GSIBs	CET1 ratio (end-point)	10.0%	11.0%	11.9%	11.9%
	T1 ratio (end-point)	10.7%	11.9%	13.0%	13.1%
	Leverage ratio (end-point)	3.7%	4.3%	4.7%	4.6%
	LCR	-	127.5%	128.2%	127.5%
EU banks	Fresh capital raised (€bn)	57.4	78.7	67.2	3.7
	of which CoCos (€bn)	13.7	44.7	35.9	3.7

Source: *EU GSIBs balance sheets, EBA and Dealogic*

Fresh capital raised by EU banks (€bn)



Source: *Dealogic*

The market volatility episode of January and February of 2016 limited a further increase in capital raisings. During 1Q16, EU banks raised €3.7 bn in fresh capital, almost entirely in the form of CoCos (€1.2 million in Follow-ons). This estimate adds to the total capital raised since the 2009 crisis of €400 bn (see figure in left panel). This estimate, however, does not take into account capital raised through internal generation (retained earnings) and balance sheet restructuring.

[1] The Banks aggregated in this report are the 14 EU GSIBs as designated by the FSB in 2014, which was in force in 1Q16. In November 2015, the FSB updated the list of systemically important banks, changing the number of EU GSIBs from 14 to 13. The assignment of the GSIBs to the respective buckets will apply from 1 January 2017.
[2] Weighted by end-point RWAs with information of 7 of the 14 EU GSIBs that reported LCRs in 1Q16 earnings reports and Pillar 3 disclosure documents.
[3] 2014 LCR is sourced from the EBA's September 2015 Basel III monitoring exercise.

Highlights

Capital, leverage and liquidity ratios

The main capital ratios stood relatively unchanged between 4Q15 and 1Q16, despite the marked market stress in the quarter. The weighted-average end-point CET1 ratio marginally increased by 2 bps (11.86% to 11.88%), while the end-point T1 ratio increased from 13.0% to 13.1%.

Of the 13 EU GSIBs that reported end-point RWAs in 1Q16, four banks increased[5] their RWAs and CET1 capital from the values reported in 4Q15; one reduced both RWAs and CET1 capital; six increased CET1 capital but reduced their RWAs; and two decreased CET1 capital and increased RWAs.

"The average end-point leverage ratio has increased from 3.7% in 4Q13 to 4.6% in 1Q16"

The weighted-average leverage ratio decreased during 1Q16 from 4.7% to 4.6%, attributed to an increase in the exposure measure above the increase in T1 capital. The average leverage ratio has increased by 95 bps since 2013.

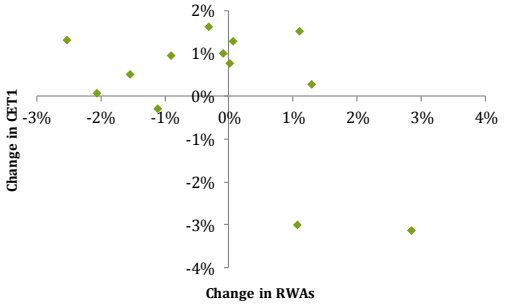
The average LCR stood at 127.5%, a marginal decrease from the figure in 4Q15 (128.2%) but above the minimum standard required to be in force by 2018 (100%).

Contingent Convertibles (CoCo)

European banks[6] raised a total of €5.1 bn in CoCos during 1Q16 (€3.7 bn by EU banks), an increase from the volume originated in 4Q15 (€0.9 bn) but below the volume of 1Q15 (€25.9 bn). Of these new issues, average coupons increased from 6.4% in 4Q15 to 7.4% in 1Q16. All instruments were originated in the first half of January and in the second half of March, after the market volatility episode.

CoCo valuations partially recovered during March and April after the market stress episode. CoCo instruments contingent on Tier I performance were most affected, with average spreads as of May increasing by 88 bps YtD (21 bps YtD for Tier 2 CoCos).

Change in CET1 and RWAs by EU GSIB (YoY, %, end-point)[4]



Source: *EU GSIBs balance sheets*

Major upcoming regulatory, legislative and policy initiatives

There are several regulatory initiatives that are currently being considered at both the international level and at the European level. These will impact the basis of calculations for the metrics covered in this report when they enter into force. Some of the key initiatives are:

- Review of the Leverage Ratio
- Fundamental Review of the Trading Book
- Credit Valuation Adjustment
- IRB models, revised Standardised Approaches & capital floors
- Interest Rate Risk in the Banking Book

AFME is actively contributing on all of these fronts.

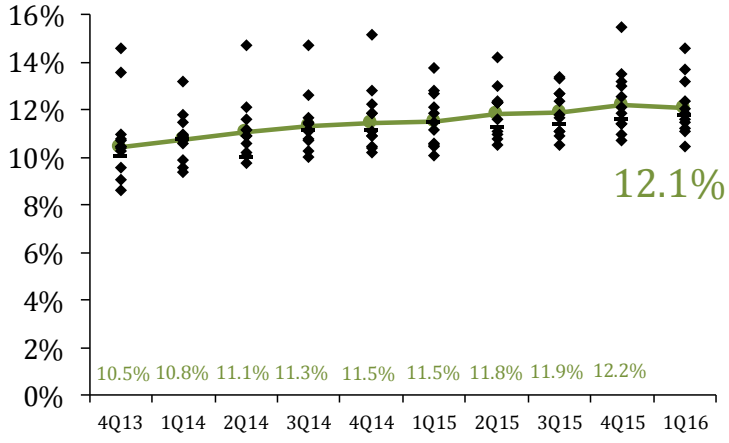
[4] The quarterly changes are in the original reporting currencies (USD, EUR or GBP) to isolate for FX effects.

[5] On the basis of the values reported in the original currencies of the financial statements.

[6] Including EU, EFTA, Turkish and other Eastern European Banks.

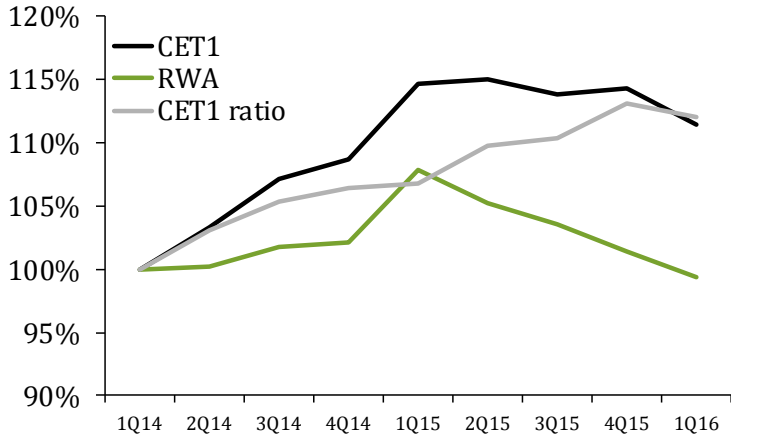
1 Capital and liquidity ratios[7]

1.1 CET1 ratio: phased-in (weighted average)



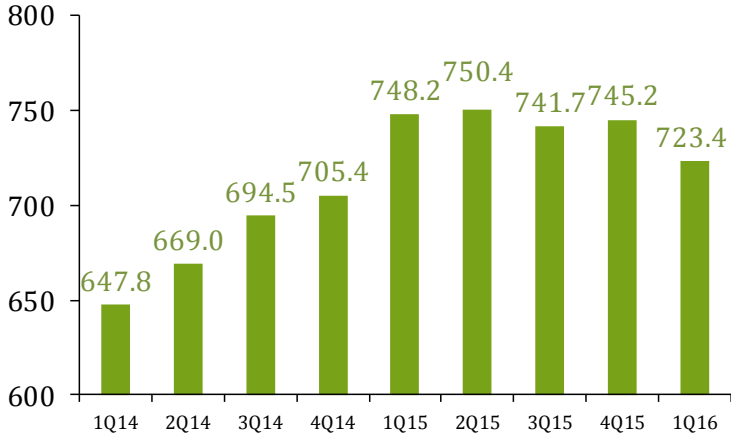
Source: *EU GSIBs balance sheets*

1.2 Cumulative percentage change of CET1, RWAs and CET1 ratio (phased-in)[8]



Source: *EU GSIBs balance sheets*

1.3 CET1: phased-in (EUR bn)



Source: *EU GSIBs balance sheets*

[7] The Banks aggregated in this report are the 14 EU GSIBs as designated by the FSB in 2014 which was in force in 1Q16.
[8] The lines represent the cumulative percentage change of aggregate RWAs, CET1 capital and the weighted average CET1 ratio.

CET 1 ratio: phased-in

EU GSIBs have complied with the CRDIV rules which entered into force on 1 January 2014.

The weighted average CET1 ratio has increased[9], on a phased-in basis, from 10.5% in December 2013 to 12.1% in March 2016.

During 1Q16, phased-in CET1 ratios marginally decreased by 10bps, although standing above the minimum required in 2015 by CRDIV. The decrease in the phased-in ratio, however, contrasts with the performance of the weighted average CET1 end-point ratio which marginally increased during the quarter as shown in Charts 1.5 and 1.6.

Progress towards increasing CET1

The quarterly decrease in the average CET1 phased-in ratio is explained by a nominal decrease of 2.9% in CET1 capital in EUR terms, which more than compensated the 2.1% decrease in RWAs during the same period.

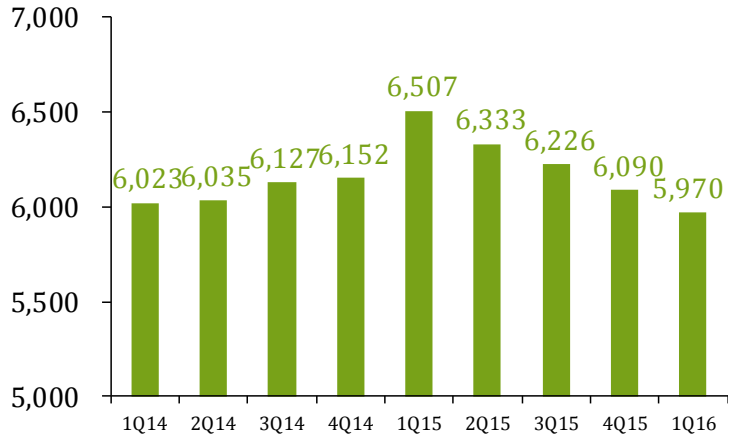
The decrease in CET1 capital and RWAs in 1Q16 was partially explained by the appreciation of the EUR against non-EUR currencies in which some of the EU GSIBs report their financial statements (USD and GBP).

Estimating the quarterly change in the original reporting currencies (isolating FX EUR effects), three EU GSIBs decreased their CET1 capital during the quarter with the remaining banks increasing CET1 capital, with a weighted average change of +0.3% QoQ when taking into account all EU GSIBs.

This would suggest that FX factors contributed to the decrease in the aggregate CET1 ratio in 1Q16.

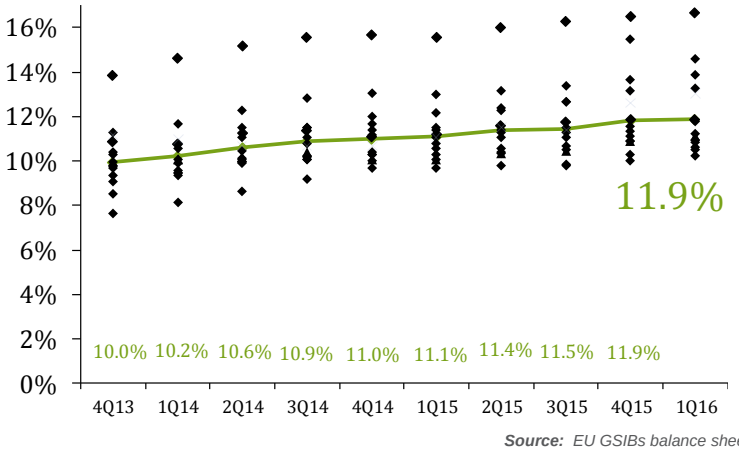
[9] CET1 ratios are the amount of CET1 capital that banks hold as proportion of risk-weighted assets (RWA). On a phased-in approach, certain transitional provisions are applied to the calculation of capital related to the treatment of deferred taxes, securitisation, and unrealised losses, amongst others.

1.4 RWAs: phased-in (EUR bn)



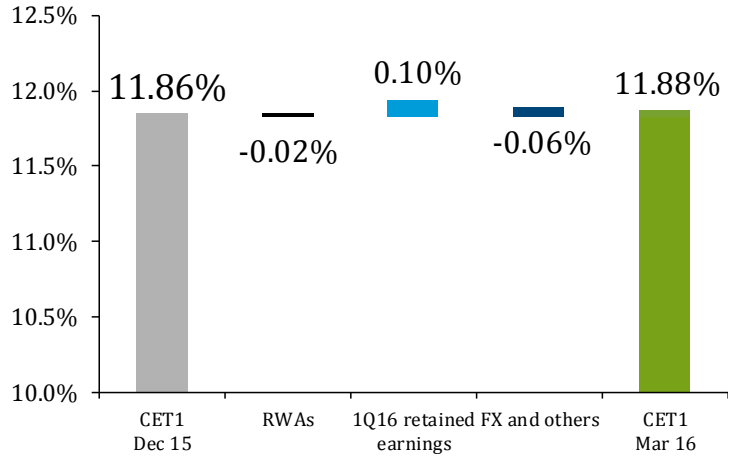
Source: EU GSIBs balance sheets

1.5 CET1 ratio: end-point (weighted average)



Source: EU GSIBs balance sheets

1.6 Change in end-point CET1 by components



Source: EU GSIBs balance sheets

Estimating the same impact for RWAs by aggregating the quarterly change in the original reporting currencies, we find a weighted average change of +0.4% QoQ, which contrasts with the quarterly decrease of 2% in EUR terms from €6.1 tn to €5.97 tn.

This would also suggest a negative rather than positive contribution of RWA dynamics to the CET1 ratio, once isolating FX effects (see waterfall in Chart 1.6).

Over the last two years, the amount of RWAs has marginally decreased from €6.0 tn in March 2014 to €5.97 tn in March 2016, where the deleveraging process and FX effects have contributed to the quarterly variations during the period.

CET1 end-point basis

On an end-point basis[10], the average CET1 ratio has increased from 10.0% in December 2013 to 11.9% in March 2016 (more precisely, to 11.88%). These ratios are comparable with a minimum required CET1 ratio of 4.5% in 2015 and between 8%-12% required from 2019 onwards, depending on factors such as the size of the bank, the phased-in process of the capital conservation buffer, and the countercyclical buffer applied in the bank's domicile[11].

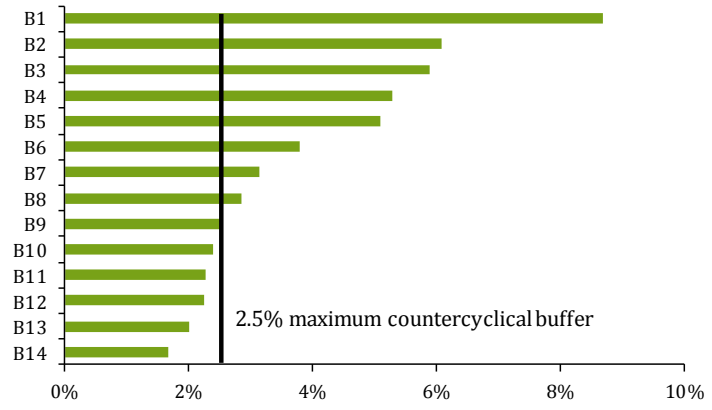
In 1Q16, the CET1 ratio marginally improved by 2bps. The change was attributed to the contribution of retained earnings by 10 bps, partially compensated by the increase in RWAs (isolating FX effects) and FX effects which negatively contributed to the variation in the ratio by -2 bps and -6 bps respectively.

The contribution of retained earnings to capital build-up is above that observed in 4Q15 (-11 bps) when a number of GSIBs reported quarterly losses, but below the contribution in 2Q15 (+24 bps) and 3Q15 (+20 bps).

[10] Under the end-point approach, the proportion of CET1 capital to risk weighted assets is calculated as if the rules due to apply at the end of the transition period were in force.

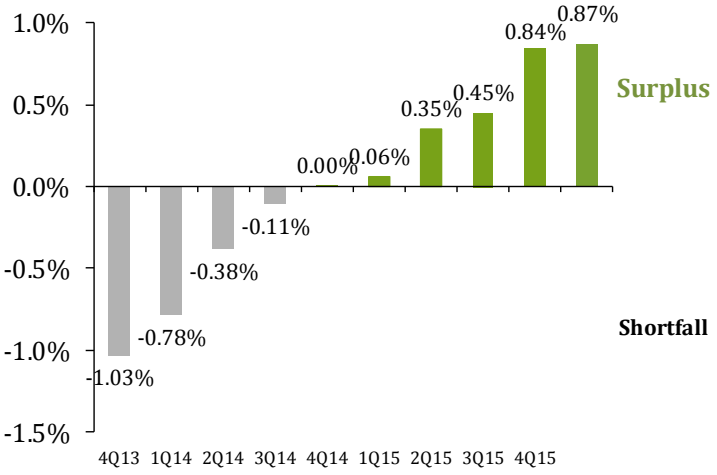
[11] The minimum required ratio in 2019 depends on the bucket in which the GSIB is allocated to, which ranges from 1-2.5% (0% for non-GSIBs), and the Countercyclical Buffer implemented by the NCAs which ranges from 0-2.5%. See Annex for further details.

1.7 Difference between current CET1 ratios and 2019 minimum requirement incl. GSIB buffer by bank (1Q16, end-point, absolute difference in %)



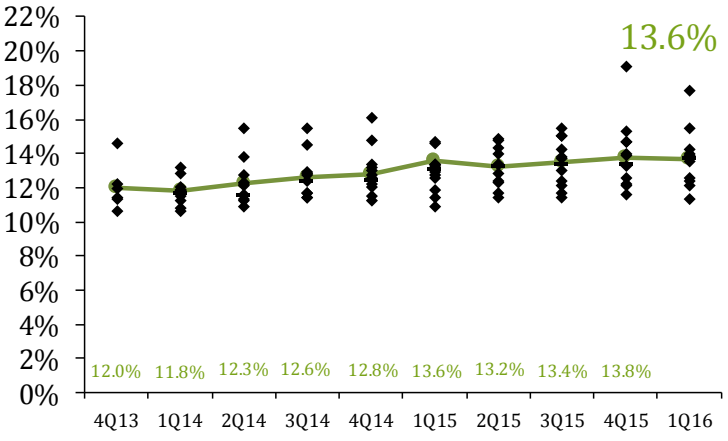
Source: EU GSIBs balance sheets

1.8 Weighted average of EU GSIBs' CET1 ratios relative to end-point target assuming a 2.5% countercyclical buffer (absolute difference in %)



Source: EU GSIBs balance sheets

1.9 Tier 1 ratio: phased-in (weighted average)



Source: EU GSIBs balance sheets

Surplus in minimum requirements[12]

Assuming that EU GSIBs maintain their current GSIB bucket allocation and assuming a 0% countercyclical buffer, data as of 1Q16 suggest that all banks have already complied with the 2019 ratios required due to their systemic importance (rows in Chart 1.7).

Taking a step further, assuming that the maximum 2.5% Countercyclical Buffer (vertical line in Chart 1.7) is applied to all EU GSIBs in 2019, nine of the 14 banks are found to be above this requirement.

On an aggregate basis, the weighted-average[13] of EU GSIB's CET1 ratios stood in 1Q16 above the maximum Pillar I requirements due to be in force in 2019. This measure (Chart 1.8) assumes that banks are allocated in their current individual GSIB bucket, and the maximum countercyclical buffer is set at 2.5% to all EU GSIBs. This figure also assumes the GSIB bucket allocation in 1Q16, which however was recently updated by the FSB, affecting in particular two EU GSIBs.

This figure represents a marked improvement on the aggregate shortfall observed in December 2013 of 1% relative to RWAs, and a balanced fulfilment of 2019 requirements in 4Q14.

Taking into account banks' Pillar I **and** Pillar II requirements that have to be met with CET1 capital, estimations indicate a weighted average surplus on CET1 ratios in 1Q16 of 0.6% if the countercyclical buffer is set at 0% in all jurisdictions (or a shortfall of 1.9% assuming a stressed scenario if the buffer is set at 2.5%).

Tier 1 Capital

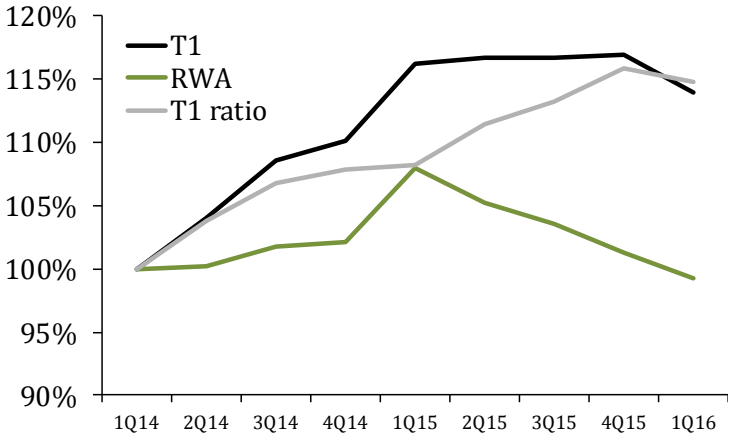
EU GSIBs have also complied with the requirements on Tier 1 capital ratios. T1 capital is a comprehensive measure of capital that encompasses CET1 capital and Additional Tier 1 capital[14].

[12] EU GSIBs shall comply with minimum CET1 ratios of between 8% and 12% from January 2019. The required ratio will depend on the G-SIB bucket the bank is assigned to (additional capital buffer between 1% and 2.5%) and the Countercyclical Buffer approved by national authorities which can reach a maximum of 2.5%.

[13] Weighted by RWAs value.

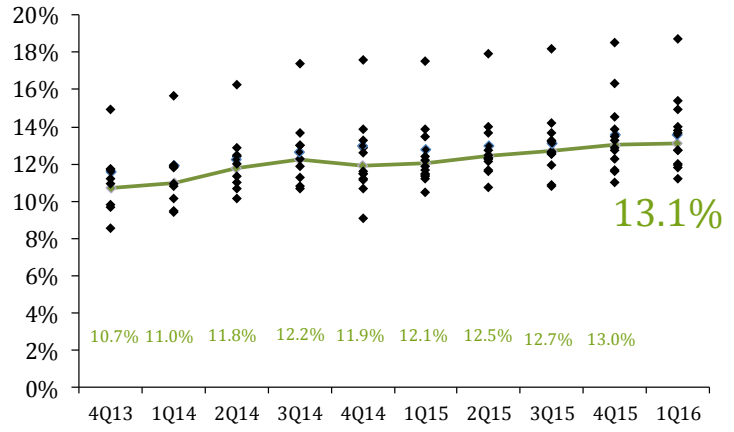
[14] Contingent Convertible bonds, subject to conditions, are included in AT1 capital. This market is discussed in Section II of this report.

1.10 Cumulative percentage change of T1, RWAs and T1 ratio (phased-in)[15]



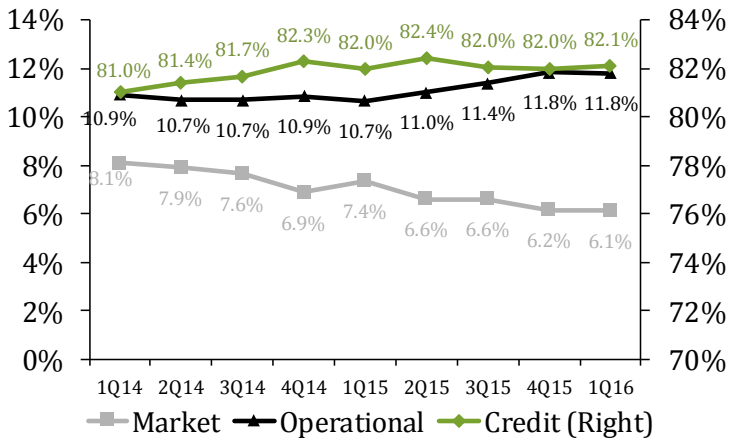
Source: *EU GSIBs balance sheets*

1.11 Tier 1 ratio: end-point (weighted average)



Source: *EU GSIBs balance sheets*

1.12 RWAs by risks



Source: *EU GSIBs balance sheets*

The ratio is measured as a proportion of RWAs.

On a phased-in basis, EU GSIBs have increased on average their T1 ratios to 13.6% in 1Q16 from 12.0% in 4Q13 and 13.8% in 4Q15, an improvement of 160 bps and a decrease of 20 bps respectively.

The quarterly decrease in T1 phased-in ratio contrasts with the improvement of 10bps once the ratio is calculated on an end-point basis (see Chart 1.11).

This ratio is comparable with a minimum required ratio of 6% in 2015 and between 9.5% and 13.5% in 2019[16], taking into account only Pillar I requirements.

Since March 2014, EU GSIBs have increased their T1 phased-in ratio from 11.0% to 13.6% in 1Q16. By components (Chart 1.10), the cumulative increase in the ratio is explained by an increase of 14% in the amount of Tier 1 capital from March 2014 to March 2016, and a decrease in EUR terms in RWAs of 1% during the period.

Risk-weighted assets

The breakdown of Risk-Weighted Assets (RWA) by risk components has maintained relatively unchanged since 2014, although with a decreasing trend in the proportion of market risks relative to total RWAs.

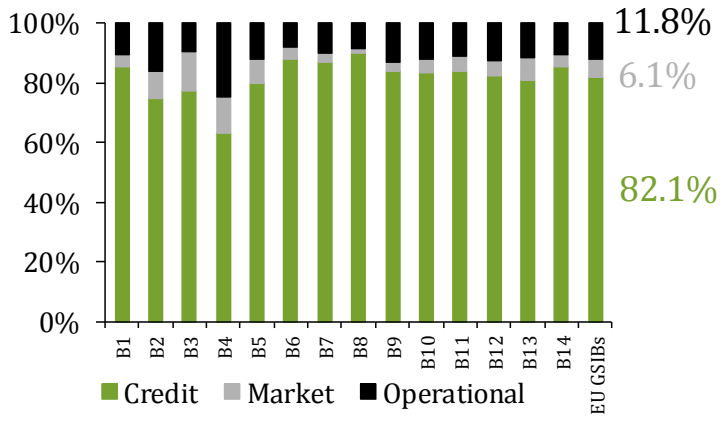
Around 82.1% of RWAs are comprised by credit-related risks, 11.8% by operational risks (10.9% in 1Q14) and 6.1% by market risks (8.1% in 1Q14).

These proportions will however change following the implementation of the remainder of the Basel package with the final trading book proposals pushing up market risk assets to around 10% before other changes are taken into account.

[15] The lines represent the cumulative percentage change of aggregate RWAs, T1 capital and the weighted average T1 ratio.

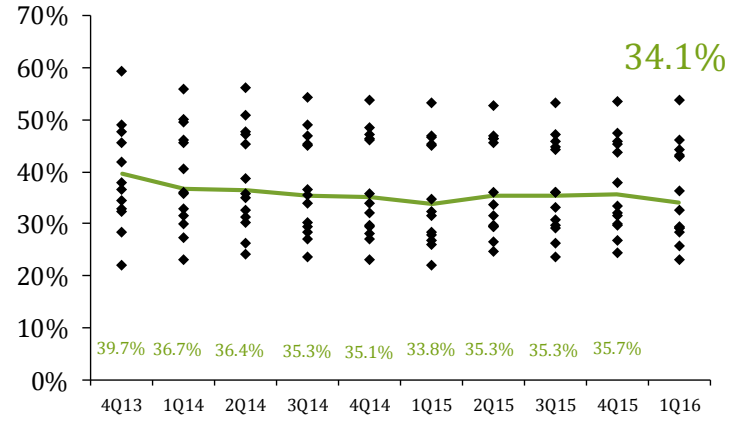
[16] As with CET1 capital ratios, the minimum required ratio in 2019 depends on the bucket in which the GSIB is allocated to, which ranges from 1-2.5% (0% for non-GSIBs), and the countercyclical buffer implemented by the NCAs which ranges from 0-2.5%. Further details of the implementation timetable are in the Annex.

1.13 RWAs by risks and EU GSIB[17]



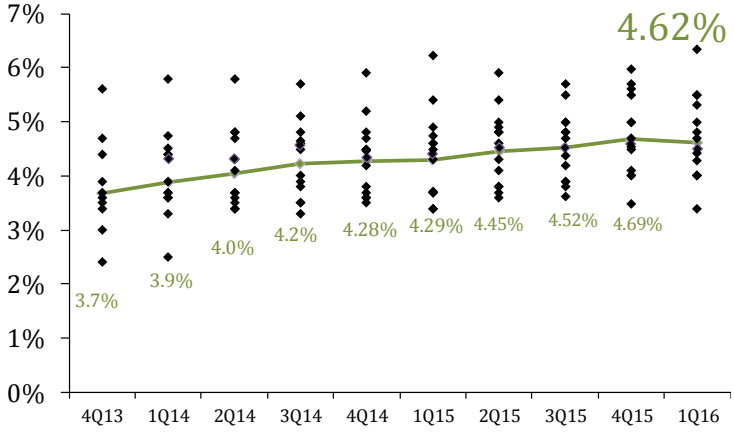
Source: EU GSIBs balance sheets

1.14 RWA densities (weighted average)[18]



Source: EU GSIBs balance sheets

1.15 Leverage ratio: end-point (weighted average)



Source: EU GSIBs balance sheets

[17] Breakdown as of 1Q16 for 12 of the 14 EU GSIBS. Others are presented as of latest available.
[18] Phased-in RWAs as proportion of total assets.

By banks, 10 of the 14 EU GSIBs had an exposure to credit risks above 80% of RWAs (with a maximum of 90% and a minimum of 63%), while 2 of the 14 EU GSIBs reported an exposure above 10% to market risks (range between 13% and 1.5%). In relation to operational risks, 11 of the 14 EU GSIBs reported an exposure above 10% of RWAs to operational risks (range between 24% and 8% between banks).

RWA densities

The ratio of RWAs relative to total assets decreased in 1Q16 to 34.1%, from 35.7% in 4Q15. Total assets in EUR increased 3%, above the increase of 0.4% in RWAs (isolating FX factors).

The 1Q16 average density is also below the figure observed in 4Q13, when it stood at 39.7%.

Notwithstanding the decreasing trend in RWA densities, the aggregate ratio is expected to increase with the implementation of new Basel initiatives such as the IRB models, revised Standardised Approaches & capital floors.

Metrics of dispersion such as standard deviation and max-min differences between banks' RWA densities indicate that the variation between EU GSIBs densities has decreased since 4Q13.

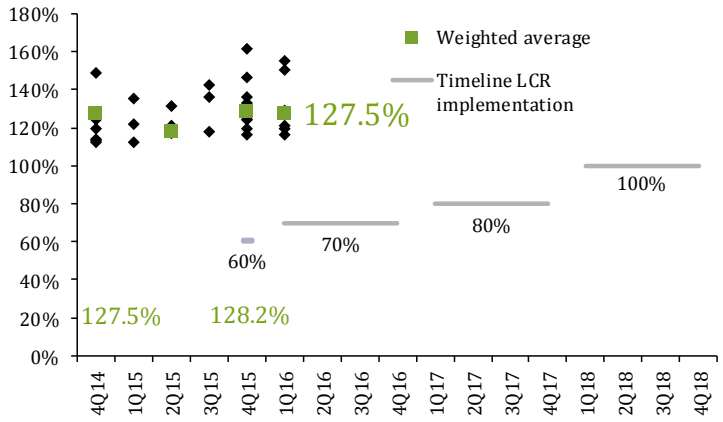
Leverage ratio

EU GSIBs have improved their leverage ratios since 2013. Leverage ratios are a measure of Tier 1 capital as proportion of the bank's total exposure (on- and off-balance sheet assets.)

On an end-point basis, the weighted average leverage ratio has improved from 3.7% in December 2013 to 4.62% in March 2016. The ratio marginally decreased compared to 4Q15, from 4.69% reported a quarter ago, due to an increase of 0.6% in T1 end-point capital (isolating FX effects) and an increase of 2% in banks' total exposure measure.

These ratios are comparable with a global minimum standard of 3% according to the Basel III accord.

1.16 Liquidity Coverage Ratio (LCR)



Source: *EU GSIBs balance sheets*

Liquidity Coverage Ratio (LCR)

CRDIV requires banks to have a sufficient level of High Quality Liquid Assets (HQLA) to withstand a stressed funding scenario of 30 days[19]. More specifically, it requires that HQLA relative to total net cash outflows over a 30-day time period are greater than or equal to 100%.

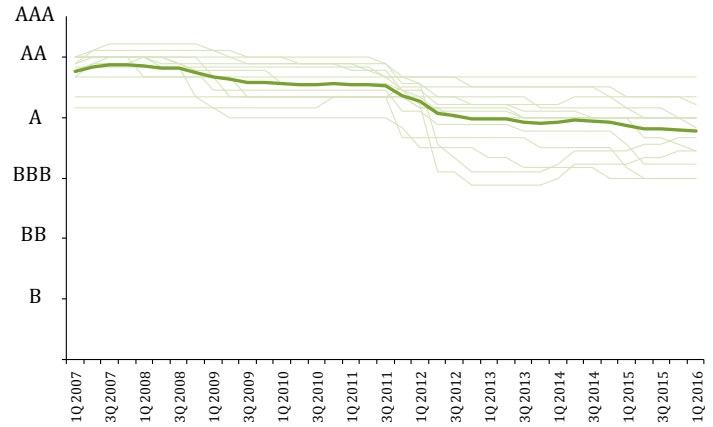
Banks must meet 60% of the LCR requirement from October 2015, 70% from 1 January 2016, 80% from 1 January 2017, and 100% from 1 January 2018 (timescale in Graph 1.16).

Available information[20] indicates that the weighted average LCR is already above the 2018 minimum required ratio (100%). The weighted average LCR stood at 127.5% in 1Q16, just marginally below the ratio observed in 4Q15 (128.5%)[21].

[19] See EBA Basel III monitoring exercise here.
[20] Information was available for seven of the 14 EU GSIBs. Among the banks not included in this calculation, two reported that their LCRs stood above 110% while three banks reported that their ratios stood above 100%.
[21] According to the latest EBA Basel III monitoring exercise, as of June 2015, Group 1 banks reported an LCR ratio of 121.1% of which GSIBs had a ratio of 118.1%. However, only 9 EU GSIBs were covered in the EBA report. In the 2014 Basel III monitoring exercise, the average LCR for GSIBs was reported by the EBA at 127% (see here).

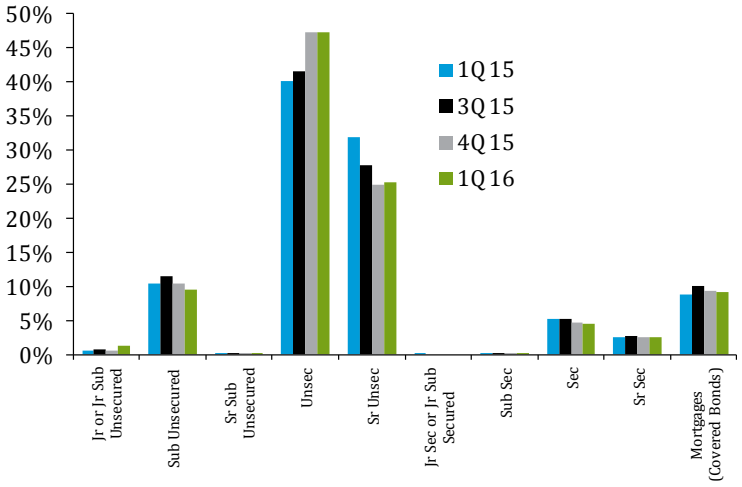
2 Debt securities and contingent convertibles

2.1 EU GSIBs simple average long-term credit rating



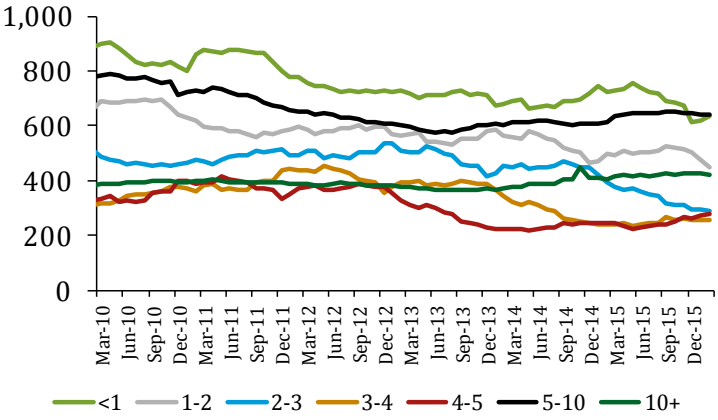
Source: *Thomson Reuters Eikon with information of Moody's, Fitch and S&P*

2.2 EU GSIBs debt outstanding by seniority



Source: *Thomson Reuters Eikon*

2.3 Maturity profile of EU 28 Banks' outstanding debt securities (EUR bn, maturity in years)



Source: *ECB*

Credit ratings

In 1Q 2016, downgrades of EU GSIBs' credit ratings outpaced upgrades. Three banks had their long-term foreign credit rating downgraded by at least one credit rating agency (CRA), while the remaining eleven banks had no changes to their credit quality assessment.

The changes in credit ratings were attributed to, among other factors, concerns about prospects of profitability and the challenging operating/macro environment (two banks), and tighter capital management and capacity to build loss-absorbing instruments compared to their peers (one bank).

In 1Q16, the median long-term credit rating stood at A (A2 in Moody's scale).

Debt securities

By seniority, 84% of EU GSIBs debt is comprised by unsecured debt, 7% by secured debt and 9% of mortgage bonds (covered bonds).

The debt funding mix by seniority remained almost unchanged during the last quarter. However, over the last year, banks have increased their proportion of unsecured bonds in their funding mix, while lowering their proportion of senior unsecured claims. This may be driven by the preparation for the implementation of MREL and TLAC, although ahead of more clarity about the details of the rules.

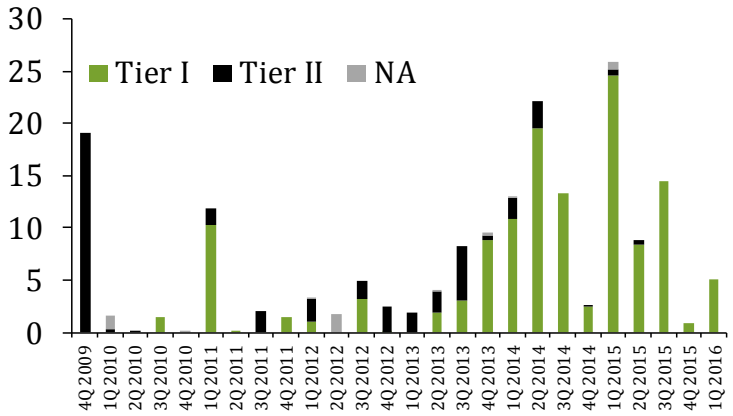
Maturity profile

The average maturity of outstanding debt securities has increased continuously over the last three years, from 4.4 years in 4Q12 to 5.0 years in 1Q16[22].

EU28 banks' outstanding debt securities stood at €3.0 tn in 1Q16 (€3.1 tn a year ago and €4.0 tn in 1Q07), where €637 bn (21%) was comprised by debt with maturity below one year; €1.3 tn (43%) of securities with maturity between one and five years; and €1.1 tn (36%) of securities with maturities above 5 years.

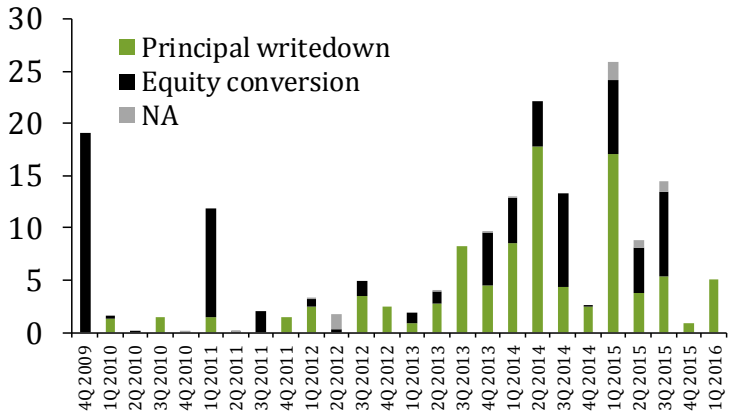
[22] This calculation assumes that bonds with maturities above 10 years (including perpetual) have a weighted average maturity of 15 years.

2.4 CoCos by capital tiering (EUR bn)



Source: *Dealogic and Thomson Reuters Eikon*

2.5 CoCos by loss absorbing mechanism (quarterly, EUR bn)



Source: *Dealogic and Thomson Reuters Eikon*

2.6 CoCos by loss absorbing mechanism (annual, EUR bn)

	2010	2011	2012	2013	2014	2015	2016 1Q
Writedown	2.8	2.8	8.4	16.3	33.2	27.2	5.1
Conversion to Equity	0.4	12.5	2.3	7.2	17.8	19.5	0.0
Not Available	0.0	0.1	1.5	0.0	0.0	3.4	0.0
Writedown (%)	0.9	0.2	0.7	0.7	0.7	0.5	1.0
Conversion to Equity (%)	0.1	0.8	0.2	0.3	0.3	0.4	0.0
Total European	3.2	15.3	12.2	23.5	50.9	50.1	5.1

Source: *Dealogic*

Contingent capital

Contingent Convertible (CoCo) bonds are hybrid capital securities that absorb losses when the capital of the issuing bank falls below a certain pre-determined threshold[23].

European banks[24] issued a total of €5.1 bn in CoCo bonds during 1Q16, a substantial increase compared to the issuance volume in 4Q15 at €0.9 bn, but a significant decrease compared to the volume originated in 1Q15 (€ 25.9 bn).

The issuance of CoCo instruments was affected by the market volatility during the first two months of the quarter, due to unfounded concerns about the possibility that banks would not be able to service coupon payments of AT1 instruments. The situation held back CoCo issuance between the second half of January and February, with issuance restarting only in mid-March.

CoCos by capital tiering and absorbing mechanism

During 1Q16, all CoCo instruments underwritten were structured on the basis of principal write down and contingent on Tier I performance. The breakdown of 1Q16 issuance does not reflect the mix observed in past years, when, for example, 54% of the 2015 volume was structured on the basis of principal write down and 65% of the volume in 2014.

All 1Q16 issues were structured with fixed rate coupons. The average coupons of these new issues[25] increased from 6.4% in 4Q15 to 7.4% in 1Q16 on a weighted average basis (see more granular information of these deals in table 2.12).

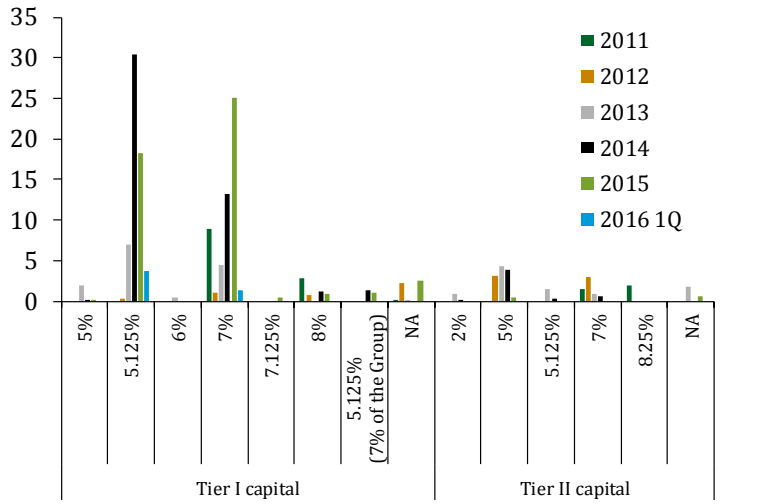
[23] BIS (2013) "CoCos: a primer". BIS Quarterly Review, September 2013.
[24] European banks according to Dealogic's classification. Includes banks in European Union nations, Eastern European countries (e.g. Russia, Azerbaijan, and Kazakhstan), EFTA countries and Turkey.
[25] Weighted average by EUR deal value, taking into account only fixed rate coupon notes.

2.7 CoCos by credit rating at date of issuance (EUR bn) [26]

	2009	2010	2011	2012	2013	2014	2015	2016 1Q
AAA		1.3						
AA-			10.6				0.5	
A			1.4				0.5	
A-		0.1	1.4		0.1	0.8	0.0	
BBB+		1.0	1.5			4.1	0.5	
BBB		0.5			4.9	9.9	8.8	
BBB-				6.1	4.3	0.9	6.4	1.3
BB+				1.4	2.2	10.2	15.2	1.3
BB	12.7	0.3			6.4	20.5	8.1	1.1
BB-	5.6				3.6	3.5	1.8	1.3
B+						0.3	5.7	
B	0.9						0.7	
B-							0.5	
NA/Not rated	0.0	0.0	0.5	4.7	2.0	0.8	1.3	0.0
Total	19.1	3.2	15.3	12.2	23.5	50.9	50.1	5.1
Investment Grade	0.0	1.6	14.8	6.1	9.3	15.7	16.7	1.3
High Yield	19.1	0.3	0.0	1.4	12.2	34.5	32.2	3.7

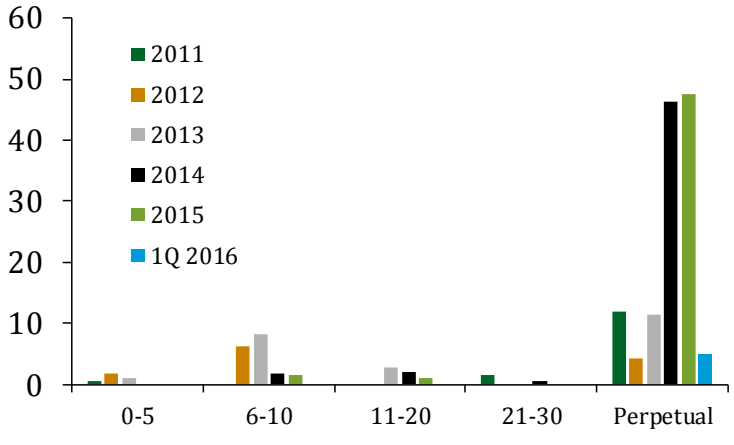
Source: Dealogic

2.8 CoCos by trigger (EUR bn)



Source: Dealogic and Thomson Reuters Eikon. * 5.125% of the bank or 7.0% of the Group

2.9 CoCos by maturity at date of issuance (EUR bn)



Source: Dealogic

CoCos by credit rating

CoCo securities issued in 1Q16 were assessed at issuance date with credit ratings of between BBB- and BB-.

€1.3 bn of the equivalent value of issued instruments were rated at an investment grade rating of BBB- (26% of the total issuance value), while €3.7 bn were rated BB+ or below (74% of the issuance value). The breakdown is comparable with the credit ratings observed in 2015, when 33% (€16.7 bn) of issued CoCos were rated between AA- and BBB- and 64% (€32.2 bn) at BB+ and below, with 3% (€1.3 bn) unrated or having an unavailable rating.

Average trigger

CoCo instruments contingent on Tier I performance are typically structured with triggers of 5.125% and 7%.

During 1Q16, three instruments representing 74% of the quarterly issuance value (or €3.7 bn) were structured with a 5.125% trigger contingent on Tier 1 performance. Only one instrument was structured with a trigger of 7%, also contingent on Tier 1 performance.

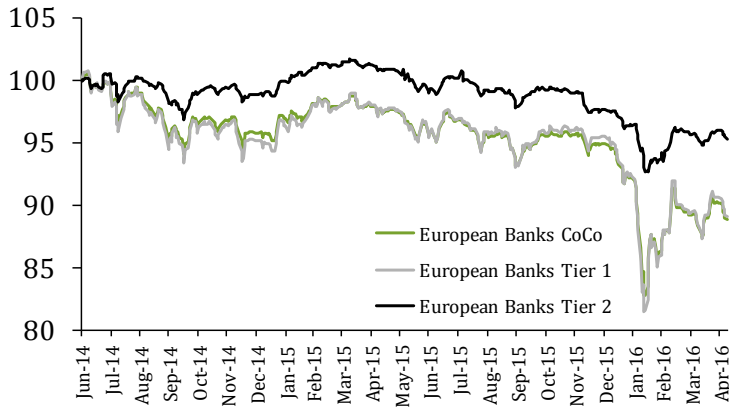
Average maturity

All CoCo instruments issued in 1Q16 were structured in the form of perpetual bonds.

The proportion follows the typical maturity of new issues structured over the last years. For example, in 2015 95% of issued CoCos were structured in the form of perpetual bond instruments and 91% in 2014.

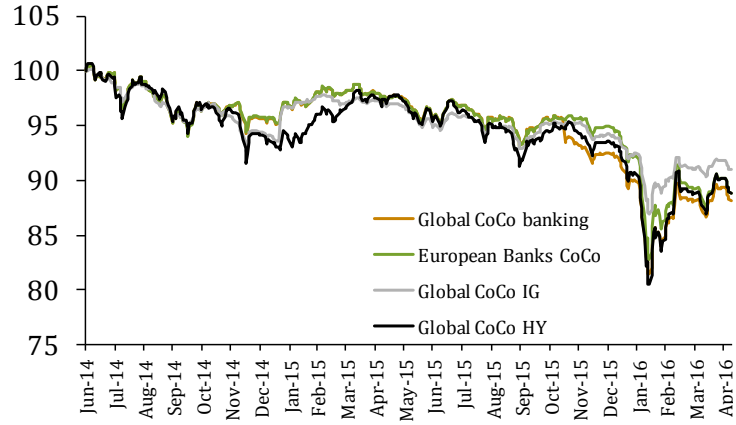
[26] Total figures may appear not to add up due to rounding.

2.10 CoCo prices by capital tiering



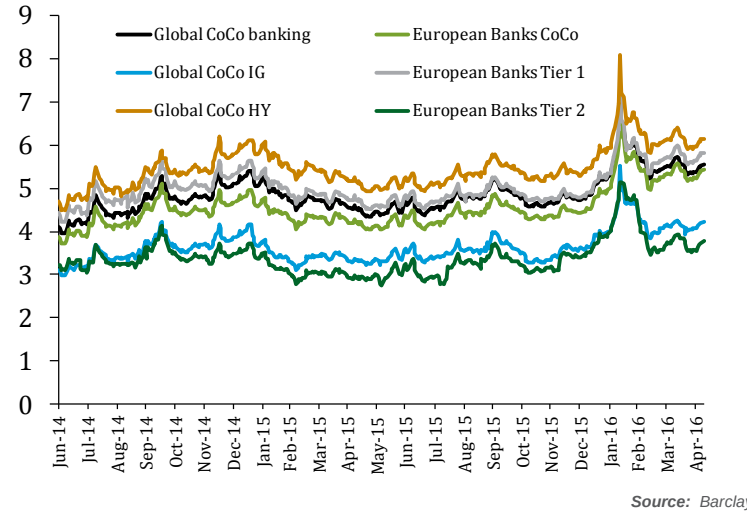
Source: Barclays

2.11 CoCo prices by risk and location



Source: Barclays

2.12 CoCo option adjusted spreads (OAS)



Source: Barclays

Valuations

CoCo prices fell substantially during the first two months of 2016. The losses varied depending on the sub-asset class of the instrument. For example, Tier I CoCos issued by European banks fell by 15% YtD as of 12 February 2016, while Tier II CoCos fell by 5.0% YtD during the same period. Tier II investors take losses on their instruments only after Tier I investors, which explains why the valuations of Tier I instruments in times of stress were hardest hit than that of Tier II instruments.

CoCo prices reached YtD losses in the first half of February, with a rapid, albeit partial, recovery since the second half of February (see Figure 2.11). As of 18 May, Tier I CoCos had fell by 5.8% YtD, while Tier II instruments fell 2.3% YtD during the same period.

From a risk perspective, Global Investment Grade (IG) CoCo instruments fell 3% YtD as of 18 May, while Global High Yield (HY) CoCo instruments fell 4% YtD in the same period.

Option adjusted spreads (OAS)

CoCo spreads rose in tandem with the losses registered in the valuations of CoCo instruments. OAS of CoCos issued by European banks rose 130 bps in the first two months of the year, closing the quarter at 5.3% (4.4% in December 2015).

Spreads of CoCo instruments issued by European banks and structured on the basis of Tier I performance rose by 93 bps during the quarter, while Tier II CoCo spreads rose by 35 bps.

More recent information indicate that spreads have decreased during the first part of 2Q16, although the levels remain above the observed at the start of the year. As of 18 May, OAS of T1 instruments had risen by 88 bps YtD, while T2 instruments had risen by 21 bps YtD.

2.13 Recently issued CoCos by European Banks (2016 as of April)

Pricing Date	Issuer	Tier Capital	Deal Total Value (Euro)	Trigger	Conversion mechanism	Issue Rate	Effective Rating (Launch)	Maturity	Coupon
12-Jan-16	Intesa Sanpaolo SpA	Tier I	1,250,000,000	5.125%	Writedown	Fixed rate	BB-	Perpetual	7
12-Jan-16	Credit Agricole SA	Tier I	1,146,473,448	5.125%	Writedown	Fixed rate	BB	Perpetual	8.125
14-Mar-16	UBS Group AG	Tier I	1,345,412,145	7.0%	Writedown	Fixed rate	BB+	Perpetual	6.875
23-Mar-16	BNP Paribas	Tier I	1,331,676,136	5.125%	Writedown	Fixed rate	BBB-	Perpetual	7.625
07-Apr-16	Banco Bilbao Vizcaya Argentaria SA - BBVA	Tier I	1,000,000,000	5.125%	Equity conversion	Fixed	BB	Perpetual	8.875
19-Apr-16	Rabobank Nederland	Tier I	1,250,000,000	5.125%	Writedown	Fixed	BBB-	Perpetual	6.625
28-Apr-16	Bankinter SA	Tier I	200,000,000	5.125%	Equity conversion	Fixed	BB-	Perpetual	8.625

Source: *Dealogic and Thomson Reuters Eikon*

Summary of the methodologies adopted in this report

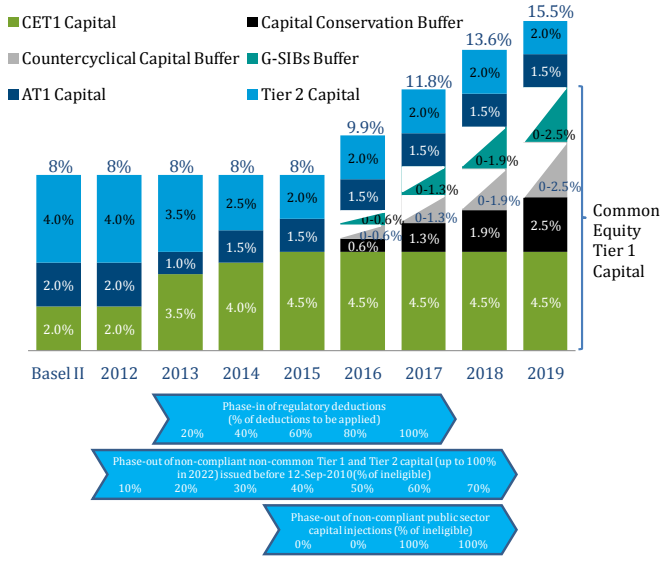
1. Balance Sheets – Overview

In 2013 the European Union adopted the CRDIV legislation, implementing the Basel III accord in the EU. The CRDIV includes a number of transitional measures, which facilitate financial markets and the real economy in adjusting smoothly to the new regulatory landscape. The charts in the first part of the report illustrate the capital and leverage ratios under the phased-in (transitional) and the end-point (fully loaded) approaches, as reported by the EU GSIBs.

During the transition period (2014-2019), certain deductions are applied to the calculation of CET1 capital, Tier 1 capital and Tier 2 capital. For CET1 capital, the regulatory deductions vary by year from 20% in 2014 to 100% from 2018 onwards, with increases of 20% per year. These deductions are related to the treatment of deferred taxes, securitisation, and unrealised losses, among others.

In addition to the abovementioned deductions, the CRDIV also establishes a timetable for the compliance with the minimum capital requirements and buffers. The ratio of minimum regulatory capital to risk-weighted assets (RWA) is illustrated in the chart below.

Minimum Capital Requirements & Buffers Implementation Timetable (% of RWAs)



Source: : AFME

The GSIB buffer ranges from 1% to 2.5% for GSIBs. The GSIB buffer varies by bank depending on the bucket where the firm is allocated to as per the FSB's/BIS methodology, which takes into account features such as size; interconnectedness; complexity; financial infrastructure; and cross-jurisdictional activity of the institution. The required countercyclical buffer ranges from 0%-2.5% depending on the assessment of each NCA.

1.1. – 1.5, 1.9 and 1.11. Capital Ratios

The Capital Ratios charts illustrate the implementation of the CRDIV requirements by the 14 EU GSIBs as designated by the FSB in 2014. Such banks are: HSBC; Barclays; BNP Paribas; Deutsche Bank; Royal Bank of Scotland; BBVA; Groupe BPCE; Group Crédit Agricole; ING Bank; Nordea; Santander; Société Générale; Standard Chartered; and UniCredit Group.

The number of reporting banks for each chart varies depending on the availability of information. The table below illustrates the number of banks that are included in each of the charts in Section 1. All figures were compiled on a best effort basis.

	1.1	1.2, 1.3, 1.4, 1.10	1.5, 1.7, 1.8	1.9	1.11	1.12, 1.13	1.14	1.15	1.16*
4Q13	14		14	7	9			10	
1Q14	13	13	12	11	8	7	13	10	
2Q14	13	13	13	12	9	11	13	11	
3Q14	13	13	12	10	8	9	13	11	
4Q14	13	13	14	13	13	14	13	14	6 (7)
1Q15	13	13	13	11	13	11	13	14	3
2Q15	13	13	14	13	13	12	13	14	3 (9)
3Q15	13	13	14	12	13	10	13	14	3
4Q15	13	13	14	12	13	14	13	14	8
1Q16	13	13	14	11	13	11	13	14	6

*The weighted averages for 4Q14 and 2Q15 are sourced from EBA's monitoring exercise reports which is based in the number of banks in parenthesis.

Each dot in the charts represents a Bank in a given quarter. The line represents the weighted average of the figures compiled in each quarter (unless disclosed otherwise).

The CET1 Capital ratio is the share of Core Tier 1 (CET1) capital as percentage of Risk Weighted Assets (RWA); Tier 1 Ratio is the share of Tier 1 capital as percentage of RWAs. Each ratio is shown on a phased-in (transitional) and fully loaded (end-point) approach as per the CRDIV legislation and as reported by the EU GSIBs.

The capital ratios data are sourced from EU GSIBs balance sheets and publicly available information disclosed in periodic financial reports and prudential data reports published by the above mentioned banks (i.e. interim earnings reports, annual reports, results presentations, Pillar III

disclosure reports or financial data disclosed as part of interim earnings results). When not available in the EU GSIBs' financial results and publically available information, 4Q14 CET1 and RWAs were sourced from the EBA's 2013 stress tests for the transitional approach.

For charts 1.3 and 1.4, for purposes of aggregation in EUR currency, the balance sheets items reported in USD and GBP were converted to EUR terms using the end-of-quarter exchange rate as certified by the ECB. The specific exchange rates are the following:

	EUR/USD	EUR/GBP
4Q13	1.3791	0.8337
1Q14	1.3788	0.8282
2Q14	1.3658	0.8015
3Q14	1.2583	0.7773
4Q14	1.2141	0.7789
1Q15	1.0759	0.7273
2Q15	1.1189	0.7114
3Q15	1.1203	0.7385
4Q15	1.0887	0.73395
1Q16	1.1385	0.79155

Source: ECB

1.6. Change in CET1 by components

Chart 1.6 illustrates the contribution of RWAs, profits and other factors to the quarterly change of CET1 ratio on an end point approach. The figures are aggregated by banks on a weighted average basis. The individual contributions are sourced from banks' presentations of the quarterly financial results and quarterly financial statements, when available in the granularity presented. When the figure is not available at the same level of granularity, a linear decomposition is performed: the quarterly percentage change of the CET1 ratio is approximated as the quarterly percentage change in CET1 capital, minus the quarterly percentage change in RWAs.

Accordingly, the contribution of RWAs to the change is calculated as the percentage change of RWAs multiplied by the CET1 ratio in the past quarter. The contribution of profits is calculated as the quarterly profits, divided by the amount of RWAs in the past quarter. The remaining "FX and other" factor is calculated as residual.

1.7. – 1.8. Difference between CET1 ratios and 2019 ratios on an end point basis

Chart 1.7 illustrates the difference between the individual EU GSIBs CET1 ratios on an end-point basis, and the regulatory ratio due to apply from 2019 assuming that banks are to comply with the GSIB buffer in which they are currently assigned in (between 1% and 2.5%). The additional countercyclical buffer is represented with a horizontal line at 2.5%, to illustrate the maximum buffer that EU GSIBs would have to comply with, should all NCAs implement the maximum buffer at 2.5%. The countercyclical buffer is yet to be implemented by the European NCAs.

Chart 1.8 illustrates the difference between EU GSIBs weighted-average CET1 ratio on an end-point basis, and a stressed maximum regulatory ratio that banks would have to comply with assuming that NCAs implement the maximum countercyclical buffer at 2.5%. That is, a requirement of 4.5% (Minimum CET1 ratio) + 2.5% (Capital conservation buffer) + 1%-2.5% (according to the bucket where the GSIB is currently located) + 0%-2.5% (countercyclical buffer). To estimate the weighted-average CET1 ratio, individual RWAs were used.

One of the 14 EU GSIBs reports its financial results on a semi-annual basis. Chart 1.8 uses the latest CET1 ratio reported for this bank.

1.10. Cumulative change of T1, RWA and T1 ratio

This chart illustrates the cumulative percentage change of each of the components of the Tier 1 ratio on a phased-in basis. As with previous charts, T1 and RWAs are sourced from EU GSIBs' financial reports and publicly available material (see reference to charts 1.1-1.4).

Data are aggregated for 12 of the 14 banks where information was available. In contrast to chart 1.8, the ratio and its subsequent cumulative percentage change, is calculated as total T1 capital as proportion of total RWAs (and not simple average of ratios).

1.12. – 1.13. Risk-Weighted Assets (RWAs)

The breakdown of RWAs by risk is sourced from financial reports published by the EU GSIBs as referenced in 1.1-1.4

Chart 1.12 illustrates the breakdown by risk component for each EU GSIB as of 1Q16 or the latest publically available breakdown.

The credit risk category represents other risks different from market and operational risk as disclosed by the EU GSIBs.

The figures are in EUR terms which are converted from the currencies used by banks to report their financial results, using the ECB's official FX rate for the corresponding end of period.

1.14. RWA densities

The densities are calculated as the ratio of RWAs to total assets by bank. The amounts of RWAs are phased-in values as reported by banks and are consistent with the figures reported in chart 1.4.

Total assets are sourced from Thomson Reuters EIKON and Banks' financial statements when not available in Reuters.

1.15. Leverage Ratios (fully loaded)

The leverage ratio represents the share of Tier 1 capital as a percentage of eligible assets under the fully loaded approach.

The leverage ratios are sourced from financial reports published by the EU GSIBs referenced in 1.1-1.5 (i.e. interim earnings reports, annual reports, results presentations, Pillar III disclosure reports, or other financial data disclosed as part of earnings results).

All figures were compiled on a best effort basis.

1.16. Liquidity Coverage Ratio (LCR)

The LCR represents the share of High Quality Liquid Assets (HQLA) relative to total net cash outflows over a 30 day time period.

LCRs are sourced from financial reports published by the EU GSIBs (i.e. interim earnings reports, annual reports, results presentations, Pillar III disclosure reports, and other financial data disclosed by banks).

Some banks disclosed in their reports that their LCR ratios were above a certain level without disclosing the actual ratio (e.g. "above 100%" or "above 110%). This information was not added in the graph.

All figures were compiled on a best effort basis.

2. Debt securities and Contingent Convertibles

2.1. Average EU GSIBs credit rating

This chart presents the simple average of the EU GSIBs long-term foreign credit ratings. The rating of each bank is estimated as the simple average of the individual long-term foreign credit ratings assigned by Moody's, Fitch and S&P. To calculate the average by bank, a value between 0 and 17 is assigned to each rating, where 0 represents DDD (or C in Moody's scale and D in S&P scale) and 17 is equivalent to AAA (or Aaa in Moody's scale). When a Credit Rating Agency (CRA) has not rated the long-term foreign performance of an EU GSIB, the average is calculated with the available credit ratings.

The information is sourced from Thomson Reuters EIKON.

2.2. Debt outstanding by seniority

The data is sourced from Thomson Reuters EIKON. The data corresponds to debt issued by the 14 EU GSIBs, which does not take account of holdings by subsidiaries/branches within the same group.

The "Mortgages" category includes mortgage covered bonds.

2.3. EU 28 bank's debt outstanding by maturity

The data is sourced from the ECB and Dealogic DCM. The figures correspond to the outstanding amounts of debt securities other than shares issued by European Union (EU28) banks at the end of reference period broken down by maturity in years.

All securities issued in all currencies are included and converted into EUR terms by the ECB.

2.4. CoCos by capital tiering

CoCo securities included are those issued by banks whose parent company is located in Europe. It does not include securities issued in Europe by banks whose parent company is non-European. Europe is defined as per Dealogic's classification, which includes European Union nations, Eastern European countries (e.g. Russia, Azerbaijan, and Kazakhstan), EFTA countries, old Soviet Union countries, and Turkey.

All securities issued in all currencies are included and converted into EUR terms by Dealogic.

The capital tiering is sourced from Dealogic DCM for each of the securities covered.

2.5- 2.6. CoCos issued by absorbing mechanism

CoCo securities included are those issued by banks whose parent company is located in Europe as defined by Dealogic, which encompasses European Union member states, Eastern European countries (e.g. Russia, Azerbaijan, and Kazakhstan), EFTA countries, old Soviet Union countries, and Turkey.

The absorbing mechanism is sourced from Thomson Reuters EIKON for each of the securities covered.

2.7 CoCos issued by credit rating

CoCo securities included are those issued by banks whose parent company is located in Europe as defined by Dealogic.

The credit rating is based on the classification by Dealogic of “Effective rating at launch”. This rating is calculated as an average of available ratings from S&P, Moody's and Fitch at the time of issuance. If an issue is rated by just one CRA, such rating is displayed.

The category “High Yield” aggregates issuance volumes of instruments rated at date of launch at BB+ or below. Investment Grade instruments relate to issues rated at BBB- or above at date of launch.

2.8. CoCos issued by maturity

CoCo securities included are those issued by banks whose parent company is located in Europe as defined by Dealogic. All securities issued in all currencies are included and converted into EUR terms by Dealogic.

Maturity is classified on the basis of the number of years from settlement date to legal maturity date. Perpetual bonds are classified under their own category.

2.9. CoCos issued by trigger

The chart aggregates the value in billion Euros of CoCo instruments issued by European banks, classified by the underlying trigger and the capital tiering in which the instruments are contingent on (Tier I or Tier II capital performance).

The data are sourced from Dealogic.

2.10. - 2.12 CoCo prices and option-adjusted spreads (OAS)

The indices in 2.10 and 2.12 are compiled by Barclays according to the capital tiering, location (Global vs. European) and risk of the security (High Yield vs. Investment Grade). The indices in 2.10-2.11 are unhedged and in nominal USD terms.

Annex

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London Office
39th Floor
25 Canada Square
London E14 5LQ
United Kingdom

Switchboard:
+44 (0)20 3828 2700

Brussels Office
Rue de la Loi, 82
1040 Brussels
Belgium

Switchboard:
+32 (0) 2 788 3971

AFME
Julio Suarez - Manager, Research
Michael Lever - Managing Director, Prudential
Charlie Bannister - Manager, Prudential

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