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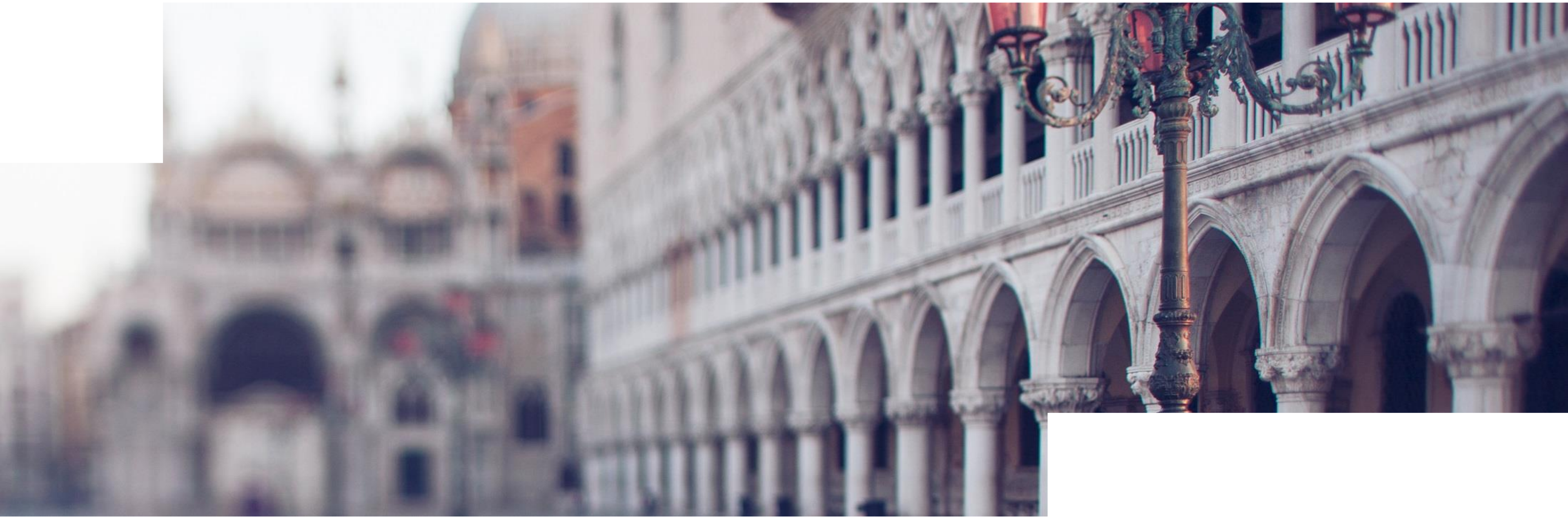
18 January 2021, 7:00 UKT

European Banks
2021 Outlook



European Sector Strategy / Financial Institutions

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European Banks: Index

2020 List of Publications

Weekly publication: IG Trade of the Week

16/12/20	-	**Subordinated / SLA ratios in CDS**: Lack of differentiation persists (link)
01/12/20	-	**RSA Insurance Group plc**: We recommend a BUY in RSALN £ 5.125% 2045-2025 Tier 2 (link)
06/11/20	-	**International Personal Finance plc**: We recommend a BUY on IPFLN € 9.75% 5NC2 senior unsecured bond (link)
22/10/20	-	**ING Groep NV**: We reiterate our BUY recommendation on INTNED €1.0% 2030-2025 Tier 2 (link)
15/09/20	-	**UniCredit SpA**: We reiterate our BUY recommendations across the capital structure and CDS (link)
18/08/20	-	**VIVAT NV**: We reiterate our BUY recommendation on VIVATN € 7.0% Perp-25 RT1 (link)
06/08/20	-	**Virgin Money UK plc**: We reiterate our BUY on VMUKLN £ 7.875% 20282023 Tier 2 and on VMUKLN £ 4% 2026-2025 Senior HoldCo (link)
27/07/20	-	**CCR Re SA**: We recommend a BUY on CCRRE € 2.875% 2040-2030 Tier 2 (link)
30/06/20	-	**Standard Chartered plc**: We recommend a BUY on STANLN € 2.5% 2030-2025 Tier 2 (link)
19/06/20	-	**Provident Financial plc**: We recommend a BUY on PFGLN £ 7.0% 2023 (link)
08/06/20	-	**Banco de Sabadell SA**: We reiterate our BUY on SABSM senior non-preferred € 1.75% 2024 and on SABSM Tier 2 € 5.375% 2028-2023 (link)
20/05/20	-	**NN Group NV**: We reiterate our Buy on NNGRNV € 4.625% 2048-2028 Dated Tier 2 (link)
24/04/20	-	**Subordinated / SLA ratios** in CDS: Lack of Differentiation (link)
01/04/20	-	**Short-end senior opco bonds**: An attractive opportunity (link)
10/03/20	-	**Banco de Sabadell SA**: We recommend a BUY on Sabadell 5.375% 2028-2023 Tier 2 (link)
20/02/20	-	CDS Trade: Sell **AEGON NV** 5-YEAR Sub CDS vs. Buy **Assicurazioni Generali SpA** 5-YEAR Sub CDS (link)
12/02/20	-	**BAWAG Group AG**: we reiterate our BUY recommendations in BGAV €2.375% 2029-2024 Tier 2 and BAWAG €0.375% 2027 Senior Non Preferred (link)
14/01/20	-	**CaixaBank SA**: We reiterate our constructive view on CaixaBank ahead of the final decision on IRPH (link)

Monthly publication: Credits on the Move

07/12/20	-	**2020 supply trends** in European financials: Supply remained robust with c.€282bn issued by banks and c.€23bn by insurers YtD (link)
02/11/2020	-	**Additional Tier 1**: Key trends seen in 2020 and opportunities ahead (link)
07/09/2020	-	**European banks**: Covid-19 impact assessment post Q2 20 results (link)
03/08/2020	-	**European insurers**: Covid-19 impact on solvency ratios and SFCR review (link)
01/06/2020	-	**EU Banks Q1 20 results**: Focus on cost of risk and capital (link)
05/05/2020	-	**Cost of Risk**: Key takeaways from the Q1 20 results reported so far (link)

Presentations

16/11/20	-	Madrid –**European Bank Issuer Day 2020** (link)
08/10/20	-	Sector Preferences & Top Trade Ideas – **September 2020** Update (link)
29/04/20	-	Sector Preferences & Top Trade Ideas – **April 2020 Update** (link)
09/01/20	-	**European Banks**: 2020 Outlook (link)
08/01/20	-	**European Insurers**: 2020 Outlook (link)
07/01/20	-	Sector Preferences & Top Trade Ideas – **2020 Outlook** (link)

Others

20/10/20	-	Credit Suisse Academy – Financials: European Banks and Insurers (link)
24/09/20	-	European Banks and Insurers: Capital Structure - An Introduction (link)
10/09/20	-	Credit Video - September 2020 update (link)
20/05/20	-	Credit Suisse Liquid Swiss Index (LSI) (link)

European Banks: Overview

Overview: Sector & capital structure preferences

Financials

Banks	Relative Value View	Z-To Next	Maturity	Return	Return
Senior Preferred/ OpCo	Fair	43	44	1.6%	3.0%
Non Preferred Senior	Attractive	67	68	2.7%	3.2%
Lower Tier 2	Fair to Attractive	131	176	2.7%	8.5%
Additional Tier 1	Attractive	422	536	5.1%	15.8%

Insurers	Relative Value View	Z-To Next	To Maturity	2020 Total Return	2019 Total Return
Senior	Unattractive	53	53	3.1%	4.7%
Dated Tier 2	Attractive	152	314	3.8%	13.1%
Undated Tier 2	Unattractive	183	389	2.6%	17.0%
Restricted Tier 1	Attractive	335	386	7.4%	13.2%

Corporates

	Relative Value View	Z-To Next	To Maturity	2020 Total Return	2019 Total Return
LEI Euro Index					
Investment Grade	Fair		60	2.9%	6.4%
LEHY Euro Index					
Sub Investment Grade	Fair	236	238	2.0%	10.2%
ECHI Euro Index					
Investment Grade	Fair	197	324	2.6%	12.0%
Sub Investment Grade	Fait to Unattractive	242	362	3.0%	14.0%

Source: Credit Suisse at 31 December 2020

Overview

Since our September 2020 Update, markets have kept performing very well, especially in November. This was driven by the maiden roll-out of a COVID-19 vaccine as well ongoing government intervention as well as central banks support. That being said, the COVID-19 negative impact is going to be long-lasting in our view, having a profound and game-changing impact on many corporate sectors. The still ongoing health crisis will also create uncertainty in the short-term (e.g. COVID-19 variant) with the extension and/or tightening of the virus-related restrictions dampening the short-term growth outlook.

However, as discussed by Credit Suisse economists (cf. Global Economy Notes: The road back to normal), even conservative estimates suggest many major economies will have vaccinated a large share of the most vulnerable population by the end of Q1. At this point, the most harmful phase of the pandemic will likely be over. This in our view provides a supportive backdrop for credit valuations into the new year.

As shown with the Q3 20 earnings season, this unprecedented situation is going to result in widespread credit metrics deterioration, with impact being more or less pronounced depending on each sector and single name situation. Overall, we think that current valuations have become more challenging and name selection remains therefore key. In that context, we see more attractive relative value in Financials compared to Corporates.

Overview: Financials

Financials					
Banks	**Relative Value View**	**Z-To Next**	**To Maturity**	**2020 Total Return**	**2019 Total Return**
Senior Preferred/ OpC	**Fair**	**43**	**44**	**1.6%**	**3.0%**
Investment Grade	Fair	40	40	1.5%	2.9%
High Yield	Fair to Attractive	170	170	4.8%	7.2%
Non Preferred Senior	**Attractive**	**67**	**68**	**2.7%**	**3.2%**
Investment Grade	Attractive	65	67	2.7%	3.3%
High Yield	Fair	139	139	4.3%	6.5%
Lower Tier 2	**Fair to Attractive**	**131**	**176**	**2.7%**	**8.5%**
Investment Grade	Fair	109	141	1.9%	6.6%
High Yield	Fair to Attractive	303	339	1.9%	10.4%
Additional Tier 1	**Attractive**	**422**	**536**	**5.1%**	**15.8%**
Insurers	**Relative Value View**	**Z-To Next**	**To Maturity**	**2020 Total Return**	**2019 Total Return**
Senior	**Unattractive**	**53**	**53**	**3.1%**	**4.7%**
Investment Grade	Unattractive	31	31	**3.0%**	4.8%
Dated Tier 2	**Attractive**	**152**	**314**	**3.8%**	**13.1%**
Investment Grade	Attractive	321	402	**3.7%**	13.2%
Undated Tier 2	**Unattractive**	**183**	**389**	**2.6%**	**17.0%**
Investment Grade	Unattractive	175	388	**2.4%**	17.0%
Restricted Tier 1	**Attractive**	**335**	**386**	**7.4%**	**13.2%**

Source: Credit Suisse at 31 December 2020

In **Insurance**, on RT1 we maintain our constructive stance despite the sharp rally, especially in November. RT1s are now trading tighter than in January 2020 and as already expressed over the course of last year we favour banks to insurers, despite a more supportive fundamental backdrop for the latter. In Tier 2, our preferred segment remains Dated Tier 2 and we still view this segment as attractive. Regarding Undated Tier 2, the differential vs. dated Tier 2 not particularly compelling in our view. As such we view Undated Tier 2 as relatively unattractive. In Senior we keep our long-standing view and remain of the opinion that this asset class does not offer compelling relative value.

Financials

In **Financials**, as we mentioned back in April and September last year, we expect fundamentals to deteriorate, but in a contained way. In April 2020, we went for an outright constructive view with only BUY recommendations across the capital structure. We retained an overall constructive view in September last year and **we still remain constructive**. While we view valuations as attractive, we are taking profit on a number of investment recommendations while keeping a number of SELL recommendations.

In AT1, despite the sharp tightening since September, **AT1 remains our favourite asset class, especially in €. We keep our stance towards the periphery and remain constructive with a focus mostly on national champions.** In late March we turned constructive on **low back-end securities** after their underperformance in the sell-off. In September last year we turned neutral and keep this stance.

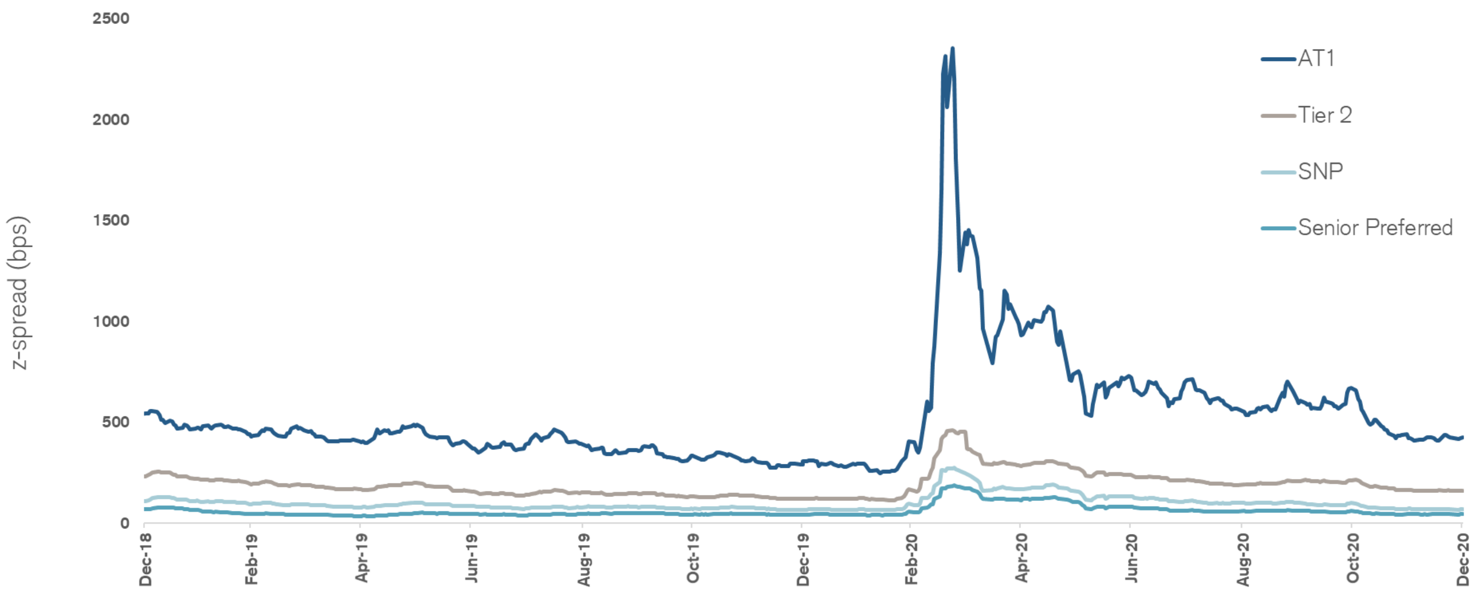
In Tier 2, we think that IG Tier 2, after the good performance since September, is now getting close to fair value and hence we are neutral on this sub segment. In HY Tier 2, we keep a number of BUY recommendations on an idiosyncratic basis.

In Senior, we are now back to the levels of January 2020. nonetheless, in Senior Non-Preferred, we still view the segment as remaining attractive. In Senior Preferred, in September last year we closed all the BUY recommendations we added in April. We currently have two BUYs in idiosyncratic situations.

European Banks: Historical performance across the capital structure

Total Returns

	FY 20	FY 19	FY18	FY 17	FY 16	FY 15	FY 14	FY 13	FY 12	FY 11	FY 10	FY 09
DJS € Banks	-23%	14%	-29%	11%	-2%	0%	0%	23%	26%	-32%	-11%	47%
AT1 CoCo €	5%	16%	-5%	15%	6%	7%	9%	14%	48%	-8%	12%	3%
BCI € LT2	3%	8%	-2%	6%	4%	2%	8%	6%	30%	-7%	2%	16%
BCI € Senior OpCo	2%	5%	0%	1%	3%	0%	7%	2%	13%	3%	3%	9%
BCI € Senior Holdco	2%	7%	-2%	4%	4%	0%	6%	1%	13%	2%	5%	11%
BCI € Senior Non Preferred	3%	6%	-1%	2%	0%	-	-	-	-	-	-	-

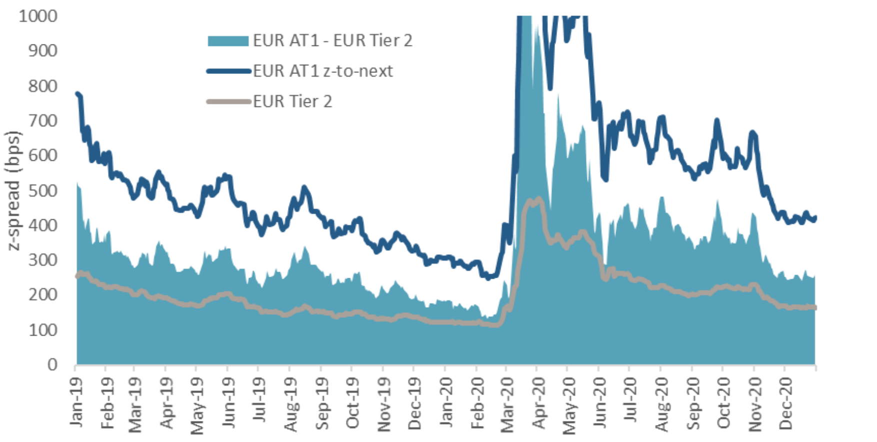


BCI refers to the Credit Suisse Bank Capital Indices. These include the BCI € Senior, BCI € Lower Tier 2 (LT2), BCI € Upper Tier 2 (UT2) , BCI € Lower Tier 2 (LT2) , BCI € Tier 1 Non-Step (T1 NS) and BCI € Tier 1 Step-Up (T1 S) sub-indices. AT 1CoCo € refers to the Tier 1 EURO sub index of the Credit Suisse Contingent Capital EURO index. DJS € Banks refers to the The STOXX Europe 600 Banks (Price) Index which include 47 European Banks

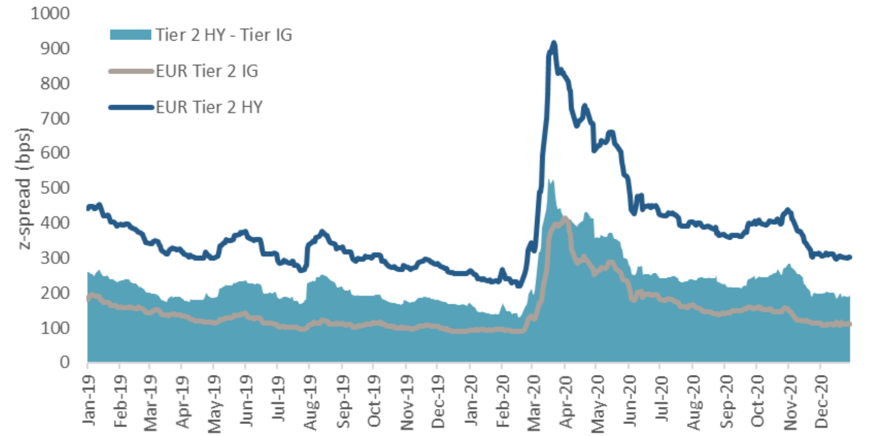
Source: Credit Suisse indices as at 31 December 2020, the BLOOMBERG PROFESSIONAL™ Service Valuation as at 31 December 2020

European Banks: Capital structure performance

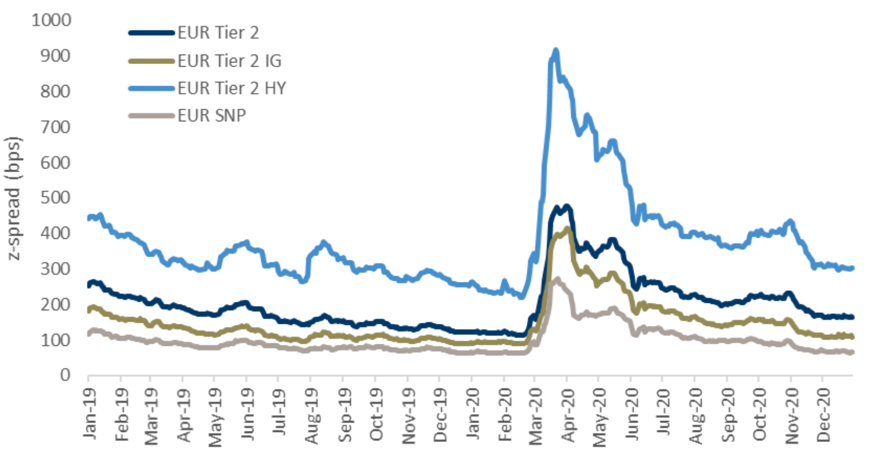
AT1 € CoCo vs. BCI € Tier 2



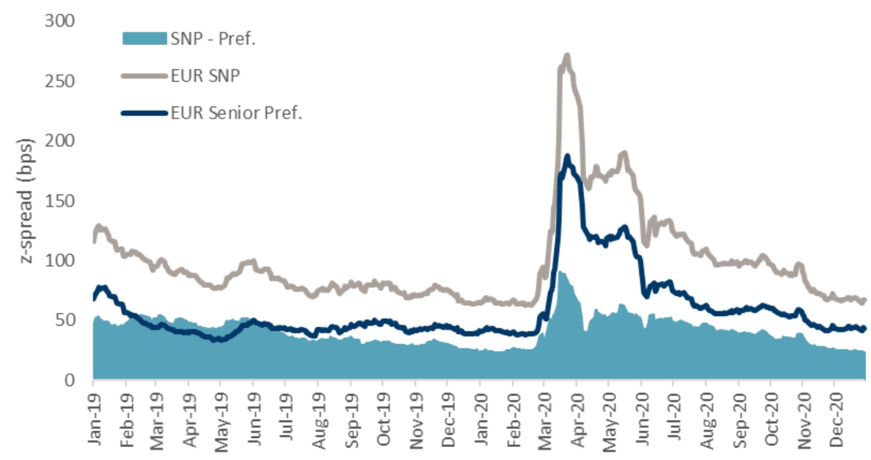
BCI € Tier 2 IG vs. BCI € Tier 2 HY



BCI € Tier 2 IG & HY vs. BCI € SNP



BCI € SNP vs. BCI € Senior Preferred



Source: Credit Suisse. Data as at 31 December 2020

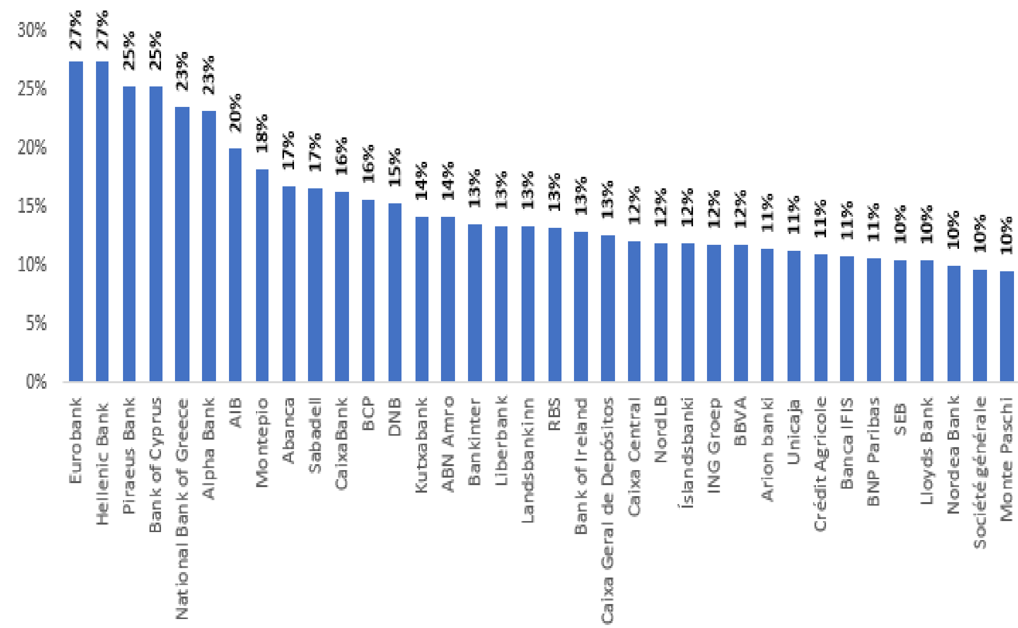
European Financials: Key themes (1/6)

1) Asset quality – We keep expecting a contained deterioration in asset quality, thanks to government schemes and regulatory relief: The contained deterioration in cost of risk (CoR) we expected in April last year materialized (cf. Sector Preferences and Top trade ideas presentation) with the CoR on average for European banks amounting to 86bps in Q1 20, 89bps in Q2 20 and the average guidance for 2020 being c.90bps. Going into 2021, we are shifting our focus beyond CoR to loans under moratorium (cf. Credits on the Move European banks: Loans under moratorium Q3 20 vs. Q2 20, published on the 4th of January 2021), which should provide us with an early indication of potential non-performing loans (NPLs) formation. We note however, **that's loans under moratorium declined between the end-June to end-September**, meaning that with the end of the first lockdown the situation eased for banks. At this juncture NPLs formation for loans under moratoria has been extremely limited with **c.€20bn of loans under non-expired moratoria classified as non-performing, resulting in an NPL ratio of 2.5%** for loans under non-expired moratoria (cf. European Banking Authority, First evidence on the use of moratoria and public guarantees in the EU banking sector, November 2020).

This deterioration suggests again that asset quality deterioration will remain contained. We also note that this asset quality deterioration takes place in a context of **banks being well capitalized**. Indeed, **capital metrics have strengthened over the course of the year 2020 with the average CET1 ratio rising to 14.81% in Q2 20 and to 15.15% in Q3 20**

2) Additional Tier 1 valuation – We remain constructive on AT1s and remains the most attractive asset class in our view: We still view AT1s as attractively priced with for instance the Credit Suisse COCO € index returning a z-spread to next of 422bps vs. a z-spread to next of 306 bps as at 2 January 2020. 2020 was extremely volatile with the year-to-date (YtD) total return amounted to–25.5% at the lows as at 19 March 2020 while the total return at year-end 2020 amounted to 5.07%. In our view the AT1 asset class remains attractive at current valuations when compared to other asset classes (cf. Credits on the Move dated 2nd of November 2020, Additional Tier 1: Key trends seen in 2020 and opportunities ahead). Based on the discrepancy in performance between the Credit Suisse CoCo € and $ indices, the € AT1 market is still in our view more relatively attractive.

Banks exposure Covid-19 impacted sectors *



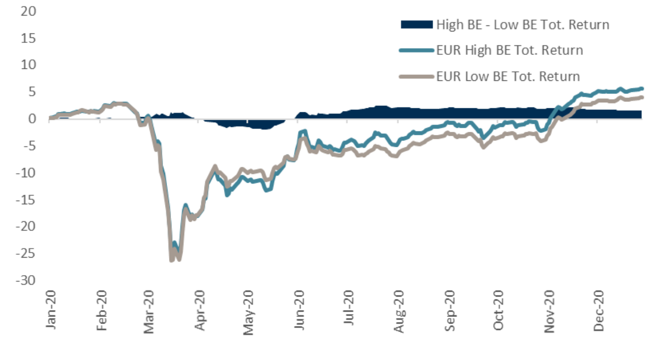
*Accommodation and food service activities; transport and storage; Arts, entertainment and recreation
Source: Credit Suisse, European Banking Authority

Lastly, in late March last year we became constructive on low back-end AT1 securities, a stance we changed in September last year to neutral and we remain so going into 2021 where the differential in z-spread to next at the wides between high-back-end and low back-end amounted to 1,518bps on the 23rd of March 2020 while the differential is currently 51bps vs. 10bps at the tights on the 12th of February 2020.

3) AT1 coupon payment risk – We reiterate our stance that we do not expect coupon cancellation: With our April Update last year we took a clear view on coupon cancellation risk by stating that in our opinion neither banks nor the European Central Bank's Single Supervisory Mechanism contemplated coupon cancellation. This still remains the case in our view. We are of the opinion, that the negative signalling effect will largely outweigh potential benefits of this measure given that the potential average capital saving is c.10bps of Common Equity Tier 1 when non paying AT1 coupons. This compares to an average saving regarding the non-payment of dividends of c.70bps. In addition, Andrea Enria clearly stated several times that that the ECB does not plan to suspend coupon payments on AT1 securities (cf. Enria's interview dated the 13th of May 2020)

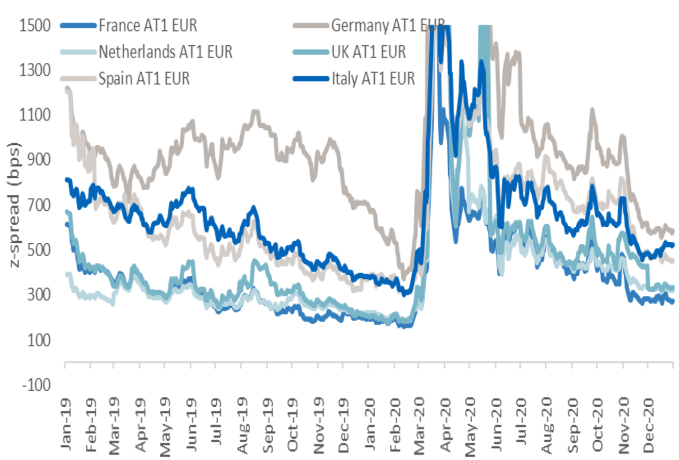
4) Issuance – We expect amounts issued to be in line with previous years across capital securities and senior non preferred: Indeed, the total amount of AT1 issued in 2020, amounted to c.€32bn (c.€30bn in 2019, c.€25bn in 2018). With regard to Tier 2, the total issued in 2020 also amounted to c.€32bn (c.€23bn in 2019 and c.€19bn in 2018). Senior bail-in total amount issued in € equivalent amounted to c.€122bn in 2020 YtD (c.€.126bn in 2019 and c.€116bn in 2018). Senior preferred issuances amounted to c.€97bn in 2020 YtD (c.€119bn in 2019 and c.€91bn in 2018) (cf. for further detiails, Credits on the Move: 2020 supply trends in European financials: Supply remained robust with c.€282bn issued by banks and c.€23bn by insurers YtD, dated 7th of December 2020). As such we would not expect issuance to be a spread driver generally speaking.

€ CoCo "Low vs. High" Back-end* (Total Return)



*We define low back-end as securities with a back-end ≤450bps
Source: Credit Suisse. Data as at 31 December 2020

Periphery vs. Core AT1 performance



Source: Credit Suisse. Data as at 31 December 2020

5) Periphery vs. Core – We remain constructive on Periphery as we were throughout 2020 and we keep our BUY recommendations in periphery's national champions: Last year the announcements around the Recovery Fund supported a compression between Periphery and Core. However, over the course of last year Spanish banks underperformed in the rally partly driven by relatively worse pandemic developments as well as emerging market exposure, in our view. As we mentioned in our September update though Spanish banks' emerging market subsidiaries being funded independently, this was more of a headline risk than a fundamental credit risk, in our opinion

We do think that economies reliant on economic sectors most impacted by the Covid-19 (including countries significantly exposed to seasonal tourism such as Italy, Spain, Portugal and Greece) could experience higher declines in GDP, coupled with higher unemployment rates leading to a more severe deterioration of asset quality metrics than core countries

However, we remain constructive**, and we still do see value in peripheral names with resilient credit profiles**. This leads us to include several recommendations in peripheral banks such as Unicredit SpA in Italy, Banco Santander SA, CaixaBank SA, Bankia SA in Spain, Caixa Geral de Depositos SA or Banco Comercial Portugues SA in Portugal. As an exception to our main rationale, we also include in our investment recommendations names such as Novo Banco SA in Portugal or Banco de Sabadell SA in Spain which in our view, represent very interesting opportunities from a relative value perspective

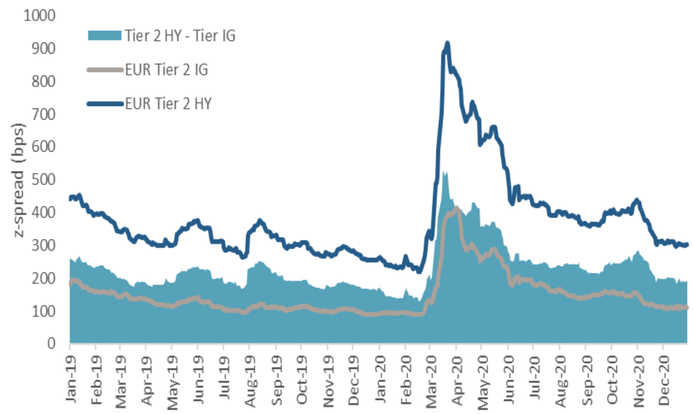
European Financials: Key themes (3/6)

6) Tier 2 – We remain broadly constructive on Tier 2 securities but we are now more selective on IG Tier 2 while the HY Tier 2 is the most attractive segment, in our view: As we show in the graph, both IG and HY Tier 2 indices are still offering relative attractive entry points, with the Credit Suisse BCI € Tier 2 IG sub-index at z-spread to next of 109bps, while the HY sub-index is returning a z-spread to next of 303bps. In particular, regarding IG Tier 2 we do see value in securities such as BGAV € 2.375% 2029-2024, DANBNK € 1.5% 2030-2025, and STANLN € 2.5% 2030-2025.

As mentioned above, HY Tier 2 is the most attractive segment, namely in peripheral names with sound credit fundamentals. In line with that, we are recommending HY Tier 2 bonds such as the BCPPL € 3.871% 2030-2025, BKIASM € 3.75% 2029-2024 or ISPIM € 3.928%2026.

Regarding callable vs. bullet securities, we remain of the view that the extension option for an issuer is by far not as compelling as in AT1 on two grounds **1)** the extension option is for only 5 years maximum and **2)** the Tier 2 regulatory capital amortises by 20% each year, five years before the final maturity of the security. **The differential between IG Tier 2 bullet and callable Tier 2 securities has declined markedly, from c.80bps at the wides last year to c.35bps currently (vs. c.10bps at the tights). However, we still see callables as attractive**

BCI € Tier 2 IG vs. BCI € Tier 2 HY



Source: Credit Suisse. Data as at 31 December 2020

Lastly, in our view, **issuance is likely to be concentrated in senior non preferred rather than Tier 2** despite the front-loading of article 104a as announced by the European Central Bank's (ECB) Single Supervisory Mechanism (SSM) on the 20th of March 2020 (cf. ECB Banking Supervision provides further flexibility to banks in reaction to coronavirus press release).

BCI € Senior Non-Preferred vs. BCI € Tier 2 IG, HY

Source: Credit Suisse. Data as at 31 December 2020

7) Senior Non Preferred vs. Senior Preferred – We still view SNP as attractive and since September last year we view senior preferred as fairly valued and we keep this stance:
With respect to Senior Non-Preferred we remain constructive on the segment as it trades too close to IG Tier 2 in view when considering the difference in recovery between the two. Indeed, in our view while the loss given default (LGD) on a Tier 2 security is likely to be 1 (cf. Banco Popular Español SA resolution decision dated June 2017), we would expect LGD for SNP to be lower than 30%.

We acknowledge though that issuance is likely to remain concentrated in this asset class (cf. our Credits on the Move publication published on the 7th of December for further issuance data). A comprehensive list of our recommendations on Senior Preferred and Non-Preferred can be found in page 22 of this presentation.

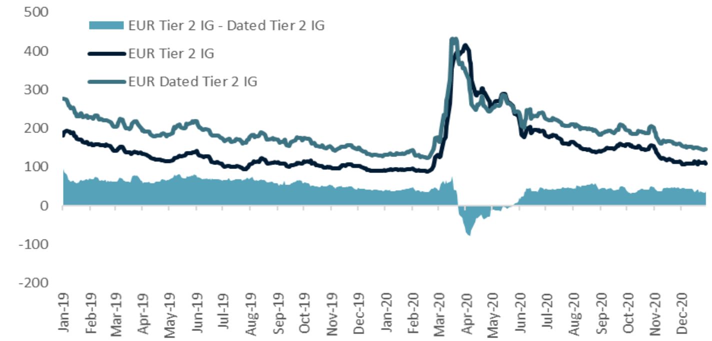
European Financials: Key themes (4/6)

8) £ market – We still view £ as attractive: The Brexit negotiations came to end on the 24th of December 2020 with an accord mostly covering goods. Hence, it is likely that the sterling market, and UK banks in particular, will be now less volatile than in a recent past. Our view remained over the course of the negotiations that an agreement would ultimately be found and hence we have continued to keep a positive stance on UK banks. We also remain constructive in second tier names such as Virgin Money UK plc.

9) Banks vs. insurers – As we already mentioned last year, we think insurers are better positioned to cope with the current economic environment because asset quality/investment risk is less acute than banks:

We view subordinated insurance as attractive, while we still do see very limited value in senior. As we went through in detail in our August Credits on the Move publication dated the 3rd of August 2020, we think that European insurers are well positioned to face the impact of Covid-19. In particular, we consider three key points when assessing the potential impact of Covid-19 on insurers: **1)** the direct impact potentially translating into higher claims, **2)** the market impact adding pressure to Solvency II ratios and **3)** the asset quality deterioration

BCI € Tier 2 IG (Banks) vs. ICI € Tier 2 IG (Insurers)



Source: Credit Suisse. Data as at 31 December 2020

Within the insurers space we do find more attractive valuations in Restricted Tier 1 and Dated Tier 2s. In Undated Tier 2, we view the differential vs. Dated Tier 2 as relatively compressed at c.31bps (vs. 18bps at tights and 170bps at the wides last year).

As regards Tier 2, at the peak of last year's crisis the Credit Suisse € BCI IG Tier 2 returned a z-spread c.80bps wider than the Credit Suisse € ICI Dated Tier 2 index. The differential is currently c.37bps (vs. 40bps at the beginning of the year 2020). We would view the current differential as fair based on the structural differential between the two asset clases with insurers' Tier 2 having more duration as well as a mandatory coupon deferral language.

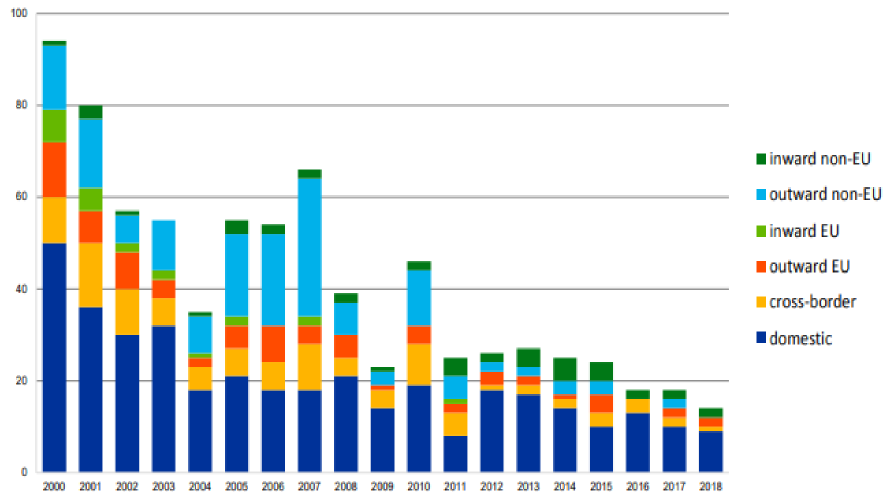
Despite the above regarding fundamentals, on a relative value basis we still favour at the margin AT1s over RT1s. In our view there is currently more value in AT1s with the Credit Suisse CoCo € index still returning a Z-spread to next c.120bps wider than at the beginning of 2020 while the Credit Suisse € RT1 returns a spread tighter at the beginning of 2020. Indeed, when we took this stance on the 29th of April the Z-to-call differential between the Credit Suisse € CoCo index and the Credit Suisse € RT1 index amounted to c.420bps and it was as at 69bps as at 3rd of September. Comparing both asset classes, the Credit Suisse €, $ and £ CoCo indices returned a z-spread to next of 422bps, 342bps, and 430bps, respectively while the Credit Suisse €, $ and £ ICI RT1 indices return a z-spread to next of 335bps, 325bps and 488bps, respectively as of 3rd September.

From a technical viewpoint, the Restricted Tier 1 market size is smaller but for those investors who want to take a more defensive investing approach than AT1s, RT1 offers attractive relative value in our view. In terms of market size, the AT1 market is a large asset class with c.€180bn across the Credit Suisse $, € and £ indices in debt outstanding while the RT1 asset class is much more limited in size at c.€7bn across the Credit Suisse €, £ and $ indices.

European Financials: Key themes (5/6)

10) Regulatory forbearance – We expect regulators to stay supportive of the banking sector: Between March and September 2020 a number of prudential and operational relief measures were enacted to support the banking sector. **Firstly**, in March last year capital, liquidity and operational relief was granted and also a guidance on NPLs and IFRS 9. **Secondly**, in April 2020, the SSM also provided a reduction in capital requirements for market risk. **Thirdly**, in July last year in a Communication on supervisory mitigating measures, the deadline for non-performing loan reduction strategies further extended, allowing more time for an assessment of the COVID-19. **Fourthly**, in September last year a temporary relief in banks' leverage ratio was granted with the banks benefiting from this relief until the 27th of June 2021. Lastly, the European Commission in a Communication laid out its proposed **Non Performing Loan action plan.** The four main goals of its NPL strategy are as follows: **i)** Further develop secondary markets; **ii)** Reform the EU's corporate insolvency and debt recovery legislation; **iii)** Support the establishment of national asset management companies (AMCs) at EU level; and **iv)** Implement precautionary public support measures to ensure the continued funding of the real economy

M&A in Euro-area: number of transactions



Source: ECB, presentation: "Is less more? Profitability and consolidation in the European banking sector"

11) Mergers & Acquisitions (M&A) – We continue to expect more consolidation in the aftermath of the Covid-19 crisis, in order to reduce overcapacity and improve banks' profitability. We reiterate our view expressed in January last year and restated over the course of the year (cf. Sector Preferences & Top trade Ideas dated 29 April 2020, theme 11), that consolidation in the European banking industry is needed with low interest rates dampening profitability while asset quality is expected to deteriorate. We would expect more M&A in Italy and we also expect to see domestic M&A in Spain, particularly after the announcement on the 3rd of September regarding a potential merger between CaixaBank SA and Bankia SA. As of now, cross-border M&A still seems unlikely in the short term, in our view. We find in this context the release by the European Central Bank of a Draft ECB Guide on the supervisory approach to consolidation in the banking sector supportive by clarifying two moot points. The key element in our view stems from the clarified approach regarding badwill with the ECB stating that " [ ] **ECB Banking Supervision recognises duly verified accounting badwill from a prudential perspective**, expecting it to be used to increase the sustainability of the business model of the combined entity, for example by increasing the provisioning for non-performing loans, to cover transaction or integration costs, or other investments."

The second key development as part of the Draft ECB Guide is the **capital requirement of the combined entity**. The ECB stated in this respect "The starting point for determining the P2R and P2G levels of the combined entity will be the weighted average of the P2R and P2G levels applicable to the two entities prior to the consolidation."

In our opinion, this guide is in line with the reported statements made on the 20th of April 2020, in an interview in the Spanish press (El Confidencial) where Andrea Enria reportedly commented that over-capacity in the European banking sector was dragging efficiency and profitability of European banks. As per the report, Enria considered that the current Covid-19 crisis could lead to a wave of consolidation in the European banking sector, with consolidation potentially being part of the solution to the European banks' low profitability issue. As per the article, Enria considered that the most exposed banks to this crisis and hence strong candidates for consolidation will be again those that faced difficulties during the financial crisis without solid business models, but that were able to remain operating because of the low interest rates and the relatively benign funding conditions.

European Financials: Key themes (6/6)

12) State aid – As expressed in April last year we remain of the view that no state aid should be needed while the Temporary Framework does not remove risk for subordinated bondholders: We think on balance that European banks, thanks to the support provided by the authorities discussed above, should not require state aid at this juncture, with the economy being on a better footing since the second semester last year. However, in our view, despite the relaxation of the state aid rules enacted on the 19th of March 2020 by the European Commission, state aid rules still remain by and large with article 45 of the 2013 Banking Communication applying. Again state aid considerations are probably less relevant at this point in time, but in due course this could be a pertinent theme, especially in a context where asset quality were to deteriorate significantly. Indeed, on the 19th of March 2020, the European Commission released a Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak. The EC stated "**Where the latter conditions were to be fulfilled, the bank receiving such direct support would not be deemed to be failing-or-likely-to-fail. To the extent such measures address problems linked to the COVID-19 outbreak, they would be deemed to fall under point 45 of the 2013 Banking Communication[], which sets out an exception to the requirement of burden-sharing by shareholders and subordinated creditors**."

Article 45 of the 30th of July 2013 "Banking Communication" provides that an exception to the loss absorption requirements can be made where implementing such measures would endanger financial stability or lead to disproportionate results. However, Article 45 stipulates that exceptions cover cases where the aid amount to be received is small in comparison to the bank's risk weighted assets and the capital shortfall has been reduced significantly in particular through capital raising measures such as **a)** rights issues; **b)** voluntary conversion of subordinated debt instruments into equity on the basis of a risk-related incentive; **c)** liability management exercises which should in principle be 100 % capital generating if the capital shortfall cannot be overcome in full and therefore State aid is required; **d)** capital-generating sales of assets and portfolios; **e)** securitisation of portfolios in order to generate capital from non-core activities; **f)** earnings retention; **g)** other measures reducing capital needs.

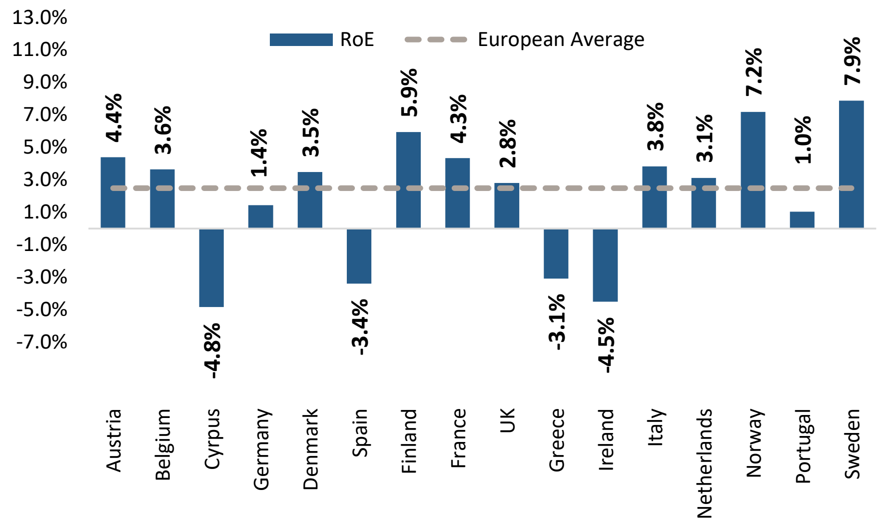
On the 13th of October 2020, the European Commission **decided to prolong and extend the scope of the State aid Temporary Framework adopted on the 19th of March 2020** to support the economy in the context of the coronavirus outbreak. All sections of the Temporary Framework are prolonged for six months until 30 June 2021, and the section to enable recapitalisation support is prolonged for three months until 30 September 2021.

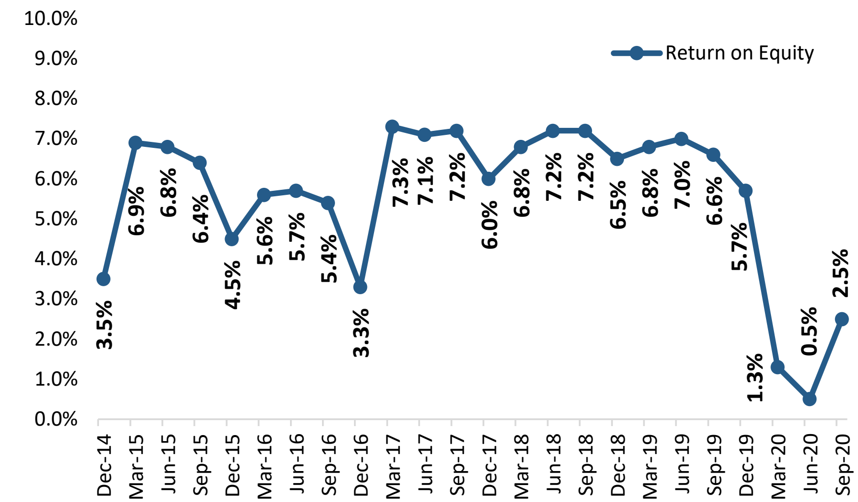
We note that a way to circumvent the potential negative consequences of the Temporary Framework is through the use of the exceptions included in the Bank Recovery and Resolution Directive to address a capital shortfall resulting from stress tests, asset quality reviews or equivalent exercises (cf. the European Commission Communication "Tackling non-performing loans in the aftermath of the COVID-19 pandemic). On the 13th of November the European Banking Authority published the methodology for the **2021 stress test** for which the process is going to start at the end of January 2021 while the results are expected by the end of July 2021.

European Banks: Fundamentals

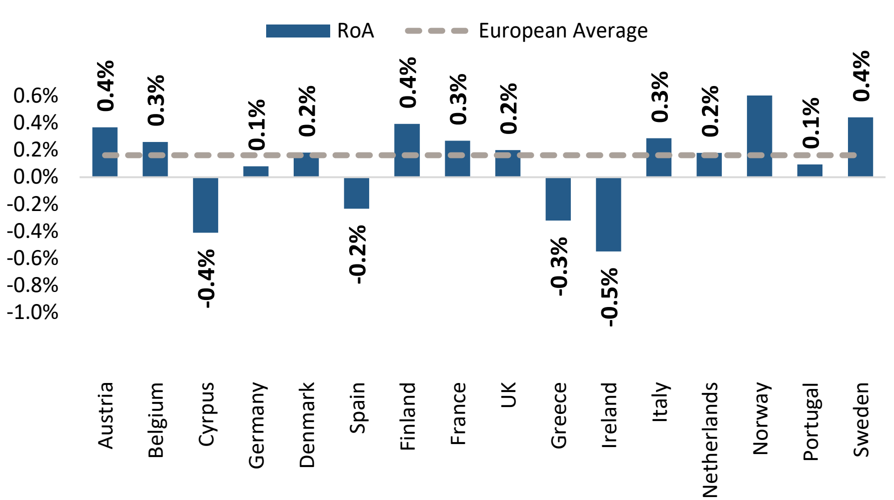
Fundamentals: Profitability (1/2)

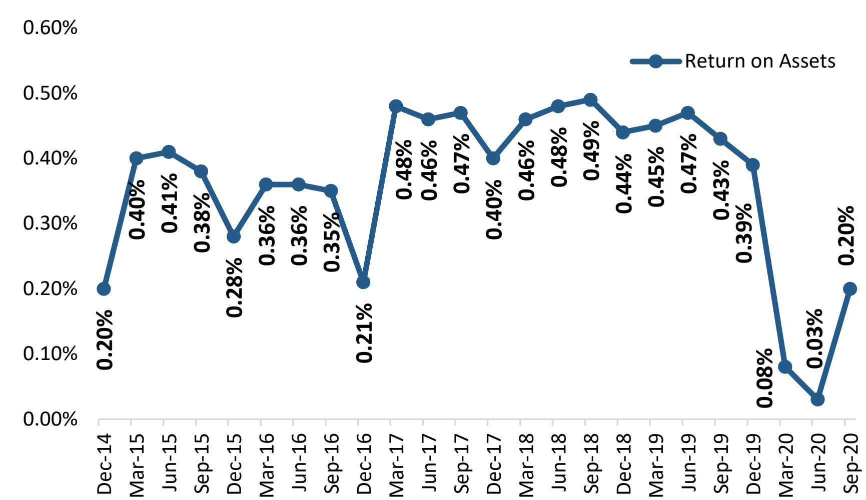
Return on Equity (RoE)





Return on Assets (RoA)

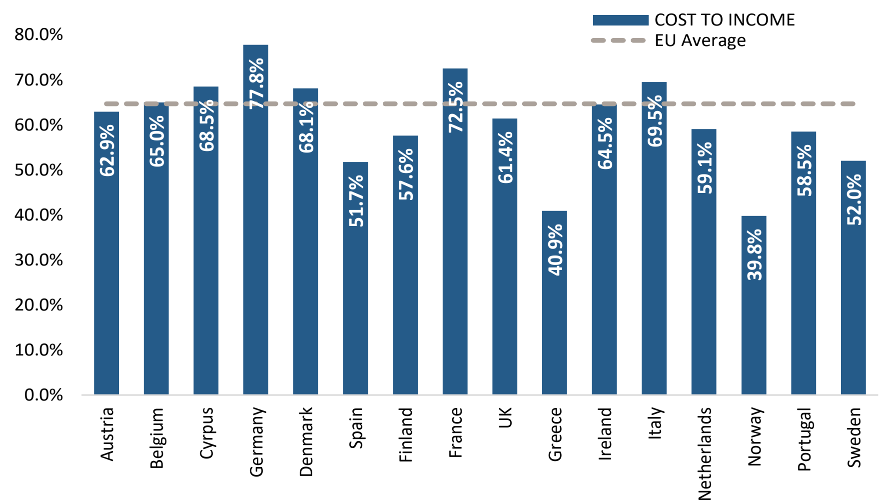


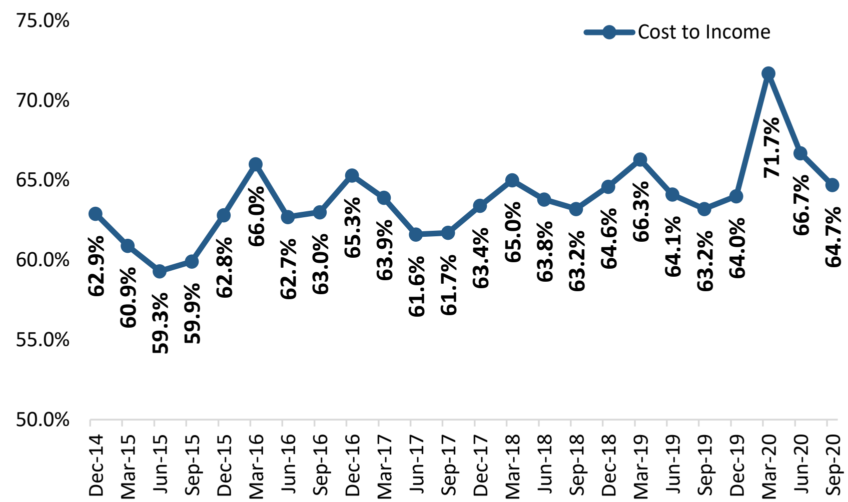


Source: EBA and Credit Suisse

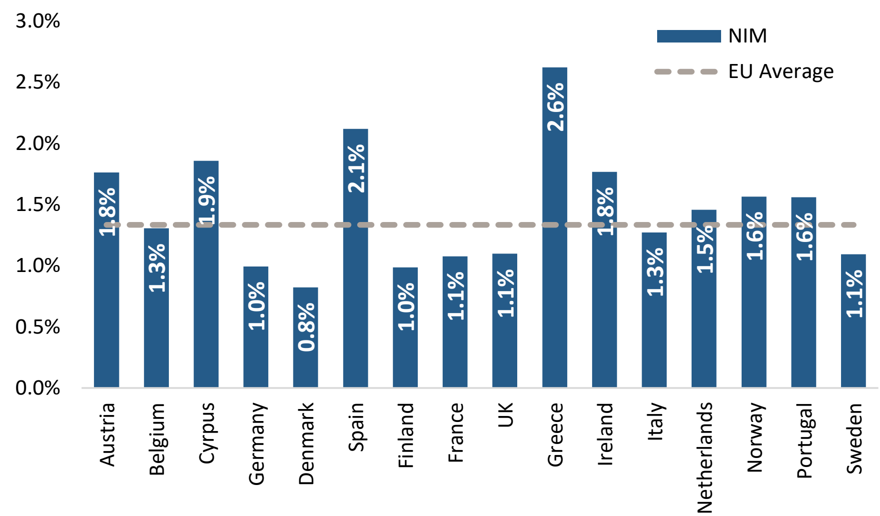
Fundamentals: Profitability (2/2)

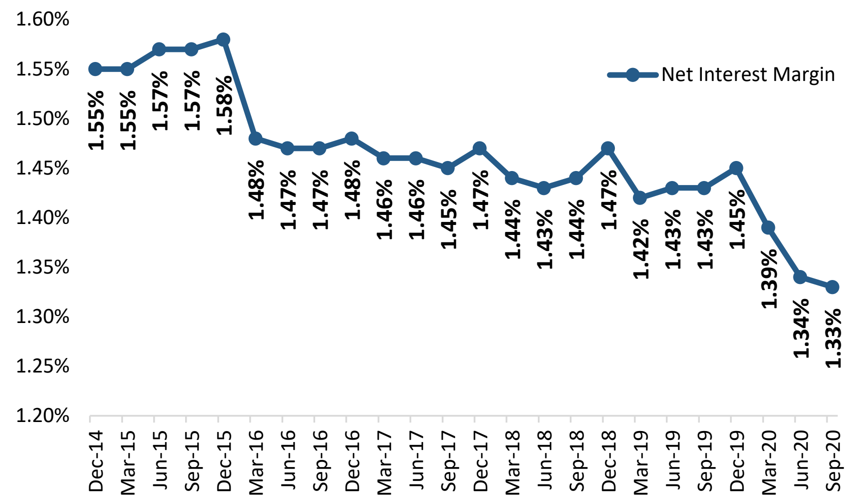
Cost to Income (C/I) ratio





Net Interest Margin (NIM)

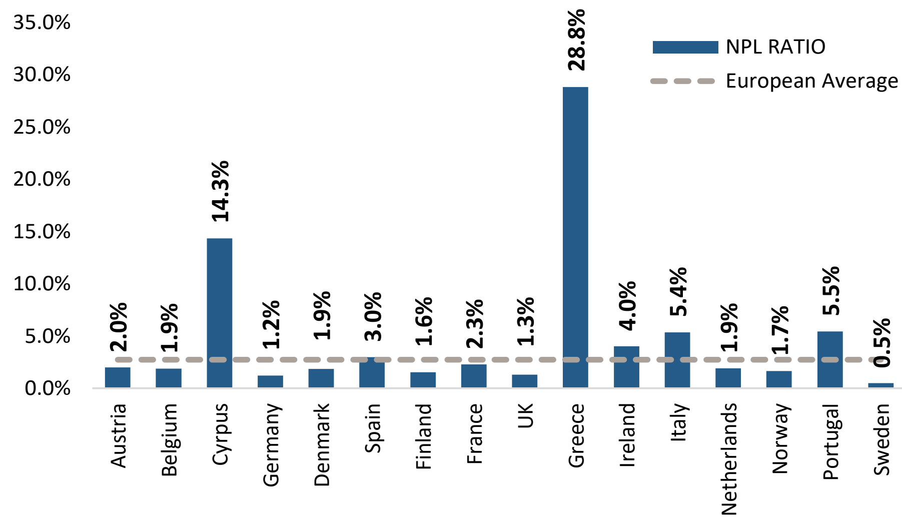


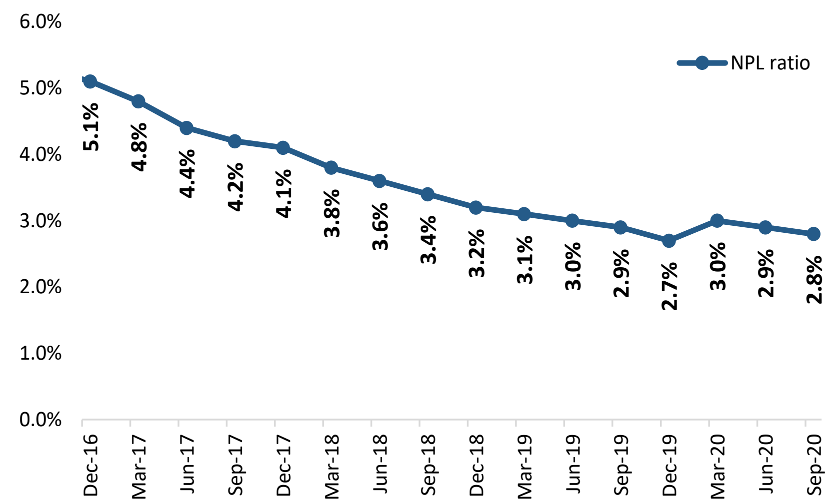


Source: EBA and Credit Suisse

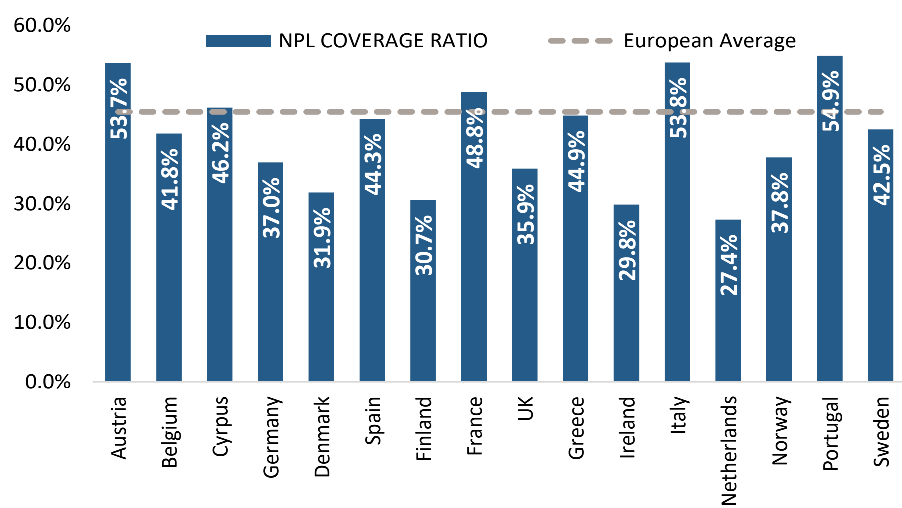
Fundamentals: Asset quality (1/2)

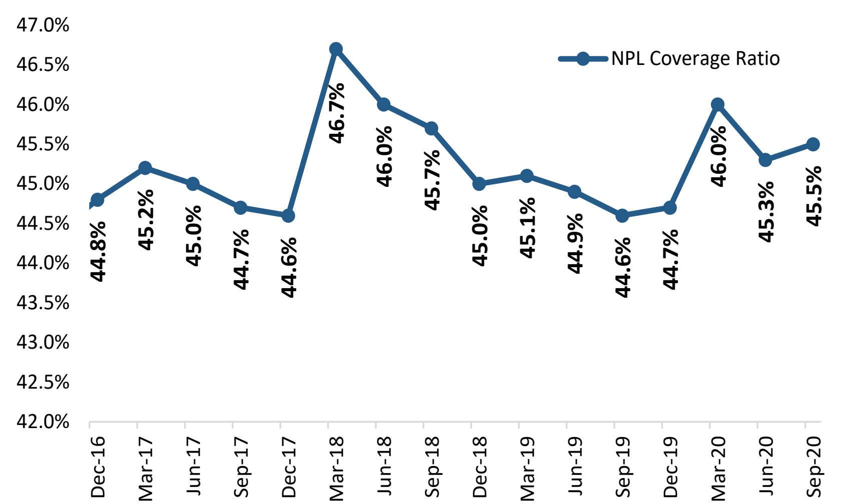
Non-performing loans (NPL) ratio





Non-performing loans coverage ratio

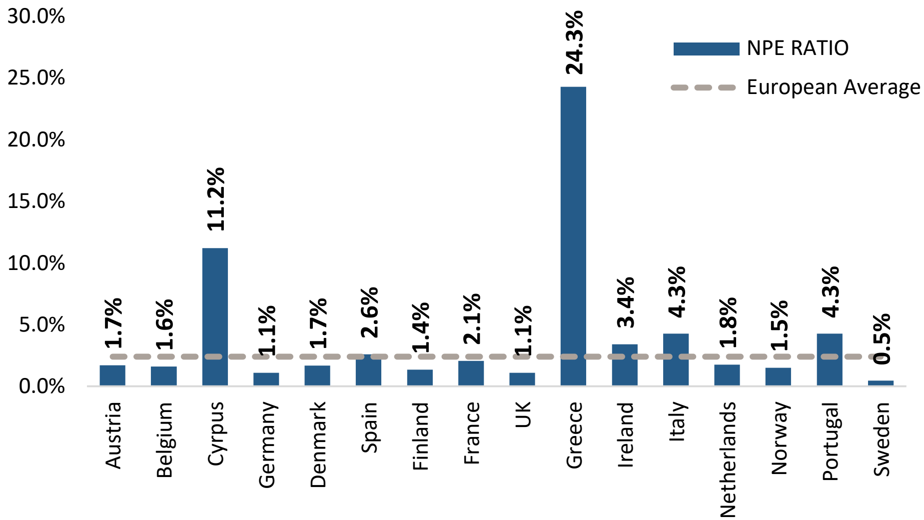


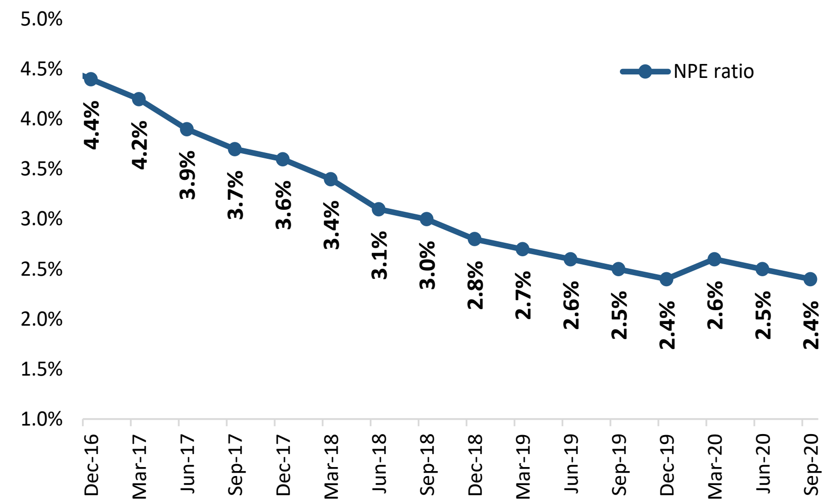


Source: EBA and Credit Suisse

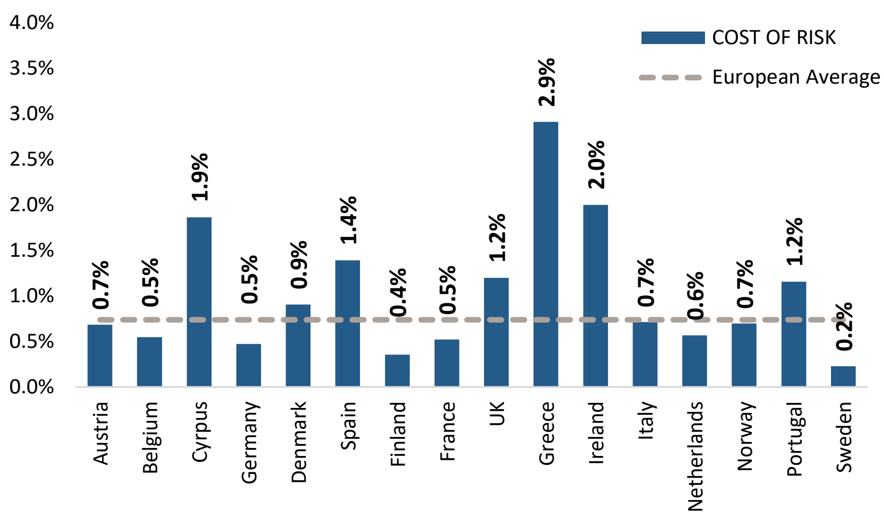
Fundamentals: Asset quality (2/2)

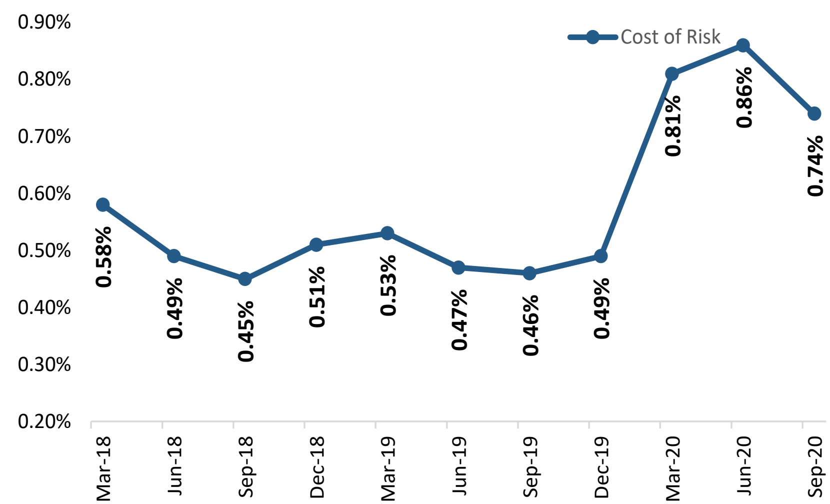
Non-performing Exposures (NPE) ratio





Cost of Risk

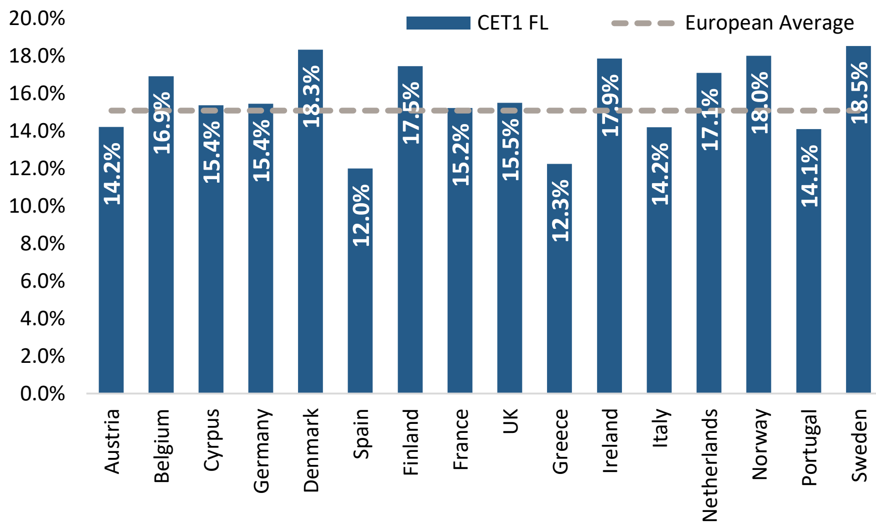


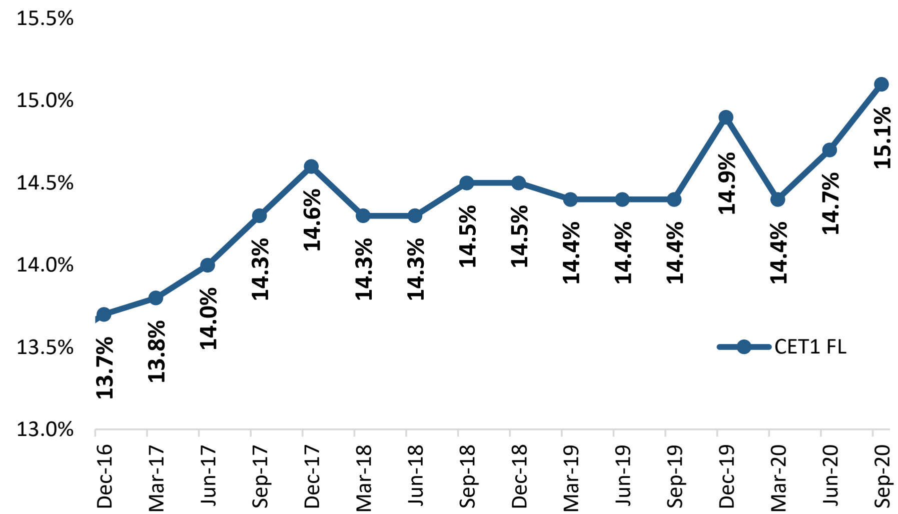


Source: EBA and Credit Suisse

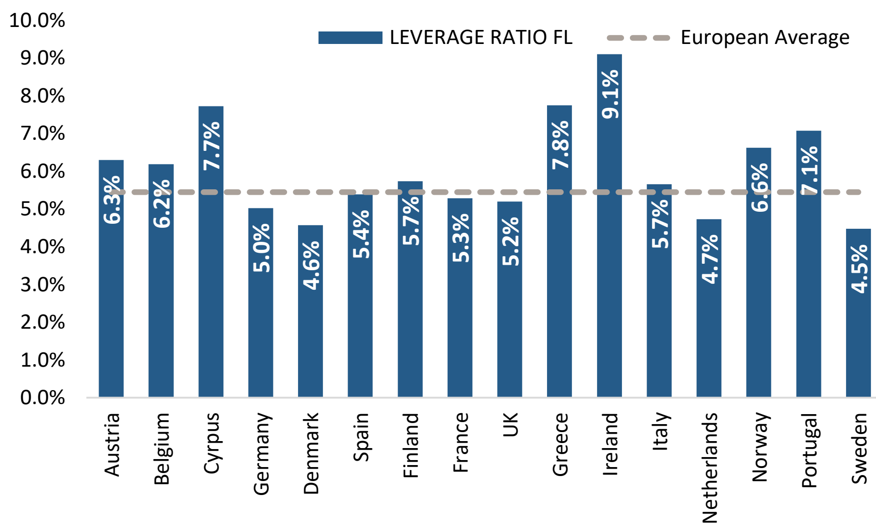
Fundamentals: Capital

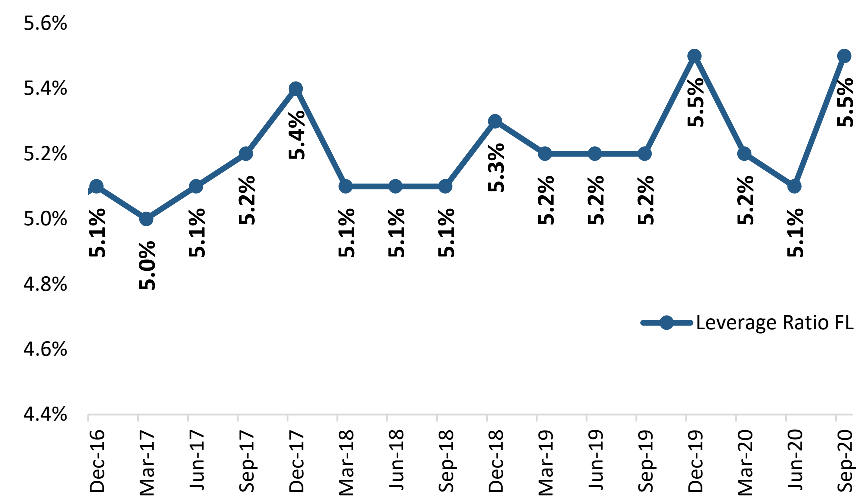
Common Equity Tier 1 (CET1) ratio - Fully Loaded





Leverage ratio - Fully Loaded

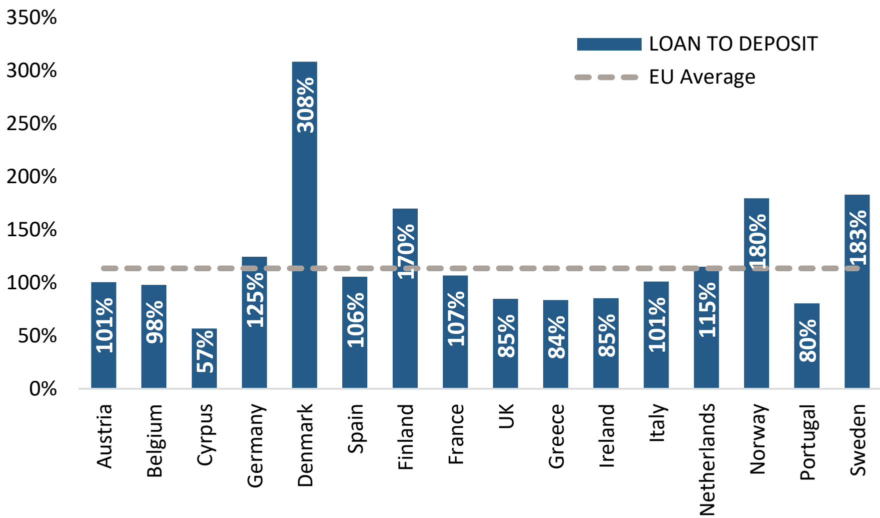


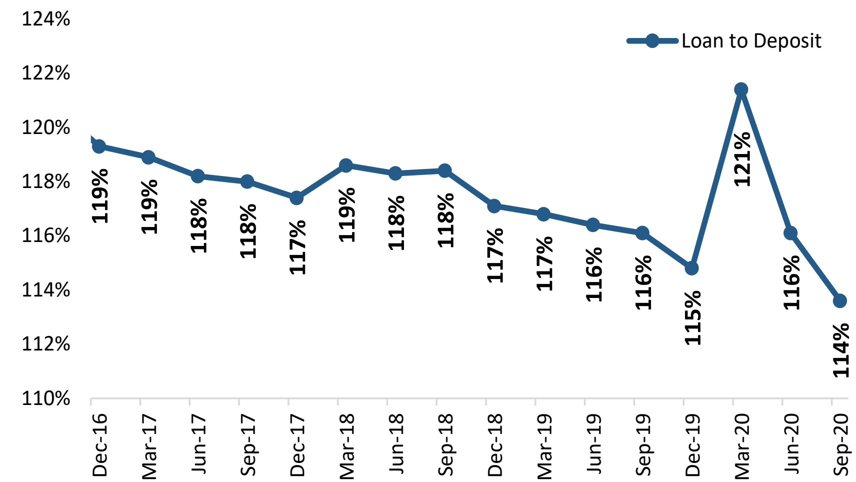


Source: EBA and Credit Suisse

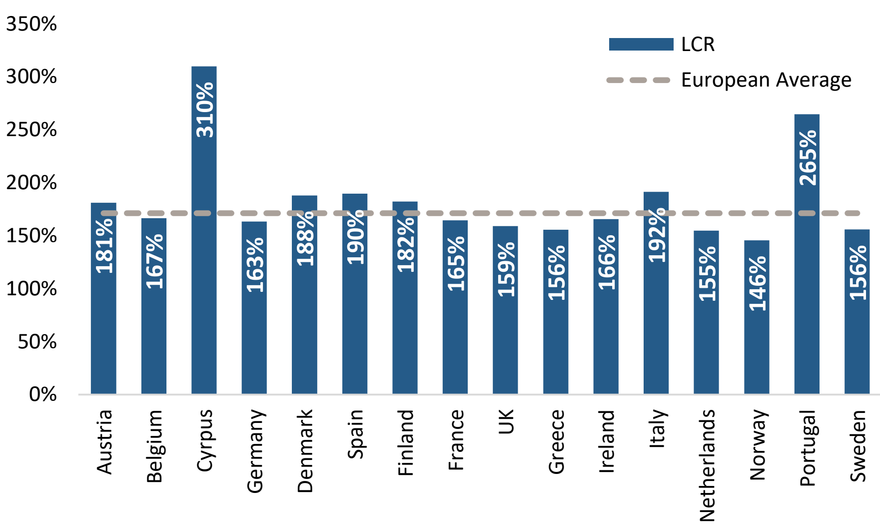
Fundamentals: Liquidity

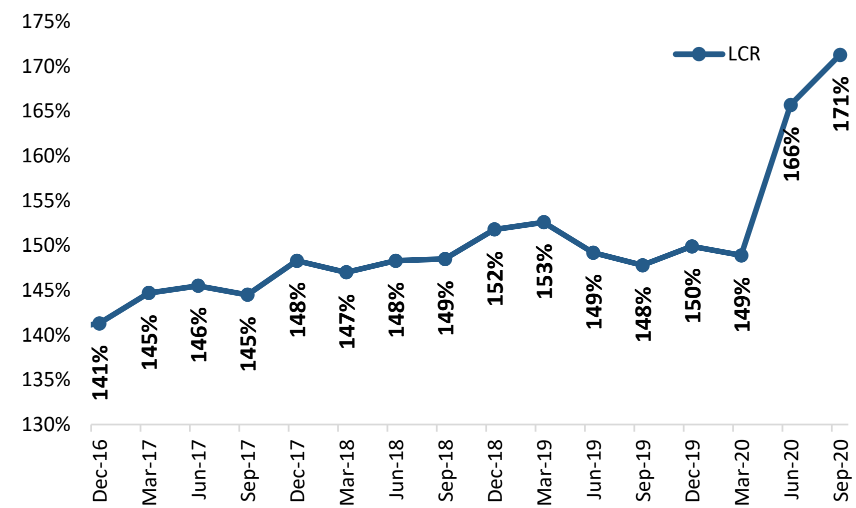
Loan-to-Deposit ratio





Liquidity Coverage Ratio (LCR)





Source: EBA and Credit Suisse

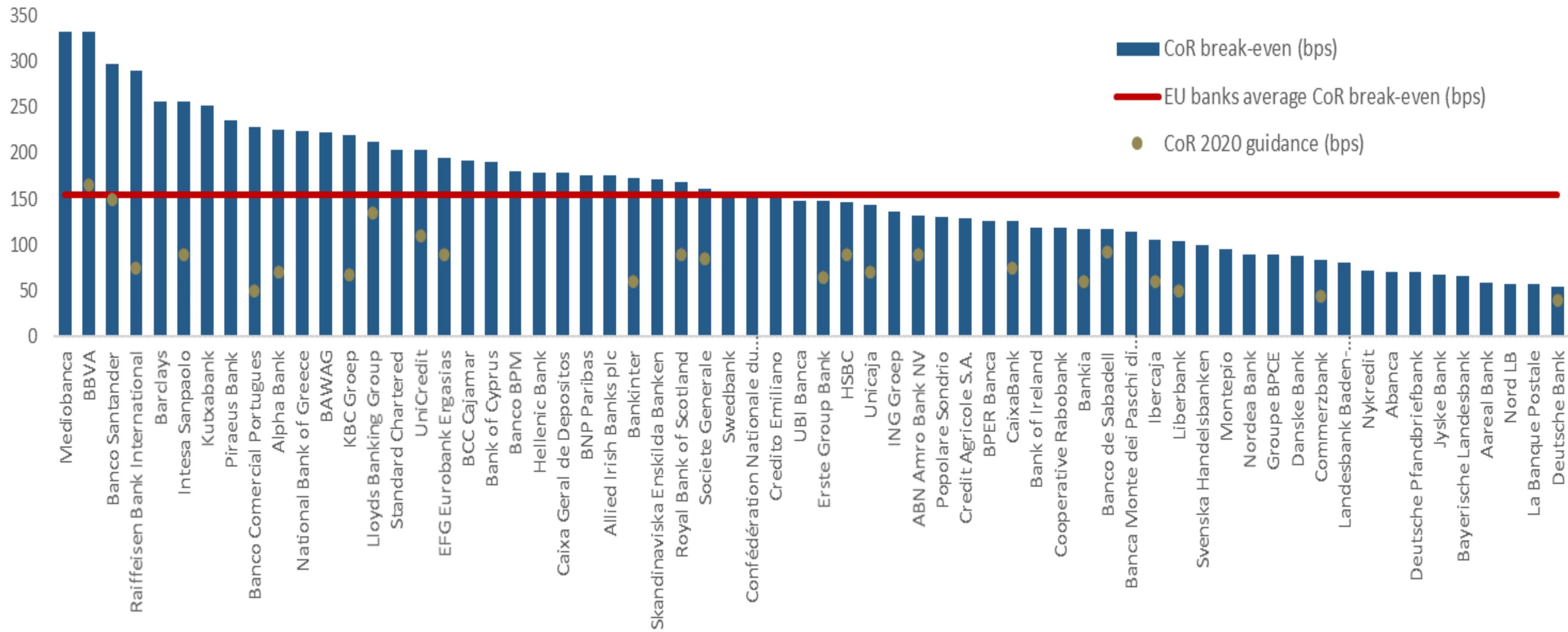
European Banks: Loan book breakdown

Bank	SMEs	Corporates	Retail	Public Sector
Aareal	56%	34%	2%	8%
Íslandsbanki	40%	19%	39%	1%
Banco BPM	38%	26%	34%	2%
Crédit Mutuel	38%	10%	50%	2%
Bank of Cyprus	37%	13%	49%	1%
Hellenic Bank	36%	5%	59%	0%
Monte Paschi	35%	16%	46%	3%
Credito Emiliano	32%	21%	46%	1%
Banca Popolare di Sondrio	32%	29%	37%	2%
SHB	32%	14%	54%	0%
BPER Banca	31%	22%	43%	4%
Piraeus Bank	29%	26%	45%	0%
Bankinter	28%	18%	52%	1%
Belfius Bank	28%	9%	40%	23%
BCP	27%	9%	62%	2%
Eurobank	27%	30%	43%	0%
Alpha Bank	27%	26%	47%	0%
Arion banki	24%	24%	52%	1%
NordLB	24%	47%	8%	21%
pBB	23%	48%	0%	29%
Intesa Sanpaolo	22%	32%	40%	5%
BayernLB	22%	47%	13%	19%
Erste Group	21%	25%	49%	5%
KBC Groep	21%	23%	51%	5%
Bank of Ireland	21%	15%	64%	0%
Landsbankinn	20%	38%	41%	1%
Rabobank	20%	32%	47%	1%
Caixa Geral de Depósitos	20%	13%	62%	6%
UniCredit	20%	44%	31%	5%
SEB	20%	39%	40%	1%
Crédit Agricole	19%	20%	56%	5%
Swedbank	19%	16%	65%	0%
AIB	19%	24%	57%	0%
Ibercaja	19%	5%	74%	3%
Sabadell	18%	21%	55%	7%

Bank	SMEs	Corporates	Retail	Public Sector
Abanca	18%	20%	50%	12%
CaixaBank	18%	24%	53%	5%
National Bank of Greece	18%	33%	48%	1%
Groupe BPCE	16%	19%	48%	16%
Liberbank	15%	7%	64%	14%
BBVA	15%	33%	45%	7%
BNP Paribas	15%	40%	42%	4%
Santander	14%	23%	60%	3%
Nordea Bank	14%	27%	58%	1%
DNB	13%	33%	54%	1%
RBI	12%	45%	41%	2%
Unicaja	11%	11%	71%	7%
CommerzBank	11%	34%	48%	7%
LBBW	10%	61%	13%	15%
Danske Bank	10%	32%	54%	4%
Société générale	10%	40%	47%	3%
Lloyds Bank	9%	11%	79%	1%
NatWest Group	9%	27%	63%	1%
ABN Amro	8%	25%	67%	1%
Kutxabank	7%	10%	74%	9%
Deutsche Bank	7%	41%	49%	4%
Barclays	6%	26%	64%	4%
Bawag	6%	33%	49%	12%
Jyske	6%	42%	50%	2%
ING Groep	5%	35%	58%	2%
La Banque Postale	3%	12%	41%	44%
Mediobanca	3%	35%	62%	1%
HESLAN	2%	59%	7%	32%
Nationwide Building Society	2%	3%	96%	0%
Standard Chartered	1%	50%	47%	2%
Nykredit	1%	29%	69%	1%
de Volksbank	1%	2%	96%	1%
HSBC	0%	56%	43%	1%
Average	**18%**	**27%**	**49%**	**6%**

Source: European Banking Authority (data as at H1 20), Credit Suisse

European Banks: Cost of Risk breakeven point



CoR break-even defined as Pre-Provision Income 2019 / Customer Loans

Source: European Banking Authority (data as at H1 20), the BLOOMBERG PROFESSIONAL™ Service , Credit Suisse

European Banks: SREP Headroom (1/3)

Bank	Data as of	CET1 FL	CET1 ph	AT1	Tier 2	Total capital	Leverage Ratio	Pillar 2R/ Pillar 2A	SREP CET1	SREP total capital	Headroom SREP CET1 (bp)	Headroom SREP Tier1 (bp)	Headroom SREP Total Capital (bp)
BNP Paribas	Q3 20	12.60%	12.60%	1.50%	2.20%	16.30%	4.40%	1.25%	9.23%	13.28%	337	313	302
Crédit Agricole S.A.	Q3 20	12.40%	12.60%	1.50%	4.10%	18.20%	4.50%	1.50%	7.86%	12.02%	474	446	618
Groupe BPCE	Q3 20	15.90%	15.90%	0.00%	2.80%	18.70%	5.50%	1.75%	8.99%	13.26%	691	508	544
La Banque Postale	Q2 20	17.30%	17.30%	0.90%	2.60%	20.80%	6.10%	2.00%	8.38%	12.75%	893	795	805
Société Générale	Q3 20	12.90%	12.90%	2.20%	3.10%	18.20%	4.40%	1.75%	9.02%	13.29%	388	425	491
ABN Amro Bank NV	Q3 20	17.20%	17.20%	1.80%	4.40%	23.40%	4.70%	1.75%	9.48%	13.75%	772	769	965
ING Groep	Q3 20	15.30%	15.30%	1.90%	2.80%	20.00%	4.70%	1.75%	10.51%	14.78%	479	486	522
Cooperative Rabobank	Q2 20	16.60%	16.60%	1.80%	5.90%	24.30%	6.40%	1.75%	10.04%	14.31%	656	653	999
Belfius Bank	Q2 20	15.50%	15.60%	0.90%	2.60%	19.00%	5.60%	2.00%	9.63%	14.00%	598	500	500
KBC Groep	Q3 20	16.55%	16.55%	1.52%	1.77%	19.84%	5.90%	1.75%	9.68%	13.95%	687	656	589
Banca Monte dei Paschi di Siena	Q3 20	10.90%	12.90%	0.00%	3.30%	16.20%	5.20%	3.00%	8.82%	13.63%	408	202	257
Banco BPM	Q3 20	14.10%	15.44%	1.27%	2.62%	19.33%	5.40%	2.25%	8.40%	12.89%	704	639	645
BPER Banca	Q3 20	13.03%	14.29%	0.45%	2.47%	17.21%	5.60%	2.00%	8.13%	12.50%	617	474	471
Intesa Sanpaolo	Q3 20	15.20%	14.70%	2.20%	2.70%	19.60%	6.60%	1.50%	8.43%	12.59%	627	669	701
Mediobanca	Q1 21	14.64%	16.20%	0.00%	2.60%	18.80%	8.15%	1.25%	7.70%	11.75%	850	676	705
UniCredit	Q3 20	14.41%	15.15%	2.18%	2.53%	19.86%	5.67%	1.75%	9.04%	13.31%	611	646	655
Popolare di Sondrio	Q3 20	16.25%	16.34%	0.00%	2.40%	18.74%	6.23%	3.00%	8.69%	13.50%	765	559	524
BBVA	Q3 20	11.52%	11.99%	2.04%	2.00%	16.03%	6.40%	1.50%	8.59%	12.75%	340	366	328
Banco de Sabadell	Q3 20	12.00%	12.90%	1.50%	2.10%	16.50%	5.25%	2.25%	8.52%	13.00%	438	396	350
Banco Santander	Q3 20	11.98%	11.98%	1.65%	1.98%	15.61%	5.20%	1.50%	8.86%	13.02%	312	299	259
Bankinter	Q3 20	11.97%	11.97%	0.60%	1.73%	14.30%	4.60%	1.20%	7.68%	11.70%	430	317	260
Bankia	Q3 20	14.79%	15.95%	1.82%	2.38%	19.39%	5.22%	2.00%	8.38%	12.75%	758	752	664
CaixaBank	Q3 20	12.48%	12.70%	2.00%	1.60%	16.30%	5.70%	1.50%	8.09%	12.25%	461	483	405
Ibercaja	Q3 20	12.50%	13.49%	1.91%	2.70%	18.10%	6.10%	2.00%	8.13%	12.50%	537	540	560
BCC Cajamar	Q3 20	12.46%	13.06%	0.00%	1.68%	14.74%	5.54%	2.50%	8.41%	13.00%	465	269	174
Liberbank	Q3 20	14.10%	15.40%	0.00%	1.80%	17.20%	6.00%	1.40%	7.79%	11.90%	761	585	530
Unicaja	Q3 20	14.70%	16.30%	0.20%	1.30%	17.80%	6.60%	1.75%	7.98%	12.25%	832	669	555
Abanca	Q3 20	12.75%	13.30%	0.84%	2.18%	16.32%	6.53%	1.75%	7.98%	12.25%	532	433	407
Banco Comercial Portugues	Q3 20	12.40%	12.40%	1.10%	2.20%	15.70%	6.70%	2.25%	8.83%	13.31%	357	275	239
Caixa Geral de Depositos	Q3 20	17.20%	17.20%	1.20%	1.40%	19.80%	8.30%	2.25%	9.02%	13.50%	818	746	630
Novo Banco	Q3 20	11.30%	12.00%	0.00%	1.90%	13.90%	6.90%	3.00%	9.07%	13.89%	293	86	1
Alpha BanK	Q3 20	15.80%	16.90%	0.00%	1.10%	18.00%	11.50%	3.00%	8.94%	13.75%	796	590	425
Eurobank SA	Q3 20	11.20%	13.20%	0.00%	2.40%	15.60%	10.07%	3.00%	8.94%	13.75%	426	220	185
National Bank of Greece	Q3 20	13.00%	14.50%	0.00%	0.90%	15.40%	7.72%	3.00%	9.19%	14.00%	531	325	140
Piraeus Bank	Q3 20	11.60%	14.10%	0.00%	2.00%	16.10%	9.38%	3.25%	6.33%	11.25%	777	566	485
Bank of Cyprus	Q3 20	12.90%	14.60%	1.83%	1.67%	18.10%	8.10%	3.00%	9.69%	14.50%	491	468	360
EU banks average	**Q3 20**	**15.18%**	**15.77%**	**1.52%**	**2.75%**	**20.03%**	**5.92%**	**2.56%**	**9.16%**	**13.66%**	**661**	**622**	**637**

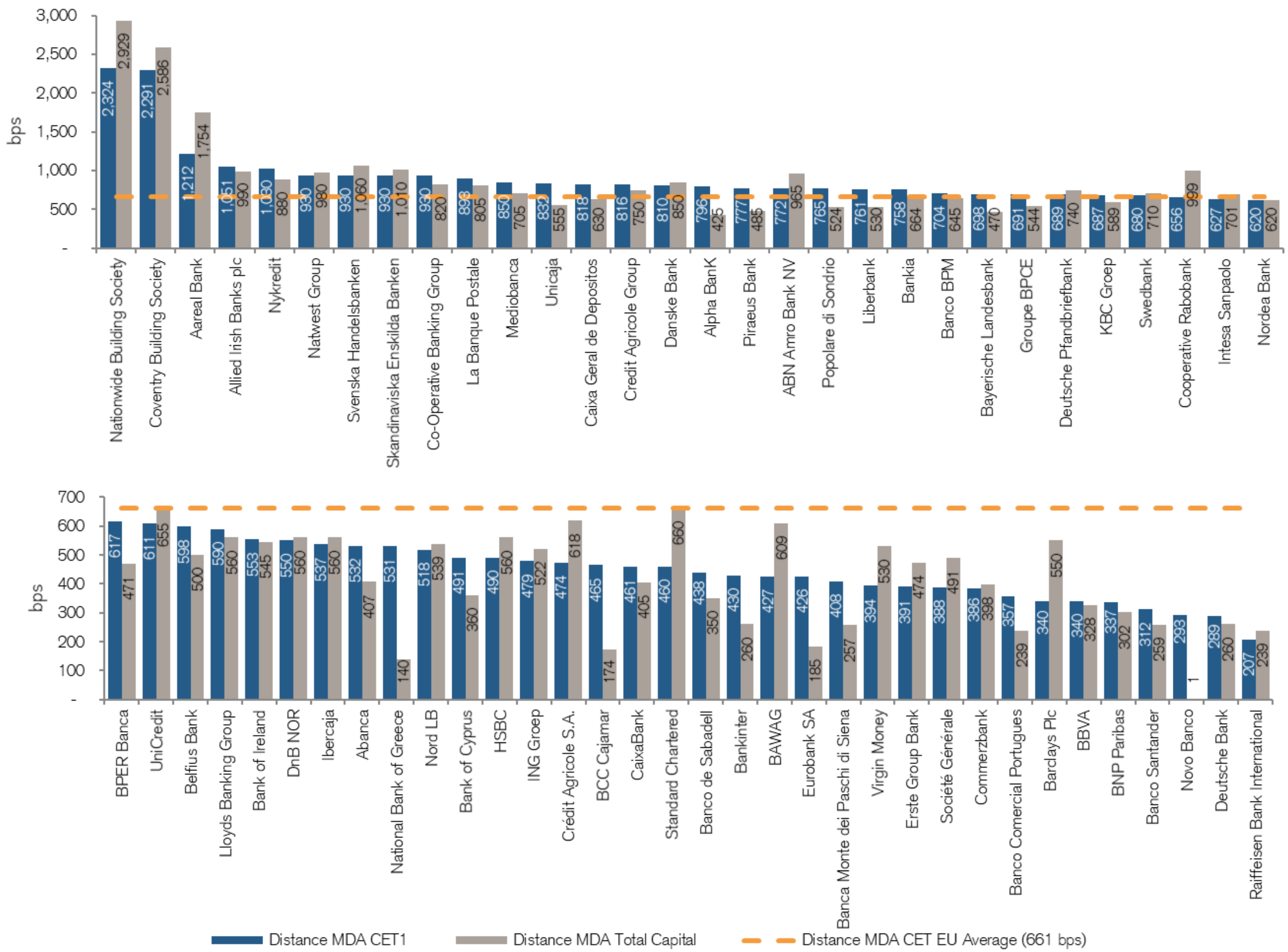
Source: Company data, Credit Suisse

European Banks: SREP Headroom (2/3)

Bank	Data as of	CET1 FL	CET1 ph	AT1	Tier 2	Total capital	Leverage Ratio	Pillar 2R/ Pillar 2A	SREP CET1	SREP total capital	Headroom SREP CET1 (bp)	Headroom Tier1 (bp)	SREP Headroom SREP Total Capital (bp)
Aareal Bank	Q3 20	13.90%	20.40%	2.70%	7.20%	30.30%	6.00%	2.25%	8.28%	12.76%	1,212	1,290	1,754
Bayerische Landesbank	Q3 20	15.60%	15.60%	0.00%	2.10%	17.70%	4.00%	2.00%	8.63%	13.00%	698	510	470
Commerzbank	Q3 20	13.50%	13.50%	1.80%	2.70%	18.00%	4.90%	2.00%	9.65%	14.02%	386	378	398
Deutsche Bank	Q3 20	13.30%	13.30%	2.10%	2.20%	17.60%	4.50%	2.50%	10.41%	15.00%	289	303	260
Deutsche Pfandbriefbank	Q3 20	15.30%	15.30%	1.70%	3.40%	20.40%	5.70%	2.50%	8.41%	13.00%	689	663	740
Nord LB	Q3 20	14.10%	14.10%	0.12%	4.68%	18.90%	4.10%	2.50%	8.92%	13.51%	518	333	539
BAWAG	Q3 20	14.00%	13.40%	2.90%	3.30%	19.60%	6.40%	2.00%	9.13%	13.51%	427	529	609
Erste Group Bank	Q3 20	14.10%	14.20%	1.70%	3.40%	19.30%	6.40%	1.75%	10.29%	14.56%	391	378	474
Raiffeisen Bank International	Q3 20	12.50%	12.50%	2.10%	2.70%	17.30%	6.10%	2.25%	10.43%	14.91%	207	225	239
Barclays Plc	Q3 20	13.90%	14.60%	4.10%	3.80%	22.50%	5.20%	5.00%	11.20%	17.00%	340	506	550
Co-Operative Banking Group	Q3 20	19.10%	19.10%	0.00%	4.60%	23.70%	3.70%	5.00%	9.80%	15.50%	930	686	820
Coventry Building Society	Q2 20	31.70%	31.70%	7.64%	0.22%	39.56%	4.50%	3.20%	8.79%	13.70%	2,291	2,845	2,586
HSBC	Q3 20	15.60%	15.60%	2.80%	2.80%	21.20%	5.40%	3.10%	10.70%	15.60%	490	562	560
Virgin Money	FY19/20	12.20%	13.40%	3.80%	3.00%	20.20%	4.80%	4.40%	9.46%	14.90%	394	541	530
Lloyds Banking Group	Q3 20	15.20%	15.20%	2.90%	2.20%	20.30%	5.60%	4.20%	9.30%	14.70%	590	651	560
Nationwide Building Society	H1 20/21	34.50%	34.50%	4.18%	9.71%	48.39%	4.60%	7.60%	11.26%	19.10%	2,324	2,450	2,929
Natwest Group	Q3 20	18.20%	18.20%	2.30%	3.20%	23.70%	6.20%	3.40%	8.90%	13.90%	930	946	980
Standard Chartered	Q3 20	14.40%	14.40%	2.10%	4.90%	21.40%	5.20%	3.30%	9.80%	14.80%	460	458	660
Allied Irish Banks plc	Q3 20	16.10%	20.20%	2.40%	1.80%	24.40%	11.10%	3.00%	9.69%	14.50%	1,051	1,085	990
Bank of Ireland	Q3 20	13.50%	14.80%	1.50%	2.90%	19.20%	6.80%	2.25%	9.27%	13.75%	553	511	545
Danske Bank	Q3 20	17.90%	18.20%	1.70%	2.20%	22.10%	4.40%	4.60%	10.10%	13.60%	810	830	850
Nykredit	Q3 20	19.30%	19.30%	0.00%	3.10%	22.40%	4.50%	3.00%	9.00%	13.60%	1,030	880	880
DnB NOR	Q3 20	18.90%	18.20%	1.40%	2.20%	21.80%	6.90%	1.92%	12.70%	16.20%	550	540	560
Nordea Bank	Q3 20	16.40%	16.40%	1.80%	1.70%	19.90%	5.00%	3.00%	10.20%	13.70%	620	650	620
Skandinaviska Enskilda Banken	Q3 20	19.40%	19.40%	1.80%	2.50%	23.70%	4.60%	3.60%	10.10%	13.60%	930	960	1,010
Svenska Handelsbanken	Q3 20	19.40%	19.40%	2.20%	2.60%	24.20%	4.60%	3.90%	10.10%	13.60%	930	1,000	1,060
Swedbank	Q3 20	16.80%	16.80%	1.40%	2.40%	20.60%	4.80%	3.00%	10.00%	13.50%	680	670	710
EU banks average	**Q3 20**	**15.18%**	**15.77%**	**1.52%**	**2.75%**	**20.03%**	**5.92%**	**2.56%**	**9.16%**	**13.66%**	**661**	**622**	**637**

Source: Company data, Credit Suisse

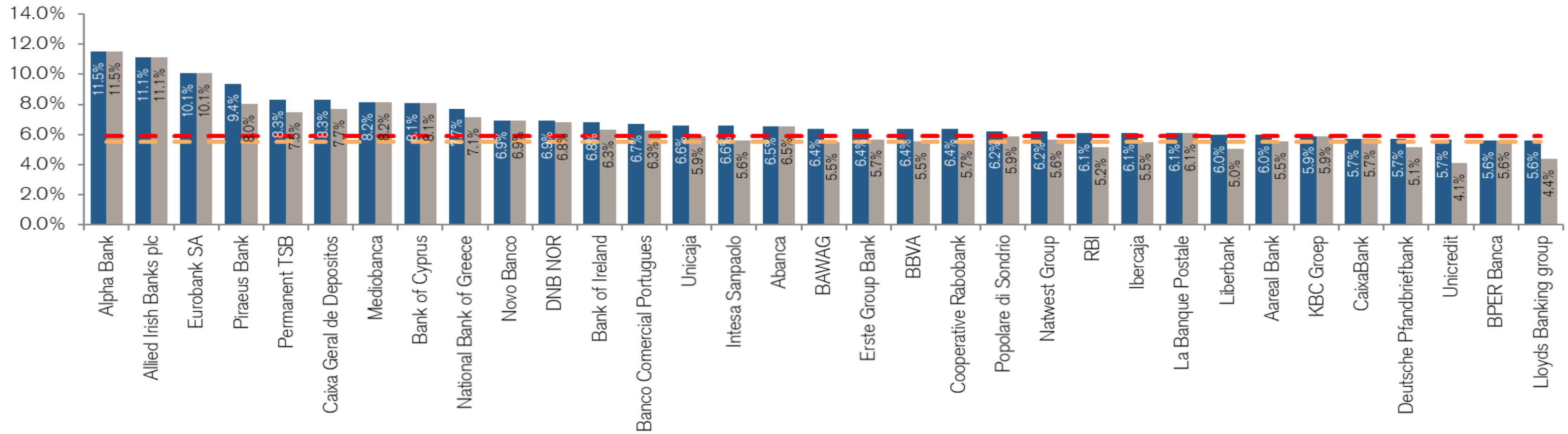
European Banks : SREP Headroom (3/3)

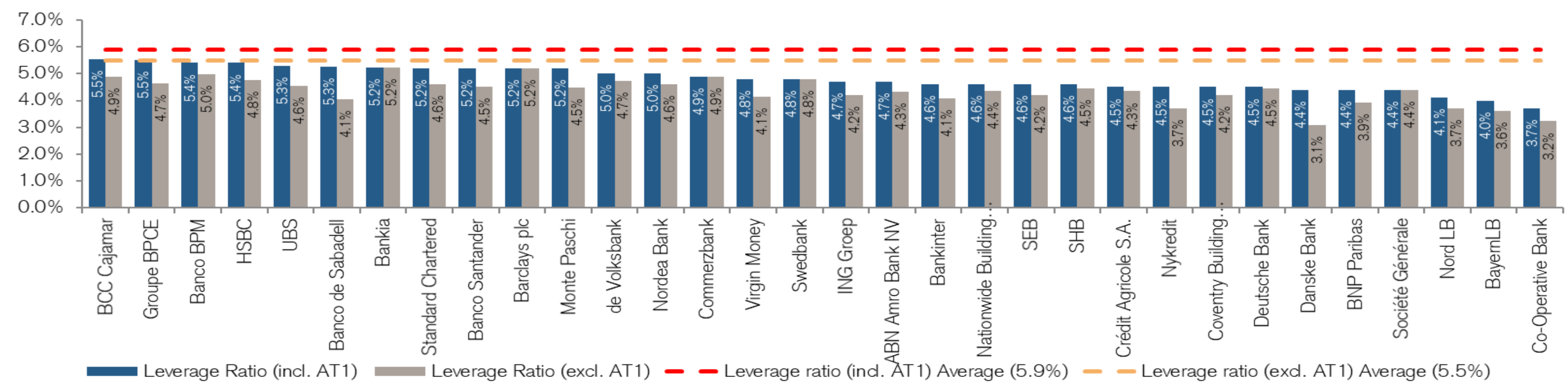


Source: Company data, Credit Suisse

Regulatory requirements: Leverage ratio analysis

Leverage ratio analysis – leverage within the capital structure (source: Company data and Credit Suisse)





- The EU banks average leverage ratio amounts to 5.9%. However, when excluding AT1s, the average leverage ratio declines to 5.5%.
- French, German and UK banks remain amongst the EU banks with lower leverage ratios, mainly as a result of their low Risk-Weighted Asset densities

Source: Company data, Credit Suisse

European Banks: Art.104a impact on supply

Bank	Data as of	CET1 FL	CET1 ph	AT1	Tier 2	Pillar 2R Total	P2R CET1	P2R AT1	P2R Tier2	Max. AT1 after Art.104a	Max. Tier 2 after Art.104a	Headroom AT1 (%)	Headroom Tier 2 bps	Headroom AT1 EUR m	Headroom Tier 2 EUR m
BNP Paribas	Q3 20	12.60%	12.60%	1.50%	2.20%	1.25%	0.70%	0.23%	0.31%	1.73%	2.31%	0.23%	0.11%	1,608	772
Crédit Agricole S.A.	Q3 20	12.40%	12.60%	1.50%	4.10%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.28%	0.00%	950	-
Credit Agricole Group	Q3 20	16.70%	17.00%	0.90%	2.60%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.88%	0.00%	4,938	-
Groupe BPCE	Q3 20	15.90%	15.90%	0.00%	2.80%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	1.83%	0.00%	7,751	-
La Banque Postale	Q2 20	17.30%	17.30%	0.90%	2.60%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.97%	0.00%	844	-
Société Générale	Q3 20	12.90%	12.90%	2.20%	3.10%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.00%	0.00%	-	-
ABN Amro Bank NV	Q3 20	17.20%	17.20%	1.80%	4.40%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.03%	0.00%	32	-
ING Groep	Q3 20	15.30%	15.30%	1.90%	2.80%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.00%	0.00%	-	-
Cooperative Rabobank	Q2 20	16.60%	16.60%	1.80%	5.90%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.03%	0.00%	58	-
Belfius Bank	Q2 20	15.50%	15.60%	0.90%	2.60%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.98%	0.00%	552	-
KBC Groep	Q3 20	16.55%	16.55%	1.52%	1.77%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.31%	0.67%	309	669
Banca Monte dei Paschi di Siena	Q3 20	10.90%	12.90%	0.00%	3.30%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	0.00%	1,157	-
Banco BPM	Q3 20	14.10%	15.44%	1.27%	2.62%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.65%	0.00%	413	-
BPER Banca	Q3 20	13.03%	14.29%	0.45%	2.47%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	1.43%	0.03%	479	10
Intesa Sanpaolo	Q3 20	15.20%	14.70%	2.20%	2.70%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.00%	0.00%	-	-
Mediobanca	Q1 21	14.64%	16.20%	0.00%	2.60%	1.25%	0.70%	0.23%	0.31%	1.73%	2.31%	1.73%	0.00%	825	-
UniCredit	Q3 20	14.41%	15.15%	2.18%	2.53%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.00%	0.00%	-	-
Popolare di Sondrio	Q3 20	16.25%	16.34%	0.00%	2.40%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	0.35%	359	61
BBVA	Q3 20	11.52%	11.99%	2.04%	2.00%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.00%	0.37%	-	1,290
Banco de Sabadell	Q3 20	12.00%	12.90%	1.50%	2.10%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.42%	0.46%	328	360
Banco Santander	Q3 20	11.98%	11.98%	1.65%	1.98%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.13%	0.40%	729	2,193
Bankinter	Q3 20	11.97%	11.97%	0.60%	1.73%	1.20%	0.68%	0.23%	0.30%	1.73%	2.30%	1.13%	0.57%	377	191
Bankia	Q3 20	14.79%	15.95%	1.82%	2.38%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.06%	0.12%	38	83
CaixaBank	Q3 20	12.48%	12.70%	2.00%	1.60%	1.50%	0.84%	0.28%	0.38%	1.78%	2.38%	0.00%	0.77%	-	1,128
Ibercaja	Q3 20	12.50%	13.49%	1.91%	2.70%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.00%	0.00%	-	-
BCC Cajamar	Q3 20	12.46%	13.06%	0.00%	1.68%	2.50%	1.41%	0.47%	0.63%	1.97%	2.63%	1.97%	0.94%	454	218
Liberbank	Q3 20	14.10%	15.40%	0.00%	1.80%	1.40%	0.79%	0.26%	0.35%	1.76%	2.35%	1.76%	0.55%	294	92
Unicaja	Q3 20	14.70%	16.30%	0.20%	1.30%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	1.63%	1.14%	372	260
Abanca	Q3 20	12.75%	13.30%	0.84%	2.18%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.99%	0.26%	295	77
Banco Comercial Portugues	Q3 20	12.40%	12.40%	1.10%	2.20%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.82%	0.36%	379	167
Caixa Geral de Depositos	Q3 20	17.20%	17.20%	1.20%	1.40%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.72%	1.16%	314	506
Novo Banco	Q3 20	11.30%	12.00%	0.00%	1.90%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	0.85%	555	229
Alpha BanK	Q3 20	15.80%	16.90%	0.00%	1.10%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	1.65%	951	761
Eurobank SA	Q3 20	11.20%	13.20%	0.00%	2.40%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	0.35%	821	139
National Bank of Greece	Q3 20	13.00%	14.50%	0.00%	0.90%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	2.06%	1.85%	747	670
Piraeus Bank	Q3 20	11.60%	14.10%	0.00%	2.00%	3.25%	1.83%	0.61%	0.81%	2.11%	2.81%	2.11%	0.81%	919	354
Bank of Cyprus	Q3 20	12.90%	14.60%	1.83%	1.67%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	0.23%	1.08%	28	128
Aareal Bank	Q3 20	13.90%	20.40%	2.70%	7.20%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.00%	0.00%	-	-
Bayerische Landesbank	Q3 20	15.60%	15.60%	0.00%	2.10%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	1.88%	0.40%	1,219	260
Commerzbank	Q3 20	13.50%	13.50%	1.80%	2.70%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.08%	0.00%	138	-
Deutsche Bank	Q3 20	13.30%	13.30%	2.10%	2.20%	2.50%	1.41%	0.47%	0.63%	1.97%	2.63%	0.00%	0.43%	-	1,379
Deutsche Pfandbriefbank	Q3 20	15.30%	15.30%	1.70%	3.40%	2.50%	1.41%	0.47%	0.63%	1.97%	2.63%	0.27%	0.00%	48	-
Nord LB	Q3 20	14.10%	14.10%	0.12%	4.68%	2.50%	1.41%	0.47%	0.63%	1.97%	2.63%	1.85%	0.00%	747	-
BAWAG	Q3 20	14.00%	13.40%	2.90%	3.30%	2.00%	1.13%	0.38%	0.50%	1.88%	2.50%	0.00%	0.00%	-	-
Erste Group Bank	Q3 20	14.10%	14.20%	1.70%	3.40%	1.75%	0.98%	0.33%	0.44%	1.83%	2.44%	0.13%	0.00%	149	-
Raiffeisen Bank International	Q3 20	12.50%	12.50%	2.10%	2.70%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.00%	0.00%	-	-
Allied Irish Banks plc	Q3 20	16.10%	20.20%	2.40%	1.80%	3.00%	1.69%	0.56%	0.75%	2.06%	2.75%	0.00%	0.95%	-	478
Bank of Ireland	Q3 20	13.50%	14.80%	1.50%	2.90%	2.25%	1.27%	0.42%	0.56%	1.92%	2.56%	0.42%	0.00%	202	-
EU banks average	**Q3 20**	**13.96%**	**14.70%**	**1.18%**	**2.60%**	**2.10%**	**1.18%**	**0.39%**	**0.52%**	**1.89%**	**2.52%**	**0.80%**	**0.35%**	**633**	**260**

Source: Company data, Credit Suisse

Cross border M&A: Key obstacles to overcome

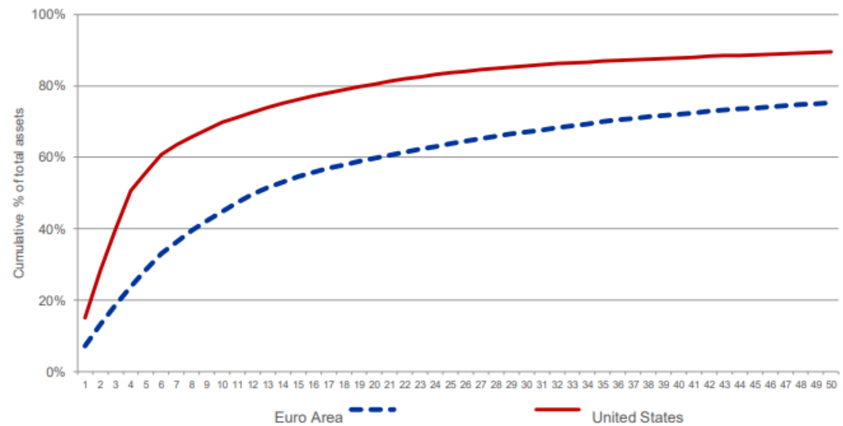
The Association for Financial Markets in Europe (AFME) commented on the draft publication of the European Central Bank's (ECB) "**Guide on the supervisory approach to consolidation in the banking sector**" highlighting several key points that we summarise below:

- **Absence of cross-border waivers: i) Cross-border LCR waiver** (currently limited to 75% of the HQLA requirement at the parent level), its benefit has not been grated in practice and its review announced in 2018 is still pending. There is also no clarity on cross border waiver policy adopted for CRR2 NSFR requirement; **ii) Internal MREL requirements** also apply at the level of all subsidiaries and cannot be waived across Member States, even if these entities are not material subgroups and are all within the scope of a single resolution authority, i.e. the SRB in the case of the Banking Union **iii) Cross border waivers for capital** are also not available with certain national laws/regulations not allowing the free movement of capital across Eurozone countries, even within the same group e.g. limits placed on the distribution of the excess capital from subsidiaries to the parent company.

- **International G-SIB buffer requirement**, the additional EU methodology introduced via the CRD5 provides the possibility to exclude intra Eurozone assets and liabilities from the cross-border component. But AFME has significant reservations with the approach proposed by the EBA and it remains to be seen whether Competent or Designated authorities will in practice be able to reduce the EU additional score or resulting G-SII bucket allocation.

- **Difference in tax regimes;** The tax framework is particularly relevant for M&A transactions: in any cross-border transaction, deferred tax assets could be lost (depending on the transaction structure), even if there is no change in the parent company's head quarter . An additional tax inefficiency could be represented by taxes triggered by a change of control not only in case of takeover, but also in case of a merger/combination.

Concentration of assets by number of institutions



Source: ECB, presentation: "Is less more? Profitability and consolidation in the European banking sector"

- **Restrictions in the recognition of minority interests in group capital;** The CRR restricts the inclusion of the minority interests (located in CET1, AT1 or T2) in the calculation of consolidated own funds; and the current CRR treatment of investments in the capital of financial sector entities that are outside the scope of prudential consolidation requires the deduction of any amounts exceeding 10% of the bank's relevant CET1 capital. AFME believes that amending this deduction to 15% could enable "step-up acquisitions" (i.e. a business combination in which a bank obtains control over a target through multiple transactions) and pave the way for future transactions and consolidation.

- **Operational resilience** is a key in mitigating risks associated with a cross-border group. However, AFME says resilience cannot mean that each local unit should operate in full isolation and hence urges the ECB to look into local initiatives such as the Finnish Preparedness Obligation to ensure that cross-border barriers are unintentionally not being built up, particularly within the Banking Union where the ECB SSM is the single supervisor, as this can erase scale benefits and result in demergers rather than mergers.

Cross border M&A: Key obstacles to overcome

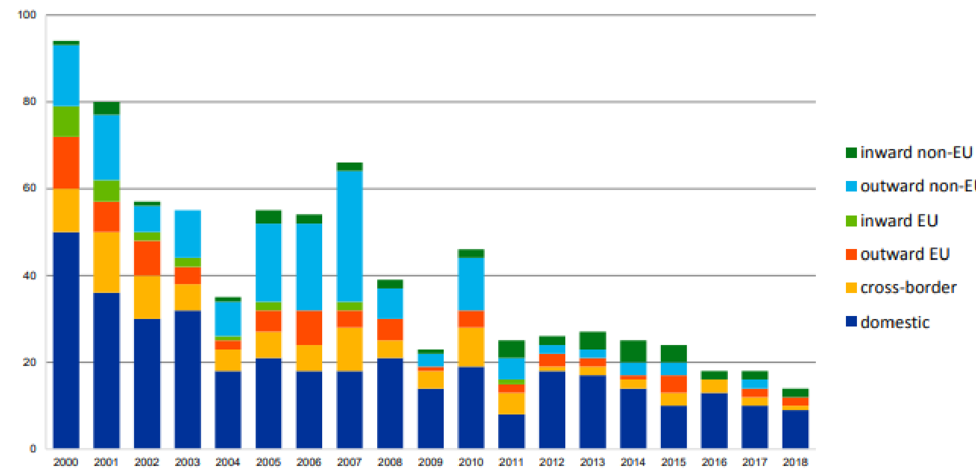
- **Regulation of M&A transaction;** In general, in the EU, M&A transactions are facilitated by the universal succession regime applied to mergers, demergers and other corporate transactions. However, **in some jurisdictions the direct universal succession from one corporate entity to another is not always automatically permitted.** For example, a cross-border demerger is not explicitly ruled yet in many jurisdictions and thus a similar goal has to be achieved through more complex structures and burdensome processes. More standardised requirements among European countries for cross-border transactions would reduce the complexity and uncertainty originated by the differences in the local legal and prudential requirements.

- **AML Framework;** the AML framework in its current directive-format, leaves too much discretion to local regulation, creating an uneven pattern of rules across Europe. This creates both inefficiencies for institutions operating cross-border and opens up vulnerabilities in the joint effort in combatting financial crime.

- **Case-by-case basis approach to M&A:** ECB's approach on assessment of the project or M&A transaction would depend on the content of the project; that is "Case-by-Case" basis.

- **Use of badwill,** AFME welcomes the confirmation of the principle that the ECB will recognise duly verified accounting badwill from a prudential perspective. With respect to the **internal models,** AFME says guidance from the ECB in the final guide on how the integration of historical data of an acquired entity into the IT infrastructure of the buyer should be prioritised would be welcomed.

M&A in Euro-area: number of transactions



Source: ECB, presentation: "Is less more? Profitability and consolidation in the European banking sector"

- **Principles for determining ex post merger P2R & P2G;** AFME encourages the ECB to go further and develop a more explicit policy stance on possible downward adjustments to the ex post P2. AFME acknowledges the fact that consideration will be given to the likely asymmetry in timing of costs (usually upfront) and benefits (overtime) of a transaction when the ECB is assessing the "ex post" P2R and P2G. Nevertheless, AFME considers that the ECB should go further in explaining how this principle will be applied in practice, particularly as this is not fully apparent in describing the P2 starting point and its adjustments. AFME also suggests that the ECB gives explicit consideration to synergies embedded in the transaction as a key element when determining P2R "downward adjustments".

- **Implementation of the ex post P2R and P2G;** AFME says that to the extent possible, it would be worthwhile expanding on what is intended by the phrase "determination of the ex post capital requirements and guidance should be clarified during the application process" mentioned in the guide. AFME interprets this as the issuance of a SREP decision for the new entity as part of the overall process, which will result in a stable P2R and P2G for at least a year, all else being equal. AFME also mentions that, as the single supervisor for Eurozone SIs, the ECB should take the opportunity issuing a new SREP decision for the combined entity to examine whether there is a case for P2R and PRG applying only at the highest level of consolidation of the group in question, particularly where entities within the Banking Union are involved.

Fundamentals: 2020 in review and 2021 supply

2020 Issuance and 2021 Supply Forecasts

European Banks

	T1	T2	TLAC/ MREL	Snr	Covered	European Insurance	Total
2020 Issuance (to 27 Nov 2020)	**€32bn**	**€28bn**	**€127bn**	**€84bn**	**€87bn**	**€25bn**	**€384bn**
Of which EUR	54%	64%	50%	65%	92%	67%	65%
Of which USD	39%	25%	44%	30%	2%	16%	28%
Of which GBP	6%	11%	6%	5%	6%	18%	7%
Of which sub-IG or NR	76%	30%	1%	3%	0%	11%	10%
Of which Floating	0%	0%	0%	8%	6%	0%	3%
Of which Callable	100%	91%	67%	21%	0%	92%	48%
LOOKING BACKWARD							
2019 FY Issuance	€30bn	€18bn	€122bn	€100bn	€135bn	€18bn	€423bn
2020 YTD vs. 2019 FY	+7%	+57%	+4%	-15%	-36%	+36%	-9%
LOOKING FORWARD							
2021 FY Redemption	€19bn	€23bn	€41bn	€141bn	€118bn	€12bn	€354bn
2021 Gross Forecast	€26bn	€29bn	€120bn	€58bn	€84bn	€15bn	€331bn
2021 Net Forecast	€7bn	€6bn	€79bn	-€84bn	-€34bn	€3bn	-€23bn
2021 Gross Forecast vs. 2020 (to 27 Nov)	-19%	+3%	-6%	-32%	-3%	-40%	-14%

Source: Credit Suisse Syndicate

Covered Bonds

- Very strong technicals in the asset class with supply 38% lower YoY for EMEA issuers / 41% lower YoY across currencies for all issuers
- ECB has driven spreads to levels materially through their SSA couterparts
- Asset class relatively immune to most of the volatility through the year
- Acceptance of negative rates from investors across the curve with bank treasuries extending duration
- Increase of ESG issuances, representing 8% of total EUR volumes YTD

Senior

- Retracement in spreads now trading flat to inside Feb tights
- Increased focus on ESG bonds post summer
- MREL requirements postponed across some jurisdictions with some borrowers favouring SP issuance vs SNP

Tier 2

- Significant year for Tier 2 for P2R optimisation purposes
- Increased diversification across currencies with GBP supply 140% up YoY
- Callable structures/anytime par calls have become market standard

AT1

- Strong and continuous appetite for higher yielding paper
- Q1 provided opportunities to lock in record low yield pre-Covid with many issuers pre-funding calls for later in the year
- The extreme volatility that followed flushed out many investors from the asset class before the big global Coco funds led the tightening late Q2
- The ECB's decision to split Pillar 2 requirements across CET1, AT1 and T2 created incremental issuance capacity and expanded the asset class
- Increased use of 6 month par calls to smooth refinancing operations
- Outperformance of USD vs. EUR issues through the year
- In H2, the narrative switched from whether to call or not, to whether to pre-finance next year's calls early

Fundamentals: Net Stable Funding Ratio

- The **net stable funding ratio (NSFR)** is defined as the amount of available stable funding relative to the amount of required stable funding. This ratio should be equal to at least 100% on an ongoing basis. The NSFR standard agreed by the Basel Committee is implemented thought the banking package (CRR2/CRD V) with some adjustments recommended by the EBA's NSFR report.
- NSFR is calculated as: **NSFR:** $\frac{\textit{Available Stable Funding (ASF)}}{\textit{Required Stable Funding (RSF)}} \geq 100\%$

ASF factor	Components of ASF
100%	▪ Total regulatory capital (excluding Tier 2 instruments with residual maturity of less than one year) ▪ Other capital instruments and liabilities with effective residual maturity of one year or more
95%	▪ Stable non-maturity (demand) deposits and term deposits with residual maturity of less than one year provided by retail and small business customers
90%	▪ Less stable non-maturity deposits and term deposits with residual maturity of less than one year provided by retail and small business customers
50%	▪ Funding with residual maturity of less than one year provided by non-financial corporate customers ▪ Operational deposits ▪ Funding with residual maturity of less than one year from sovereigns, PSEs, and multilateral and national development banks ▪ Other funding with residual maturity between six months and less than one year not included in the above categories, including funding provided by central banks and financial institutions
0%	▪ All other liabilities and equity not included in the above categories, including liabilities without a stated maturity (with a specific treatment for deferred tax liabilities and minority interests) ▪ NSFR derivative liabilities net of NSFR derivative assets if NSFR derivative liabilities are greater than NSFR derivative assets ▪ "Trade date" payables arising from purchases of financial instruments, foreign currencies and commodities

Source: Basel Committee on Banking Supervision

RSF factor	Components of RSF
0%	▪ Coins and banknotes, All central bank reserves, All claims on central banks with residual maturities of less than six months, and "Trade date" receivables arising from sales of financial instruments, foreign currencies and commodities.
5%	▪ Unencumbered Level 1 assets, excluding coins, banknotes and central bank reserves
10%	▪ Unencumbered loans to financial institutions with residual maturities of less than six months where the loan is secured against Level 1 assets, and where the bank has the ability to freely rehypothecate the received collateral for the life of the loan
15%	▪ All other unencumbered loans to financial institutions with residual maturities of less than six months not included in the above categories ▪ Unencumbered Level 2A assets
50%	▪ Unencumbered Level 2B assets ▪ HQLA encumbered for a period of six months or more and less than one year ▪ Loans to financial institutions and central banks with residual maturities between six months and less than one year ▪ Deposits held at other financial institutions for operational purposes ▪ All other assets not included in the above categories with residual maturity of less than one year, including loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns and PSEs
65%	▪ Unencumbered residential mortgages with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under the Standardised Approach ▪ Other unencumbered loans not included in the above categories, excluding loans to financial institutions, with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under the standardised approach
85%	▪ Cash, securities or other assets posted as initial margin for derivative contracts and cash or other assets provided to contribute to the default fund of a CCP ▪ Other unencumbered performing loans with risk weights greater than 35% under the standardised approach and residual maturities of one year or more, excluding loans to financial institutions ▪ Unencumbered securities that are not in default and do not qualify as HQLA with a remaining maturity of one year or more and exchange-traded equities ▪ Physical traded commodities, including gold
100%	▪ All assets that are encumbered for a period of one year or more ▪ NSFR derivative assets net of NSFR derivative liabilities if NSFR derivative assets are greater than NSFR derivative liabilities ▪ 20% of derivative liabilities as calculated according to paragraph 19 ▪ All other assets not included in the above categories, including non-performing loans, loans to financial institutions with a residual maturity of one year or more, non-exchange-traded equities, fixed assets, items deducted from regulatory capital, retained interest, insurance assets, subsidiary interests and defaulted securities

European Banks: Regulatory requirements

Key regulatory themes: 2021 Outlook

Basel 3.5	▪ Process has been impacted by Covid-19, with the economic fallout expected to influence legislators key focus areas ▪ Publication of draft legislation now slated for Q1 2021 – SMEs highlighted as a key focus area
Buffer reform	▪ Policymakers have been disappointed by the ability to drive lending through capital relief measures, notably banks' reluctance to fall into their buffers ▪ Recognition that banks are incentivized to avoid buffer breaches is driving consideration of reform of the buffer regime – Countercyclical buffers that can readily be released to stimulate lending are recognized as being a more flexible policy tool, responses could include more regulatory discretion around releasing other buffers, and larger countercyclical buffers vs others
Dividend restrictions	▪ Measures expected to be eased in 2021 in at least some jurisdictions, with growing recognition that restrictions have reduced banks' access to capital
Moratoria and NPLs	▪ Recent policy publications including from ESAs highlight the tension between recognizing and provisioning bad loans, and the policy aim of avoiding brakes on bank lending ▪ Remains to be seen how this balancing act plays out, with commentators pointing towards FY '20 onwards to begin to see provisioning flow through onto balance sheets
MREL policy	▪ Compliance periods have generally moved onto the less aggressive BRRD2 schedule ▪ SRB decision to apply the more dovish 8% TLOF subordination requirement across the board means that banks in jurisdictions such as Sweden which have not will face generally higher requirements
P2R	▪ SRB banks have been actively issuing to fill their P2R buckets, a trend that we expect to continue into 2021 ▪ For banks with excess CET1 the imperative to issue, reducing NIM, is lower
UK post-Brexit	▪ UK has signalled its intention to shift its regulatory regime to one led by a rule book from the regulator rather than legislatively led. Early signs of divergence on e.g. BRRD2
2021 stress tests	▪ The 2021 EU-wide stress test is expected to be launched at the end of January 2021 with the publication of the macroeconomic scenarios and the results published by 31 July 2021

Source: Credit Suisse, DCM

EBA consultation on changes to the EU-wide stress test

EBA launched a consultation on possible changes to the EU wide stress test in January 2020 and alongside this they published a discussion paper to present their vision. The proposal contains some aspects that have been previously raised by senior policy makers

Key features

- **Final decision, taking into account feedback received on the discussion paper, is now expected to be taken in Q2-Q3 2021**
  - The new framework would be implemented in the 2023 stress test at earliest
- Two-legged approach proposed with less constrained and more flexible bank leg and more constrained supervisory leg

Proposed framework with two-legged approach

	Bank leg	Supervisory leg
Commonalities	▪ Common scenario ▪ Harmonised starting points	
Features	**Bank leg** ▪ Less constrained bottom-up (banks can remove some constraints and explain) ▪ No quality assurance by supervisors (but 'basic' data checks on starting points) ▪ Owned by banks	**Supervisory leg** ▪ Constrained bottom-up ▪ Quality assurance by supervisors (challenger model) ▪ Owned by supervisors
Usage of two results	**Bank leg result** ▪ Transparency and market discipline	**Supervisory leg result** ▪ Determination of P2G
Publication (the EBA provides disclosure)	▪ Granular disclosure from bank leg ▪ Limited disclosure from supervisory leg	

Issues identified with the current framework

- Microprudential and macroprudential assessment objectives can be conflicting
- Less integrated into regular supervisory process than in some other jurisdictions
- Methodological constraints limit realism of results
- No clear ownership of results (bank vs regulator)
- Resource intensive process

Proposed new framework

- Primarily microprudential in nature
- Bank and supervisory legs would share the same common scenarios, though supervisory leg would be constrained and similarly prescriptive to current methodology. Bank leg to be less prescriptive
- Supervisory leg would inform P2G with more limited disclosure, while bank leg would provide market transparency with more disclosure
- Pure top down method for the supervisory approach was deemed to not be feasible at this stage as models are insufficiently robust, however this could be considered beyond 2022
- Supervisory approach may relax the static balance sheet assumption to include some limited actions, e.g. disposals that have occurred post balance sheet date
- Bank leg would not be quality assured by supervisors and banks would have flexibility to relax or remove some constraints within the common methodology
- ICAAP models might be able to be used for the bank leg, while banks could also decide to simply use the supervisory leg outputs

Disclosure of results

- Bank leg reporting would remain on common templates
- Supervisory leg disclosure limited to capital ratios and key drivers, with granular disclosure on the bank leg
- Banks would need to quantify and disclose components that drive difference between bank and supervisory leg results
- Disclosure accompanied by greater visibility on P2G, with possible full disclosure, disclosure of P2G buckets or disclosure of CET1 depletion with adjustments so that results are in line with final P2G

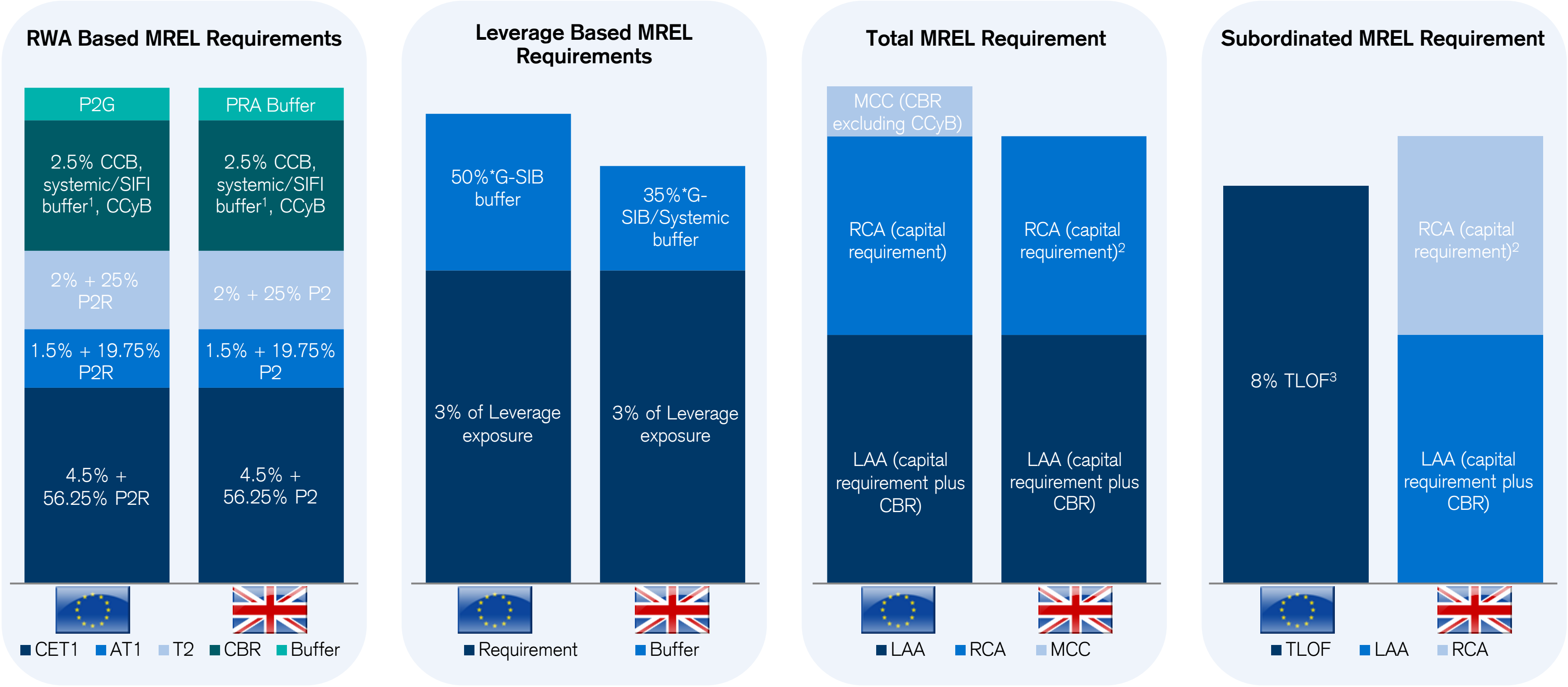
Scenarios

- The paper considers the possibility of introducing additional adverse scenarios
  - Common scenarios with one retaining a similar degree of sensitivity from year to year and the other varying depending on prevailing economic conditions
  - Asymmetric scenarios with each scenario following different paths
- It also considers the possibility of including exploratory scenarios and disclosing the sensitivities of the outcomes

Sources: EBA Discussion Paper on the future changes to the EU-wide stress test - 22 January 2020, EBA update - 30 July 2020, Credit Suisse, DCM.

Overview of key requirements across the UK & EU

SSM and UK regimes are largely similar, being grounded in the same legislation, albeit with some key differences



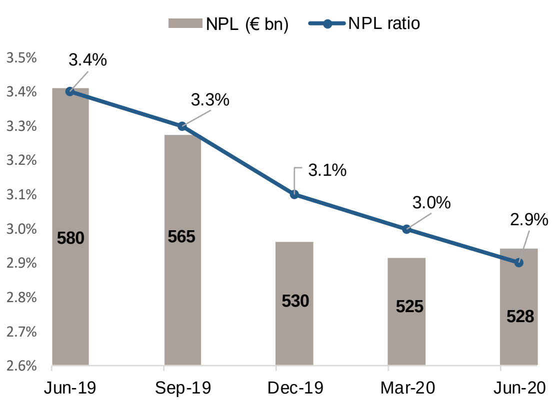
Key Instrument Differences:
- AT1: 5.125% trigger and temporary write down permitted in SSM
- Subordinated MREL: SRB permits non-preferred OpCo senior as well as HoldCo

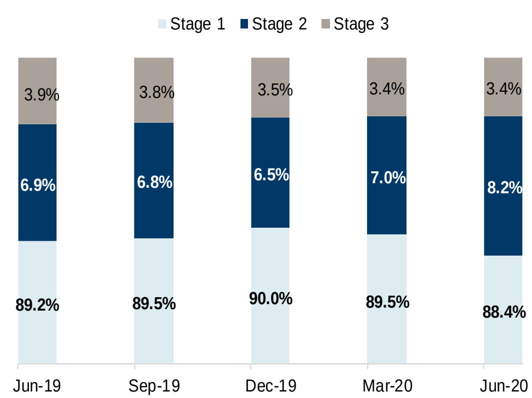
1. Systemic and SIFI buffers to become additive from 29 Dec '20 under CRD 5, UK implementation less clear
2. Also a leverage based requirement, though only binding on Nationwide
3. Generalisation, more detailed requirements on p.17

Source: Credit Suisse DCM

EBA assesses the risk of European Banking System

- **On the 11th of December 2020,** the European Banking Authority (EBA) published its annual risk assessment report (RAR) of the European banking System, accompanied by the publication of the 2020 EU-wide transparency exercise. This report describes the main developments and trends in the EU banking sector since the end of 2019 and provides EBA outlook on the main risks and vulnerabilities.
- **1) Regarding loans and advances (L&A) as at June 2020,** EBA assessed that it increased by c.€500bn, compared with the previous year (+3%). L&As to households accounted for the largest share of total loans and advances (35%), followed by lending to NFCs (32%). EBA said that EU banks classified 88.4% of their L&As into stage 1 (89.2% in June 2019); amounting to €0.5 trillion (-10% compared with June 2019), 8.2% into stage 2 (6.9%); amounting to €1.2 trillion (23% higher than in June 2019) and 3.4% into stage 3 (3.9%). EU banks reported c.€870bn of loans with granted EBA-compliant moratoria, which represented c.7.5% of the total outstanding loans to households and NFCs. **With respect to the NPL ratio,** the ratio amounted to 2.9%, c.50bps lower than in June 2019 and 20bps lower than in December 2019; amounting to €528bn, down by10% from H1 19. **As regards, asset quality,** the EBA commented that it was expected to deteriorate materially over the next quarters. Banks booked significant provisions on performing loans that resulted in a material increase in cost of risk. Although NPL ratios continued to decline, other asset quality metrics showed signs of deterioration. Loans classified under IFRS 9 stage 2 and forborne exposures increased markedly. The volume of forborne loans (FBLs) increased by c.10% in Q2 20 and amounted to just above €360bn. The increase was solely driven by forborne performing loans, which increased from c.€125bn in March 2019 to almost €155bn in June 2020 (+21%). In June 2020, the FBL ratio was 2%, up from 1.9% the previous quarter but still down from 2.1% in June 2019.
- **2) Regarding the capital as at June 2020,** EBA assessed that the average CET1 ratio amounted to 15.0% (14.7% on a fully loaded basis), up by 60bps from H1 19. As at Q2 20, the CET1 ratio increased by 40bps, recovering some of the decline observed in Q1 20.





	CET 1 ratio		LCR ratio	NPL ratio	Share of stage 2 loans	RoE	Leverage ratio (fully phased-in)
	transitional	*fully-loaded*					
Q2 20	15.0%	14.7%	166.0%	2.9%	8.2%	0.5%	5.2%
Q1 20	14.6%	14.4%	148.9%	3.0%	7.0%	1.3%	5.2%

Source: European Banking Authority.

- As per EBA, one of the reasons for the increased capital ratios in Q2 20 was due to regulatory measures that either preserved capital resources, such as restrictions on dividend payments, or reduced RWAs, mainly in credit risk due to PGS and supporting factors. Banks' total capital ratio amounted to 18.8%, up by 70bps from H1 19. The leverage ratio decreased by 10bps in the past year and stood at 5.3% in June 2020. As per EBA, a majority of banks in the sample (70%) reported a ratio of at least 5% in June 2020; more than 200bps above the minimum requirement of 3%, which will be applicable for EU banks in June 2021.
- **Banks' structural profitability challenges would remain.** As per EBA, low interest rates, may stay lower for longer than expected prior to the pandemic, and strong competition from both banks and non-banks would add pressure to banks' core revenues. **EBA is of the opinion that banks' operational resilience has been broadly unaffected despite the challenges posed by COVID-19**.

EBA updates Basel III impact study, following EC's call for advice

- **On the 15th of December 2020,** the European Banking Authority (EBA) published its updated ad-hoc impact study on the implementation of Basel III in the European Union (EU) in response to the EU Commission's call for advice (CfA).
- The EBA stated that under the full implementation of Basel III and conservative assumptions, the updated impact is meaningfully lower than previously estimated, using June 2018 data and a consistent sample. The EBA reaffirms its policy recommendations put forward in its previous advice and supports the full implementation of the final Basel III standards in the EU, which will contribute to the credibility of the EU banking sector and ensure a well-functioning global banking market. The overall impact is presented under two implementation scenarios: **the first one, called "Basel III scenario"**, updates the impact presented in the previous CfA Reports; **the second one, called "EU-specific scenario",** considers the additional features requested by the European Commission in its CfA.
- **Key findings of the quantitative analysis: 1) changes in Tier 1 minimum required capital (T1 MRC) (c.f table 1):** As of December 2019, the updated impact in terms of T1 MRC amounted to +18.5% under the Basel III scenario, which is meaningfully lower than previously estimated impact of 24.1%, using June 2018 data for the consistent sample. The lower impact is due to a reduction in the impact of CVA risk (+2.1% compared to +4.3%using 2018 data) as a result of the introduction of the revised CVA framework and the lower impact of the output floor (now +6.7%, compared to +9.5% using 2018 data). The estimated total capital shortfall amounts to €52.2bn (€30.2bn in terms of CET1), down from the €109.5bn shortfall in total capital (€74.6bn in CET1), using June 2018 data for the consistent sample. Under the EU-specific scenario, the MRC impact would reduce further to +13.1%, resulting in a total capital shortfall of €33.0bn, of which €17.4bn of CET1; **2) changes in capital ratios (c.f. table 2):** Under the Basel III scenario, the total capital ratio would decrease by c.3pp, from 18.2% to 15.3%. The reduction is slightly lower for T1 and CET1 ratios, which will reach, respectively, 13.2% and 12.3% in the revised framework. The impact will result in a shortfall in total capital amounting to €52.2bn, of which €30.2bn amounts to CET1. Under EU-specific scenario, total capital ratio would reduce by 2.1pp, under revised framework, from 18.2% to 16.1%. This impact resulted in a shortfall in total capital of €33.0bn, of which €17.4bn amounts to CET1; **3) impact during transitional period (c.f table 3)**

Table 1: % change in T1 MRC (vs current T1 MRC) & total capital shortfall

Scenario	Δ SA (%)	Δ IRB (%)	Δ CCP (%)	Δ SEC (%)	Δ MKT (%)	Δ OP (%)	Δ CVA (%)	Δ LR (%)	Δ OF (%)	Δ Total (%)	Total capital shortfall (€ bn)
Basel III	2.4	2.6	0.0	0.4	0.8	3.8	2.1	-0.2	6.7	18.5	52.2
EU- Specific	1.7	1.3	0.0	0.4	0.8	1.7	0.5	-0.1	6.9	13.1	33.0

Scenario	CET			Tier 1			Total capital		
	Current level (%)	Revised ratio (%)	Shortfall (€ bn)	Current level (%)	Revised ratio (%)	Shortfall (€ bn)	Current level (%)	Revised ratio (%)	Shortfall (€ bn)
Basel III	14.6	12.3	30.2	15.7	13.2	41.0	18.2	15.3	52.2
EU- Specific	14.6	12.9	17.4	15.8	13.9	23.6	18.2	16.1	33.0

Source: European Banking Authority data as at 31 December 2019, Basel III reforms

Table 3: Transitional arrangements for output floor calibration & operational risk ILM

Scenario	Reform	Jan-23	Jan-24	Jan-25	Jan-26	Jan-27	Jan-28
Basel III	Output floor calibration	50%	55%	60%	65%	70%	72.5%
EU-Specific	Output floor calibration	50%	55%	60%	65%	70%	72.5%
Alternate EU-Specific	Output floor calibration	50%	55%	60%	65%	70%	72.5%
	Operational risk ILM for bucket 2 and 3 banks	1	1+20% bank-specific ILM -1	1+40% bank-specific ILM -1	1+60% bank-specific ILM -1	1+80% bank-specific ILM -1	bank-specific ILM

ECB’s prudential and operational relief measures for Covid-19

17 September 2020:

- **Temporary relief in banks’ leverage ratio**
- Measure allows banks to temporarily exclude central bank exposures from leverage ratio
- Banks to benefit from relief measures until the 27th of June 2021

28 July 2020:

- **Communication on supervisory mitigating measures**
- Recommendation on dividends and share buy-backs extended until 1st of January 2021 Forward guidance provided on timeline to restore capital & liquidity positions
- Further extension on deadline of NPL reduction strategy

16 April 2020:

- **Reduction in capital requirements for market risks**
- Temporary reduction in qualitative market risk multiplier set by supervisors

27 March 2020:

- **Recommendation on dividends**
- ECB recommended that banks do not pay dividends for 2019 & 2020, and refrain from share-buybacks aimed at remunerating shareholders until at least 1st of October 2020.

20 March 2020:

- **Guidance on NPL & IFRS 9**
- Relief measures regarding asset quality deterioration and NPLs
- Guidance on treatment of loans to take account of public support measures
- Avoiding excessive procyclicality in IFRS 9 by using transitional arrangements & giving greater weight to the long-term stable outlook when estimating long-term expected credit loss

12 March 2020:

- **Capital, Liquidity & Operational relief**
- Banks allowed to use capital & liquidity buffers, including Pillar 2 (P2) guidance
- Frontloading change of change of capital composition of P2 requirement
- Postponement of existing supervisory deadlines and new decisions

Source: ECB Banking Supervision

EC's strategy to tackle NPLs in the aftermath of Covid-19

- **On the 16th of December 2020, the European Commission (EC) presented a strategy to prevent the future build-up of non-performing loans (NPLs) as a result of Covid-19,** to ensure that EU households and businesses continue to have access to the funding they need throughout the crisis. EC believes that given the impact coronavirus has had on the EU's economy, **the volume of NPLs is expected to rise across the EU**, although the timing and magnitude of this increase is still uncertain. Depending on how quickly the EU's economy recovers from the coronavirus crisis, banks' asset quality, and in turn, their lending capacity – **could deteriorate.**
- EC is of the view that the financial health of the EU banking sector remains strong after the initial economic and financial shock caused by COVID-19, yet risks are tilted to the downside. **As at Q2 20**, the average Tier 1 capital ratio for all EU banks amounted to 16.4%, and the average NPL ratio amounted to 2.8%. The liquidity coverage ratio for significant financial institutions remained comfortably at 165.5%. But since banks are also exposed to particular segments, which are financially more vulnerable, namely SMEs, the EC believes that it is vital to closely address the challenge of tackling NPLs, while ensuring proper protection of vulnerable borrowers.
- **Recent developments in the NPLs:** The NPL ratio increased to 2.8% in Q2 20 and 2.9% in Q1 20; up from 2.6% in Q4 19 (which put an end to the downward trend in NPL ratio since 2014), driven mainly by reduced NPL sales and restructuring activities as well as new defaults. The provisioning ratio improved considerably to 63.4% in Q2 20, up 1.6pp QoQ and 4.5pp YoY. The absolute amount of NPLs (gross value) for all banks in the EU amounted to €588bn in Q2 20, compared to €585bn in Q1 20 and €646bn in Q4 19.
- **Proposing a series of four main goals:** In order to give Member States and the financial sector the necessary tools to address a rise of NPLs in the EU's banking sector early on, the Commission is proposing a series of actions; as mentioned below.

1. Development of secondary markets for distressed assets: to provide banks possibility to reduce NPLs by selling them to third-party investors and help them free up space in their balance sheets for new lending. To prevent renewed accumulation of NPLs, EC proposed targeted improvements to the securitisation framework for banks' NPEs.

2. Asset management companies (AMCs): to provide effective measure when impaired asset affect a large part of the domestic banking & mainly cover loans secured by commercial real estate and large corporate exposures. Their primary goal is to remove NPLs from banks' balance sheets & extract most value by recovery in asset prices over-time

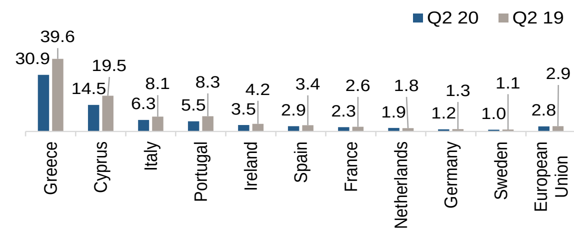
3. Reform the EU's corporate insolvency and debt recovery legislation: which will help converge the various insolvency frameworks across the EU, while maintaining high standards of consumer protection. More convergent insolvency procedures would increase legal certainty and speed up the recovery of value for the benefit of both creditor and the debtor.

4. Precautionary measures: While the EU's banking sector is in a much sounder position than after the financial crisis, Member States continue to have varying economic policy responses. Authorities have the possibility to implement precautionary public support measures, where needed, to ensure the continued funding of the real economy.

NPL ratio and provisions by Member States

	Gross NPLs and advances (% of total gross loans and advances)		**Total loss provisions** (loans) (% of total doubtful and non-performing loans)	
	Q2 20	**Q2 19**	**Q2 20**	**Q2 19**
Greece	**30.9**	39.6	**47.8**	49.7
Cyprus	**14.5**	19.5	**55.4**	53.2
Italy	**6.3**	8.1	**59.8**	58.5
Portugal	**5.5**	8.3	**66.4**	59.2
Ireland	**3.5**	4.2	**54.9**	37.0
Spain	**2.9**	3.4	**69.4**	63.8
France	**2.3**	2.6	**66.2**	64.8
Netherlands	**1.9**	1.8	**40.1**	31.6
Germany	**1.2**	1.3	**89.0**	85.3
Sweden	**1.0**	1.1	**32.2**	-
European Union	**2.8**	**2.9**	**63.4**	**58.9**

Gross NPLs & advances (% of total gross loans & advances)



Source: ECB. Calculations by European Commission

Possible infection risk stemming from legacy instruments

Timeline

- **20 July 2018** — EBA provides 3rd update on monitoring AT1 instruments based on the review of 23 new AT1 issuances since May 2015- December 2017
- **22 July 2019** — EBA provides updated list for CET1 instruments, by including 16 new instruments since the 1st publication in May 2014
- **09 Sep 2019** — EBA provided clarity on treatment of **Legacy instruments** at end of the grandfathering period (31 December 2021)
- **19 Dec 2019** — EBA provides updated list of CET1 instruments
- **21 Oct 2020** — EBA issues opinion to possible **infection risk** stemming from **legacy instruments**
- **28 Oct 2020** — Andrea Enria addresses the European **Parliament's Economic & Monetary Affairs Committee**

- **Grandfathering period was introduced until 31 December 2021 after Capital Requirements Regulation (CRR) came into force.**
- **On the 21st of October 2020,** the European Banking Authority (EBA) released an opinion to clarify the prudential treatment of legacy instruments in view of the end of the grandfathering period on 31 December 2021. In its opinion, the EBA proposes policy options to address the possible infection risk stemming from such instruments. The EBA's recommendations aim at ensuring a high quality of capital for European Union institutions and a consistent application of rules and practices across the Union.
- The EBA focused on legacy instrument features, and how they might "infect" the new style capital stack. They identified two key areas: **1) Payment flexibility, e.g. dividend pushers and stoppers:** This seems a more limited risk, with the key concern where the old style instrument could restrict payment flexibility on new style instruments. This is in our view a very small subset, most of which have already been redeemed and **2) Subordination risk:** The CRR defined required subordination in relation to capital tiers, e.g. Additional Tier 1 must rank junior to Tier 2. If an "old style" Tier 1 instrument is reclassified as Tier 2, while it continues to rank *pari passu* with AT1, then the new style AT1 would be at risk of disqualification, as it would not be junior to all Tier 2.
- On the back of the above, the EBA recommends that: **i)** institutions redeem or repurchase instruments; **ii)** institutions modify the instruments to address the risks above (e.g. modify ranking of a legacy T1 to make it rank pari passu with Tier 2) and **iii)** institutions disqualify the instrument from both capital and TLAC/MREL if **i)** and **ii)** above are not possible. **iii)** is the "last resort option" as per the EBA.
- **Statutory initiatives:** As part of the transposition of the Bank Recovery and Resolution Directive 2 (BRRD2), member states will change the insolvency hierarchy. The EBA states "Where the relevant national legislation introduces mandatory insolvency rules whereby ranking in insolvency is automatically amended based on instruments' regulatory categories, this could provide an additional solution to the risk of infection." In our view, **this EBA opinion is broadly supportive for the legacy instrument asset class as it indicates the willingness of the EBA to see these securities removed from the banks' capital structure.**
- However, we note that this EBA Opinion does not fully clarify the prudential treatment of legacy securities. Indeed, the option **iii)** would allow for legacy securities to remain on balance sheet, even though the EBA clearly mentions that it would be "**for a limited number of cases**" and as a "last resort option". **Also, statutory initiatives could potentially mitigate the risk of infection as mentioned above.**
- In our view, **the subordination risk might be more relevant for constant-maturity swaps (CMS**) legacy securities than discount perpetual legacy securities. Indeed, CMS securities are usually classified as Tier 1 securities while discount perpetual securities are usually classified as Tier 2 securities from a regulatory standpoint.

Andrea Enria expects an increase in NPE, once public support such as moratoria expires

- Andrea Enria, in a speech at the **European Parliament's Economic and Monetary Affairs Committee**, on the 27th of October 2020, addressed the situation of banking sector in the current Covid-19 situation and also talked about the consolidation and restructuring of the banking industry. Enria said that as per the results published in July 2020, regarding the potential weaknesses of the banking sector, in response to the Covid-19 situation, **the conclusion was that under a central scenario predicting a very harsh recession, with Euro area GDP falling by 8,7% in 2020, followed by a fairly robust recovery in 2021-22, the banking sector would be able to withstand the effects of the shock on its asset quality and capital.**
- Enria said that the pandemic has so far not led to a noticeable increase in non-performing loans (NPL) (Q2 20 amounted to 2.94% vs 3.22% in Q4 19). However, as per Enria, **an increase in non-performing exposures is expected**, particularly once public support measures, such as payment moratoria, expire. Enria also pointed out that **for most of the banks, Cost of risk (CoR) is increasing compared to 2019.**
- **With respect to the measure banks need to take regarding the pandemic,** Enria said that**: 1)** Banks should be ready to deal with the likely increase in NPLs; **2)** Banks should have adequate and clear policies for identifying and measuring credit risk at an early stage, in particular at a time when loans still benefit from public support measures; **3)** Banks also need to make sure they have the operational capacity to effectively manage the increase in distressed or defaulted exposures and **4)** Banks should ensure adequate levels of provisioning for their loan books.
- **Regarding the effective restructuring of the banking industry,** Enria said that bank consolidation can be part of the solution, as it could focus efforts to improve cost efficiency and develop better focused, more sustainable business models. Adding to this, Enria also said that banks might face challenges due to climate related risk and Brexit and the banks must intensify their efforts to achieve post-Brexit operating models
- **With respect to recovery of the banking sector,** Enria said that there are specifically two focus areas: **1)** The crisis management framework and **2)** The cross-border integration of banking groups. **As regards the crisis management framework,** Enria commented "Still, a large number of banks, also middle size ones, would be subject to liquidation according to national procedures that still differ in relevant respects. A more harmonised framework, also enabling the intervention of deposit guarantee schemes on a "least cost" basis, would be an important improvement". Enria also said, "From a supervisory perspective, it is also important to ensure that once we have declared a bank as failing or likely to fail and the Single Resolution Board has determined that there is no public interest in resolution, the bank exits the banking sector in a relatively short time frame so that it does not remain in "limbo".
- **Regarding the cross-border integration of banking groups**, Enria said, "This could be done by introducing **adequate incentives and safeguards for banking groups to enter into intra-group support agreements**. While these intra-group support agreements would have a contractual nature, they would be linked to the group's recovery plans and further strengthened by empowering the supervisor to enforce the agreement. In this way, the liquidity needs of a group entity would be met in a timely manner, alleviating the concerns of host authorities while also enabling a more efficient allocation of liquidity at group level. This would be made possible by linking the granting of cross-border liquidity waivers to, among other things, the existence of adequate intragroup financial support agreements."

SRB's expectations for resolvability of banks engaging in M&A

- **On the 7th of December 2020,** the Single Resolution Board (SRB) published a paper, outlining its expectations for how banks engaging in mergers & acquisitions (M&A) can ensure resolvability. SRB is of the opinion that **bank consolidation,** if well designed and well executed, can enhance banks' resilience and profitability, thus strengthening resolvability. The SRB has set out the necessary capabilities that banks need to demonstrate to be considered resolvable in its **Expectations for Banks (EfB) document**, published in April 2020. In that document, the SRB sets the goal of the end of 2023 for achieving resolvability across its banks in a phased way. However, the SRB recognises that M&As and other corporate transactions may have an impact on banks' existing paths to resolvability. **Therefore, the SRB expects banks to prepare a revised resolvability work plan respecting the overall requirements, including the elements presented below;**

- **1. Principle 1.2 of the EfB document (SRB's expectations wrt process)** According to the principle, the banks are expected to share information on prospective corporate transactions that are likely to result in a material change, as soon as possible. **They may request information, which might include:**

Pro-forma analysis of foreseen legal and organisational structures

The business and operating model: risk profile & balance sheet

Pending regulatory authorisation: MREL funding plan with information from the transaction and pro forma data to update the resolution plan

The target funding: including a plan ensuring compliance with MREL for combined group

Preliminary assessment of the impact on resolvability, to extent feasible

- After the conclusion of the transaction, banks are expected to return to normal resolution planning activities, including the submission of up-to-date data in the SRB resolution reports. Internal resolution teams (IRTs) will consider, on a case-by-case basis, alternative phase-in or transition periods for some or all of the resolvability expectations, taking into account the banks' updated resolvability work programmes reflecting the impact of the transaction. **These are not expected to exceed, as a rule, the original EfB timeline by longer than 18 months.**

- **2. SRB has the following resolvability expectations from banks:**

Maintaining sufficient loss absorbing and recapitalisation capacity;
- at the point of entry and subsidiary levels, to absorb losses in resolution and regain market confidence post-resolution. The previously adopted MREL decisions remain valid until they are replaced by new decisions.

Integrating information systems to meet data requirements;
- maintaining appropriate governance arrangements and ensuring effective quality assurance capabilities & timely delivery of information, including planning, decisions & MREL reporting, with a sufficient level of quality.

Strengthening operational continuity in resolution and access to FMI Services;
- following the completion of transaction, banks are expected to revisit their essential services, prepare a plan to mitigate risks and revisit the FMI contingency strategy and plan.

Rationalising the legal structure after the operation;
- to consider potential measures that would facilitate the separation of core business lines & critical functions in resolution, assess if additional economic functions becomes critical & ensure operational & financial continuity.

Phase-in of the EfB; clarifying when banks are expected to build up their capabilities in respect to specific dimensions

EfB dimensions	Resolution planning cycle (RPC)
Governance	Ongoing
MREL	**Intermediate targets:** January 2022 **Final target:** January 2024
Operationalisation of bail-in	2020-2021
Liquidity & Funding resolution	2021-2023
Operational continuity in resolution & access to FMI services	**Identification & mapping of operational risk:** Ongoing **Critical functions prioritised:** 2020-2023
Information systems and data requirements	**MIS for bail-in execution:** 2020-2022 **MIS Valuation:** 2020/2021-2023
Communication plan	Ongoing
Separability & restructuring	2021-2023 (Bank specific)

Source: Single Resolution Board, EfB document

Our view:

- We believe, SRB outlining its expectations for resolvability of banks engaging in M&As is helpful. However firmer guidance on MREL requirements for the combined entity could have been useful too, along the lines of what the ECB provided in July with its M&A guide regarding capital requirements

Regulatory requirements: Subordination requirements - SRB

- **Single resolution Board, on the 20th of May 2020,** published its final 'Minimum Requirements for Own Funds and Eligible Liabilities (MREL) Policy under the Banking Package', along with an overview of the SRB responses to the industry consultation. As per the release, SRB said that the MREL decisions implementing the new framework would be taken based on this policy in the 2020 resolution planning cycle and the decisions will be communicated to banks in early 2021.
- These decisions will replace those issued under the previous legal framework and each new decision will set out two binding MREL targets, including those for subordination: **the binding intermediate target to be met by 1 January 2022 and the fully calibrated MREL (final target) to be met by 1 January 2024.** For the existing binding MREL targets (set in the 2018 and 2019 cycles), SRB will take a forward-looking approach for banks that may face difficulties meeting those targets, before new decisions take effect. In the 2020 resolution planning cycle, MREL targets will be set according to the transition period in SRMR2, i.e. setting the first binding intermediate target for compliance by 2022 and the final target by 2024. The decisions will be based on recent MREL data, and reflect changing capital requirements.
- The Banking package has significantly amended the subordination requirements for various banks, especially for larger, more systemic banks. **As per the new framework**, which establishes minimum subordination requirement for G-SIIs, Top Tier Banks and Other Pillar 1 Banks, **i) Pillar 1 subordinated MREL requirements, is calibrated at 18% TREA (plus CBR)**/ 6.75% LRE for G-SIIs, or 13.5% TREA (plus CBR)/ 5% LRE for Top Tier Banks and Other Pillar 1 Banks and **ii) any additional subordination set by the resolution authority, equal to a level of 8% TLOF**. *(Note: This level may be decreased or increased by the resolution authority, subject to a cap and a floor.* In line with Article 12c(5) SRMR, the SRB may set subordination requirements for resolution entities of banks that do not qualify as G-SIIs, Top Tier Banks and Other Pillar 1 Banks, based on a case-by-case assessment of NCWO risk.

Provisions for resolution entities subject to a Pillar 1 subordinated MREL requirement

8% TLOF Target level

- Article 12c(4) SRMR provides that the SRB shall require G-SIIs, Top Tier Banks and Other Pillar 1 Banks to achieve a **subordination level equal to 8% TLOF**, which is in addition to the Pillar 1 subordinated requirements described above in **i).**
- Depending on the risk density and the liability structure at the reference date of MREL calibration, the 8% TLOF target level may already be achieved by the other Pillar 1 subordinated MREL requirements.
- Where the amount corresponding to 8% TLOF exceeds the risk-based or leverage-based Pillar 1 subordinated MREL requirements, the latter need to be increased up to the equivalent of 8% TLOF to ensure that the target level is achieved.
- **The 8% TLOF target level for Top Tier Banks is capped at 27% of TREA.**

Increase of the 8% TLOF target level

- SRB may increase the requirement for G-SIIs, Top Tier Banks and Other Pillar 1 Banks to c.30%; where **i)** substantantive impediments to resolvability have been identified in the preceding resolvability assessment; **ii)** the credibility and feasibility of the resolution strategy is limited or **iii)** the bank has been assigned a prudential Pillar 2 requirement which ranks it, in terms of riskiness, among the top 20% of the resolution entities under the SRB's remit that are subject to an MREL decision.
- SRB will consider increasing subordination in relation to banks for which it concludes that the credibility and feasibility of their resolution strategy is limited.

Decrease of the 8% TLOF target level

- SRB may decrease the target level on a case-by-case basis, depending on the outcome of the assessment of NCWO risk, and subject to satisfactory progress towards resolvability.
- While determining the overall requirement, SRB may decrease the level downwards in accordance with Article 12c(4) SRMR by no more than the level equal to the formula:

$$8\%\ \text{TLOF} \times \left(1 - \left(\frac{3{,}5\%\ \text{TREA}}{18\%\ \text{TREA} + \text{CBR}}\right)\right)$$

Regulatory requirements: Liability Management Exercises (LME)

- In 2020, a number of banks carried out **liability management exercises (LMEs)** in order to optimise their cost and funding structure. As a matter of fact, in **senior** a number of banks (e.g. Barclays plc, HSBC Holdings plc) because of the loss of TLAC treatment for bullet securities, one year before the final maturity of the security
- Senior LMEs also took place (e.g. Lloyds Banking Group plc) because the bonds were issued out of the operating entity and not the resolution entity, i.e. the holding company
- Other issuers implemented LMEs in order to **optimise their liquidity** in the banking industry (e.g. Provident Financial plc) or in the insurance sector (e.g. VIVAT NV) with both reducing their amount of liquidity outstanding. This was driven by the pandemic for Provident with receivables declining while VIVAT NV optimised its liquidity with its new parent company
- As regards **capital securities**, a number of transactions took place in order to **remove legacy securities** from the banks' capital structure (e.g. Rabobank, NatWest Group plc, Crédit Agricole SA, Lloyds Banking Group plc) as they will lose capital treatment
- Other LMEs took place in order to **address the refinancing of capital securities** in the short term (e.g. Virgin Money UK plc, Shawbrook Group plc, Ibercaja Banco SA)
- Lastly, a number of **consent solicitations** stemmed from the phase-out of LIBOR with the issuers requesting bondholders to approve a new reference rate (e.g. Lloyds banking Group plc, Santander UK Group Holdings plc)

Capital

Issuer	Description	No.	Currencies	Maturities	Targeted
Barclays	Tender offer for old-style Tier 2	1	USD	2022	USD3bn
ING	Any-and-all Tier 2 tender offer	1	USD	2023	USD1bn
SanUK	Tier 2 capped tender offer for cash (2 OpCo, 2 HoldCo)	4	USD	2023-2045	USD2.7bn
Lloyds	Exchange offer for legacy T1 and OpCo T2 notes into new T2	5	GBP	PerpNC26/29/31, 23/25	GBP2bn
Barclays	Consent on GBP & USD capital and MREL Libor-linked resets	12	GBP, USD	Calls 22-36, Perps	GBP6.2bn
Lloyds	Consent solicitation on GBP AT1 Libor-linked resets	2	GBP	PerpNC23/29	GBP2.25bn
SanUK	Consent solicitation on GBP AT1 Libor-linked resets	2	GBP	PerpNC22/24	GBP1.25bn
Rabobank	Any-and-all old-style Tier 1 tender offer	1	GBP	PerpNC38	GBP250m
NWG	Any-and-all old-style Tier 1 & Tier 2 tender offer	4	USD	PerpNC31/34, '22/'23 bullets	USD4.5bn
VMUK	Tier 2 tender offer combined with new issue	1	GBP	'26NC'21	GBP475m
Shawbrook	Tier 2 any and all tender combined with new issue	1	GBP	Oct-20 call	GBP75m
Generali	Tender offer for legacy T1/T2 alongside new Green T2	3	EUR, GBP	2022 calls	EUR1.5bn eq.
AIB	Capped tender offer for AT1 securities	1	EUR	PNC2020	EUR500m
Cred Ag	Legacy capital USD any-and-all, EUR capped tenders	2	USD, EUR	Perpetual	EUR350m eq.
Lloyds	Legacy capital any-and-all tender for cash	1	USD	PNC24	USD2bn
HBOS	Par-par exchange - legacy capital into new LBG notes	1	EUR	2030	EUR441m
SanUK	Tier 2 capped tender offer for cash (max. $600m)	1	USD	2023	USD1.5bn
ING	Tier 2 capped tender offer for cash (max. $1bn)	1	USD	2023	USD2bn
Ibercaja	Tier 2 tender offer combined with new issue	1	EUR	'25NC'20	EUR500m

Senior

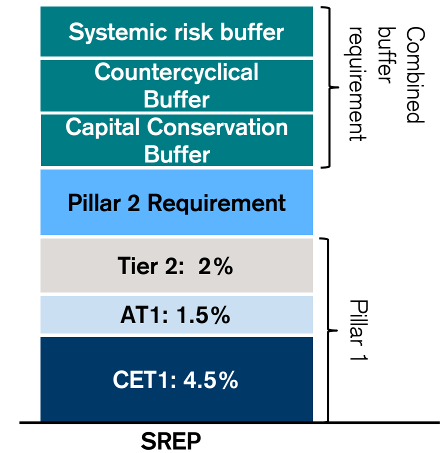
Issuer	Description	Type	No.	Currencies	Maturities	Amt. out.
ING	Capped tender offer for OC Snr alongside new HC Snr	OC Snr	3	EUR	2021-2022	EUR4.5bn
HSBC	Capped tender offer alongside new issue	HC Snr	3	EUR	2022-2023	EUR5bn
Barclays	Any-and-all tender offer for cash	HC Snr	1	USD	2021	USD1bn
HSBC	Any-and-all knockout waterfall offer + new deal	HC Snr	6	USD	2021-2022	USD8.1bn
HSBC	Any-and-all knockout waterfall offer + new deal	HC Snr	9	USD	2021-2022	USD13.3bn
Provident	Modified Dutch Auction capped at £75m	Snr	1	GBP	2023	GBP250m
Skipton	Any-and-all tender offer	PS	1	GBP	2022	GBP350m
Barclays	EUR500m capped tender off for 2021 bullet	HC Snr	1	EUR	2021	EUR1.5bn
Danske	Exchange offer from bullet into callable SNP securities	SNP	2	EUR, USD	2022	EUR2.5bn eq.
Cred Ag	USD any-and-all, EUR/GBP capped tender,+ new T2	PS	15	EUR, USD, GBP	2021 - 2025	EUR15.1bn eq.
HSBC	Any-and-all knockout waterfall offer + new deal	HC Snr	5	USD	2021 - 2028	USD10bn
Lloyds	Any-and-all tender for cash	OC Snr	3	AUD	2022 - 2025	AUD1.1bn
Deutsche	Capped at €2bn, alongside new Tier 2 issuance	SNP	11	EUR	2021 - 2028	EUR15.6bn
Lloyds	USD any-and-all, GBP/EUR capped at £487m	OC Snr	8	GBP, EUR, USD	2020 - 2025	GBP5.9bn eq.
Vivat	Any-and-all tender for cash	Snr	1	EUR	2024	EUR650m
Lloyds	Any-and-all tender for cash	OC Snr	4	USD	2021 - 2025	USD4.2bn

Source: Credit Suisse, DCM

Regulatory requirements: Introduction

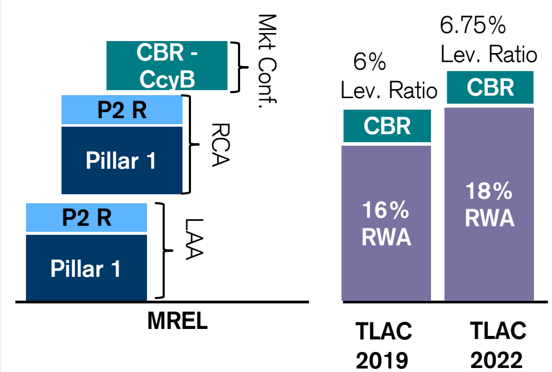
Capital Requirements

- **SREP:** minimum capital that banks need to maintain at all times. A breach of SREP would lead to potential capital strengthening measures monitored by resolution and competent authorities to restore the bank's capital position, including distribution restrictions. SREP is set on a bank by bank basis by the ECB (or national supervisor) at least once per year, with Pillar 2 requirement being the key item to monitor on a yearly basis.
- **MDA (Maximum Distribution Amount):** when a financial institution fails to meet the Combined Buffer Requirement (typically linked to a breach of SREP), the institution is requested to calculate its MDA which will lead to restrictions on:
  - AT1 coupon payments
  - Dividends
  - Bonus to employees
- **ADI (Available Distributable Items):** consists on the sum of: i) profit of the year, ii) profits carried over from previous years, and iii) other distributable reserves. Monitoring ADI is particularly relevant with regard to AT1s, since the AT1 coupon payments are limited to the ADI available at the time of the coupon payment date.



Loss Absorption Requirements

- **MREL (Minimum Requirement of Eligible Liabilities):** acts as a buffer to ensure that if a bail-in is triggered, the bank will have enough liabilities and own funds to absorb the losses and recapitalise the bank (if needed). MREL is calculated as the sum of three components as % of TREA (~RWA): i) Loss absorption amount (LAA), ii) Recapitalization amount (RCA), and iii) Market Confidence Buffer calculated as "Combined Buffer Requirement – Countercyclical Buffer (CcyB)".
- MREL requirement is also expressed as Leverage Ratio Requirement. MREL applies to all European banks regardless their systemic importance.
- **TLAC (Total Loss Absorption Capacity):** following the Financial Stability Board (FSB) standards, the CRR2 Banking Package introduces TLAC in Europe. Banks will need to comply with the following TLAC requirements:
  - Until 31 December 2021: **16% of risk weighted assets and 6% Leverage Ratio**
  - From 1 January 2022: **18% of risk weighted assets and 6.75% Leverage Ratio**



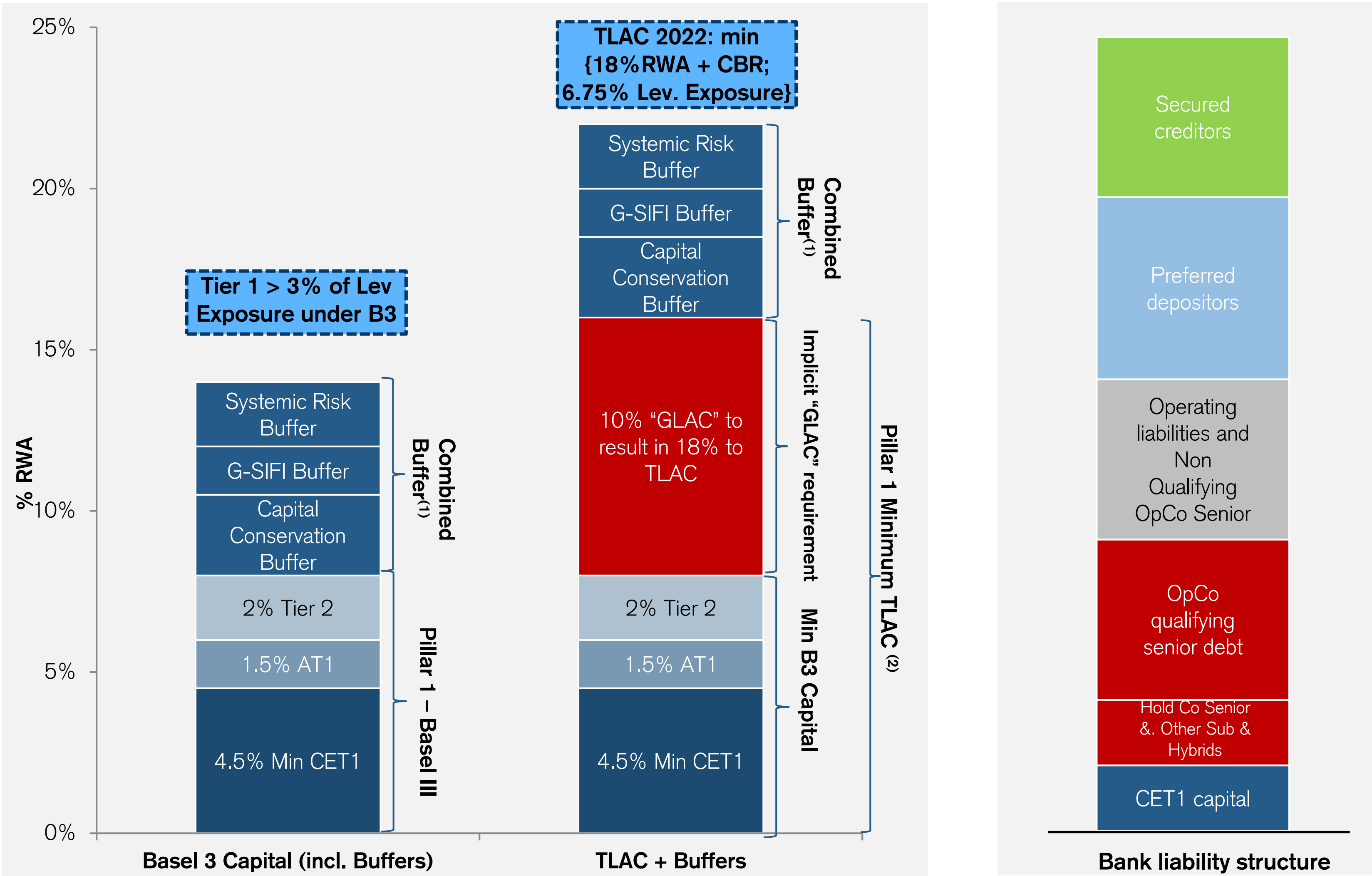
Liquidity Requirements

- **LCR (Liquidity Coverage Ratio):** requires banks to hold sufficient high-quality liquid assets (HQLA) to cover its total net cash outflows over 30 days
- **NSFR (Net Stable Funding Ratio):** is designed to ensure that banks have enough long term liabilities to fund its long term assets. NSFR is defined as the amount of available stable funding relative to the amount of required stable funding. This ratio should be equal to at least 100% on an ongoing basis.

LCR: $$\frac{\textit{High Qualiity Liquid Assets}}{\textit{Liquidity outflows over 30 days}} \geq 100\%$$

NSFR: $$\frac{\textit{Available Stable Funding}}{\textit{Required Stable Funding}} \geq 100\%$$

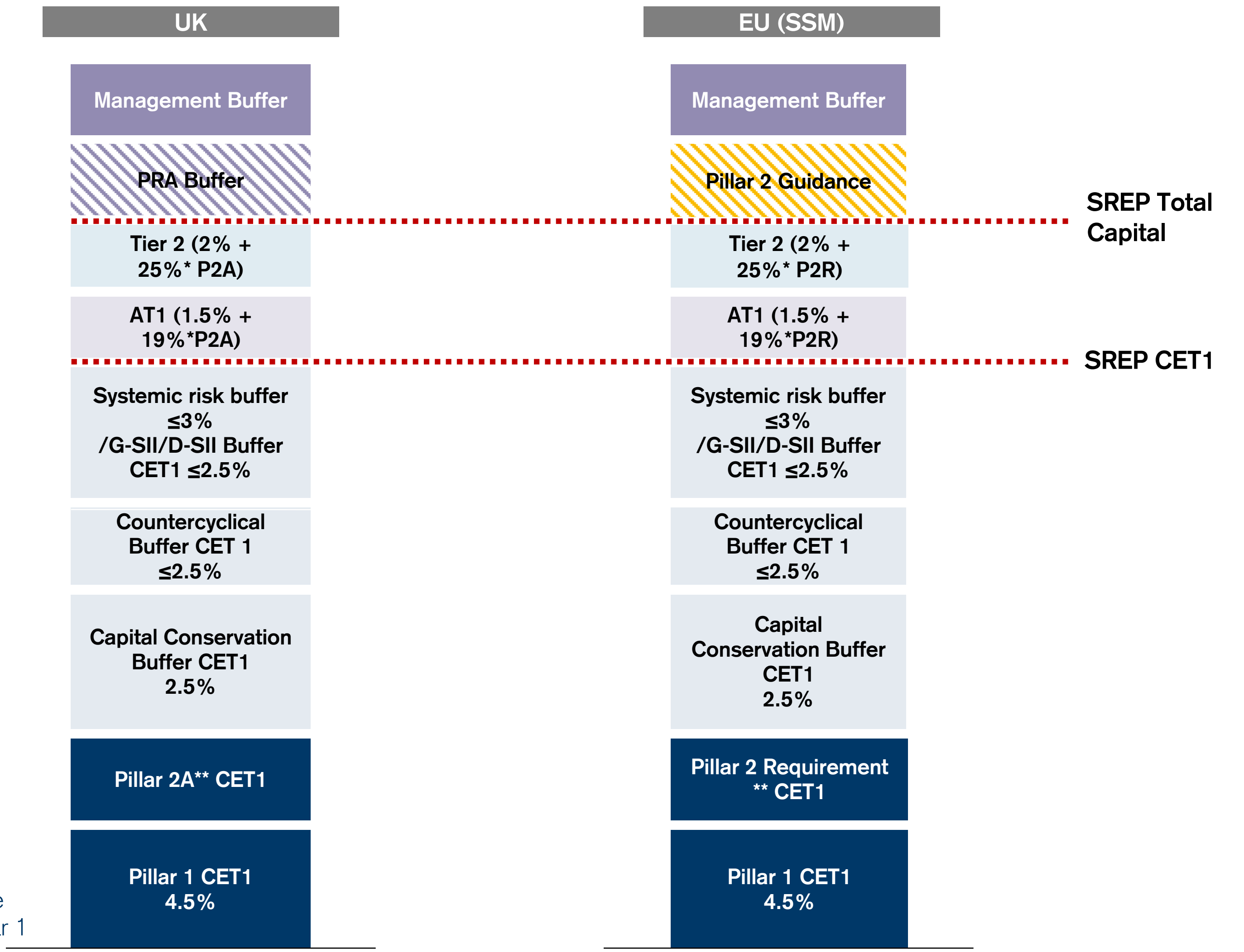
Regulatory requirements: TLAC and Basel III capital



(1) B3 rules restrict discretionary payments (dividends, AT1 coupons; bonuses etc.) when within buffer zone.
(2) Assumes 16% RWA TLAC; G-SIFI, SRB buffers vary per bank; countercyclical buffer assumed to be 0%
(3) GLAC = Gone-concern Loss Absorbing Capital = TLAC – CET1 – AT1 – T2

Source: Credit Suisse, FSB- 9 November 2015

Regulatory requirements: Capital requirements UK vs EU



*% of RWA
** Pillar 2A, P2R to be met with the same proportions of capital as Pillar 1

Regulatory requirements: Subordination structures

Standard Subordination in EU

- Covered deposits / Deposit Guarantee Schemes
- Eligible deposits from SMEs and natural persons
- Preferred Senior liabilities | Corporate and institutional deposits/ Structured notes/ Non-collateralized derivatives/ Interbank deposits > 1 week/ Other senior unsecured claims
- Non preferred Senior unsecured debt
- Other sub debt
- Tier 2
- AT1
- Equity

Subordination in EU - deposit preference

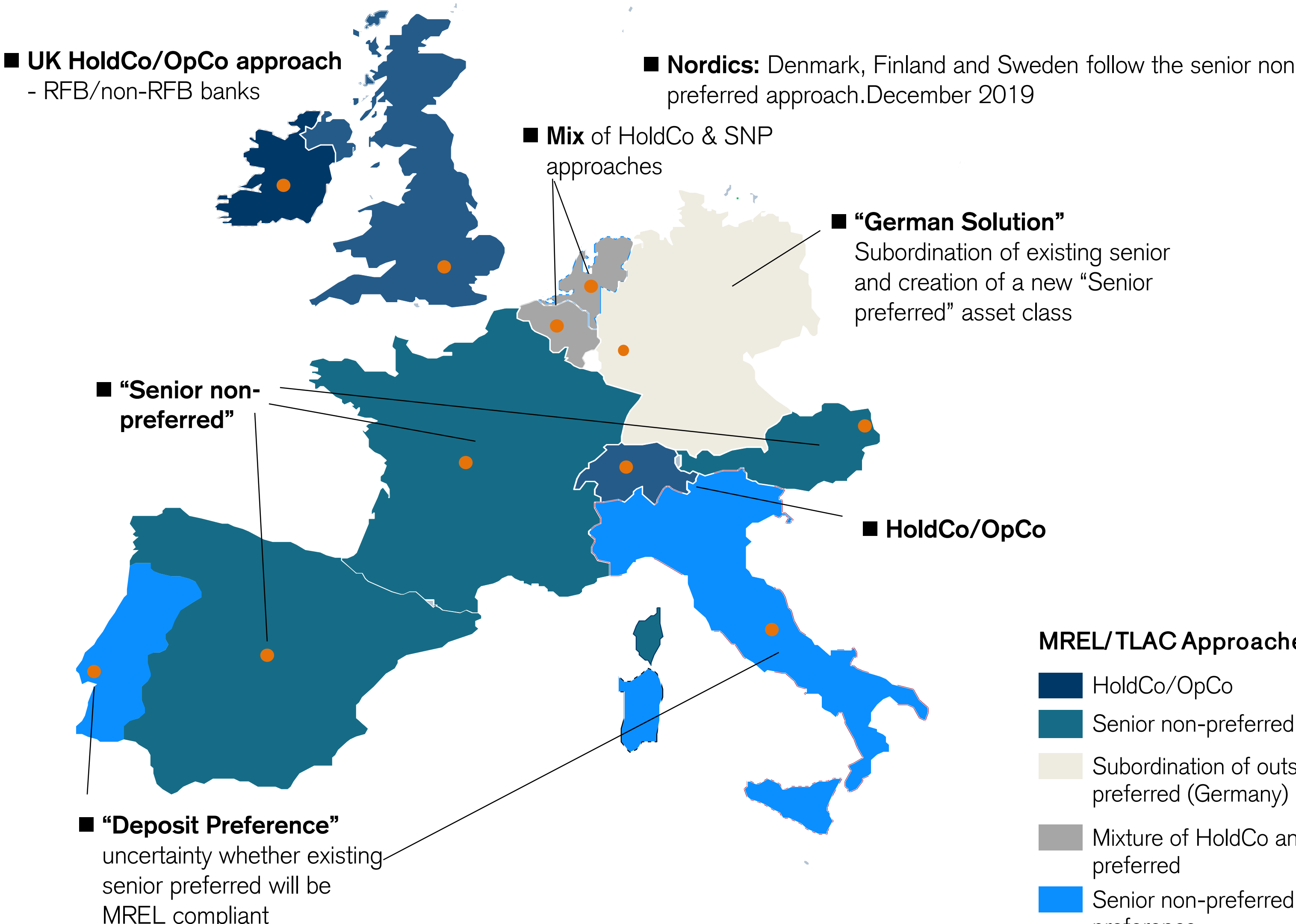
- Covered deposits / Deposit Guarantee Schemes
- Eligible deposits from SMEs and natural persons
- Corporate and institutional deposits / Interbank deposits > 1 week
- Preferred Senior liabilities | Structured notes/ Non-collateralized derivatives/ Other senior unsecured claims
- Non preferred Senior unsecured debt
- Other sub debt
- Tier 2
- AT1
- Equity

Structural subordination

- Covered deposits (OpCo) / Deposit Guarantee Schemes
- Eligible deposits from SMEs and natural persons (OpCo)
- Senior unsecured liabilities (OpCo) | Non-eligible deposits (OpCo)
- Senior unsecured liabilities (HoldCo)
- Tier 2 (OpCo) / Tier 2 (HoldCo)
- AT1 (OpCo) / AT1 (HoldCo)
- Equity

MREL / TLAC eligible

Regulatory requirements: Bail-in implementation across Europe (MREL & TLAC)



MREL/TLAC Approaches

- HoldCo/OpCo
- Senior non-preferred (Standard)
- Subordination of outstanding senior preferred (Germany)
- Mixture of HoldCo and Senior non-preferred
- Senior non-preferred with deposit preference

Regulatory requirements: Types of debt instruments

Funding instruments	Loss absorption/Funding	Capital
▪ Covered Bonds ▪ ABS ▪ Structured Notes ▪ CP/ CD	▪ Senior non-preferred ▪ Senior preferred	▪ Tier 2 ▪ Additional Tier 1 ▪ CET1 instruments

MREL/ TLAC eligible instruments

CP/CD

- ST funding issued off CP/CD programme
- <1y maturity, sold to Money Market funds

Senior unsecured (incl. TLAC/MREL)

- Senior unsecured funding, issued off an EMTN programme
- Issued in public benchmark format, or as bilateral agreement (i.e. private placement)
- Tenor can be anywhere from 1-100yrs, with great flexibility on size

Structured notes

- Privately placed notes with payouts linked to financial indices etc

Covered bonds

- Secured funding, majority of issuance secured on mortgages, but potential for other collateral (e.g. SME loans, aircraft)
- Framework for issuance either legislative or structured
- Tenor typically 3-15yrs, size €300-2bn

ABS

- Secured funding, collateral can include mortgages, credit cards, car loans
- Assets taken off balance sheet, thus RWA reduction trades can be constructed
- Tenor typically shorter than covereds (1-5yr), with a smaller investor base

Tier 2

- Subordinated and dated
- Contributes towards Total Capital ratio, regulatory benefit amortises on a straight line basis over the last five years
- Variety on markets available

Additional Tier 1

- Deeply subordinated and undated
- Contributes towards Total Tier 1 ratio
- Contractual loss absorption, through minimum of 5.125% CET1 trigger in EU

CET1 instruments

- Common Equity Tier 1 instruments issued by banks

Format of instruments dependent upon client's requirements and objectives

Regulatory requirements: Capital instruments overview

	Additional Tier 1	Tier 2
Maturity	■ Perpetual ■ Calls from 5 years ■ No step-ups	■ 5 years+ ■ Calls from 5 years ■ No step-ups ■ Straight line amortisation in final 5 years
Ranking	■ Deeply subordinated, senior only to equity ■ Contributes towards Tier 1 and Leverage Ratio	■ Subordinated, senior to AT1, junior to senior unsecured ■ Contributes towards Total Capital
Coupons	■ Fully discretionary ■ Non-cumulative ■ Must be cancelled at regulator's request or if insufficient distributable items or MDA ■ No dividend stoppers/pushers	■ Mandatory
Loss absorption	■ Write down or conversion at CET1 trigger (minimum 5.125%) ■ Statutory loss absorption through PONV under BRRD	■ Statutory loss absorption through PONV under BRRD
Requirement	■ 1.5% of RWA, plus any AT1 component of P2	■ 2% of RWA, plus any T2 component of P2
Rating	■ Moody's: typically 3 notches below Adj. BCA ■ Fitch: typically 5 notches below Viability Rating (VR) for IG rated banks, 4 notches below VR for BB-/BB/BB+ rated banks, and 3 notches below VR for single B rated banks (B-/B/B+).	■ Moody's typically 1 notch below Adj. BCA ■ Fitch: typically 1 notch below Viability Rating (VR), but in some case 2 notches below (typically banks with no AT1 outstanding, low core capital and/or asset quality issues)
Special event redemption	■ Early redemption (and variation) option for tax and capital qualification events	
Pros	✓ Provides greatest utility: full regulatory recognition as AT1 and eligible for inclusion in leverage ratio calculations (esp. in UK) ✓ Coupons are tax deductible in most jurisdictions ✓ Cancellable coupons provide going concern loss absorption	✓ Most cost-efficient form of capital ✓ Coupons are tax deductible ✓ Counts towards TLAC/MREL and supports senior creditors ✓ Lowest execution risk
Cons	× More expensive than Tier 2	× Does not count towards leverage ratio × Only provides loss absorption through resolution/gone concern basis

Regulatory requirements: Attachment/Detachment levels of senior unsecured debt

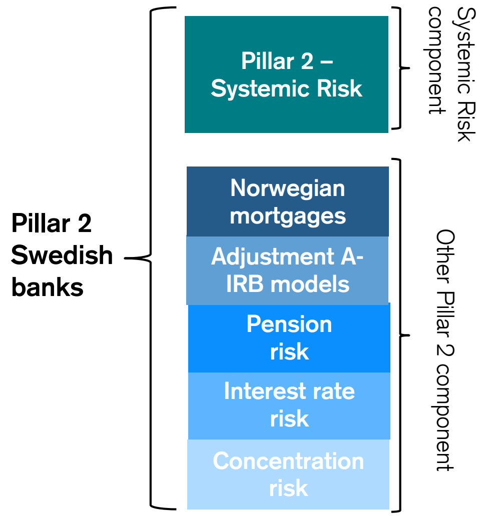
Type	UK Hold Co	Swiss Hold Co	Existing EU Op Co	Existing EU Op Co	German Op Co	German OpCo	EU OpCo-post NPS	EU OpCo-post NPS	Non-preferred Senior (NPS)
							Existing senior	Existing senior	
TLAC/MREL/Minimum Total Bail-inable debt	25%	28.60%	25%	25%	25%	25%	25%	25%	25%
Senior stack as percentage of RWA	10%	14.30%	10%	35%	10%	35%	10%	35%	10%
Comment on funding profile	N/A	N/A	Deposit funded	Wholesale funded	Deposit funded	Wholesale funded	Deposit funded	Wholesale funded	N/A
Total Capital Ratio	15%	15%	15%	15%	15%	15%	15%	15%	15%
Corporate deposit assumption (rank equal to senior)	N/A	N/A	5%	5%	N/A	N/A	5%	5%	N/A
Non Preferred Senior/Tier 3 stack	N/A	N/A	N/A	N/A	N/A	N/A	10%	10%	10%
Attachment Level (as % of RWA)	15%	15%	15%	15%	15%	15%	25%	25%	15%
Detachment level (as % of RWA)	25%	29%	30%	55%	25%	50%	40%	65%	25%
Recovery in Bail-in event:									
Recovery if losses are 16% of RWA	90%	93%	93%	98%	90%	97%	100%	100%	90%
Recovery if losses are 20% of RWA	50%	65%	67%	88%	50%	86%	100%	100%	50%
Recovery if losses are 25% of RWA	0%	30%	33%	75%	0%	71%	100%	100%	0%
Recovery if losses are 30% of RWA	0%	0%	0%	63%	0%	57%	67%	88%	0%

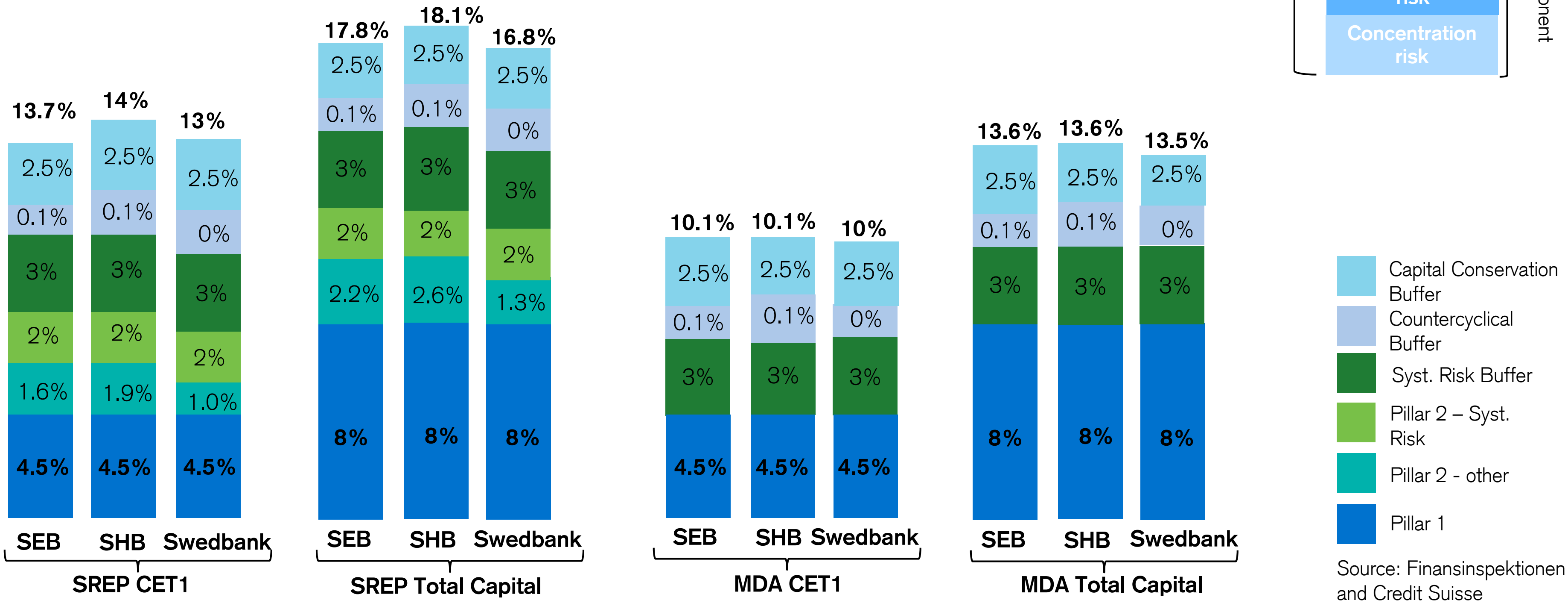
Source: Credit Suisse

Please note that we assumed total capital ratios to be consistent at 15% for all the hypothetical illustrations. We assumed a senior stack of 10% of RWA in deposit funded banks as proxy for banks with a “thin senior debt stack” and assumed senior stack of 35% of RWA for wholesale funded banks with a “thick senior debt stack” .

Regulatory requirements: Capital requirements for Swedish Banks

- Finansinspektionen (FI) is Sweden's financial supervisory authority. FI's supervision work is mainly focused on the Supervisory Review and Evaluation Process (SREP) for the three largest banking groups in Sweden: Skandinaviska Enskilda Banken (SEB), Svenska Handelsbanken (SHB) and Swedbank
- Swedish banks needs to comply with Pillar 1 (8% over RWA on a total capital basis, or 4.5% on a CET1 basis), capital conservation buffer set at 2.5%, countercyclical buffer, systemic risk buffer set at 3% for the major three Swedish banks, and Pillar 2 (which is taken into account for SREP calculations but not for MDA purposes)
- As of 2019, Pillar 2 is not included in MDA threshold calculations. However, this could change from mid-2020 onwards once the new CRR2 banking package will be implemented in Sweden. At present, Pillar 2 is composed of Systemic Risk (which needs to be fully fulfilled with CET1) and "other Pillar 2" which is composed of i) Credit related correlation risk, ii) interest rate risk in banking book, iii) Pension risk, iv) Maturity adjustments in A-IRB models, v) capital requirement Norwegian mortgages)





Source: Finansinspektionen and Credit Suisse

Regulatory requirements: Swiss TBTF: Key Requirements and Application (1/2)

Going-concern capital

- Minimum going concern capital requirement for all banks ("Sockelanforderung"): 4.5% LR and 12.86% of RWA
  - Total going concern capital requirement (incl. progressive component) based on the two G-SIB's (CS and UBS) current exposure and market share: 5% LR and 14.3% RWA(1)
- CET1 requirement increases by 0.125% for the LR and 0.36% for RWA for every 5% market share and CHF200bn LRE increase, once
  - Group LRE are permanently at or above CHF 1'050bn or Swiss market share is at or above 27%
- Minimum own funds requirements for systemically relevant banks need to be at all times above 3% LR and 8% of RWA + additional buffer of currently 4.8% (RWA) which may temporarily be breached
- Quality of capital – max. 1.5% LR and max. 4.3% of RWA to be held in HT (7% CET1 trigger) AT1, the remainder needs to be held in CET1
- Countercyclical buffer needs to be held additionally to these requirements and FINMA may require a bank to hold additional amounts or existing amounts need to held in higher quality capital under Article 131b

Gone-concern capital

- Amount equal to going-concern capital, i.e. 14.3% RWA / 5% LRE for G-SIBs currently
- Rebate of max. 5.7% RWA / 2% LRE can be granted for measures which improve the resolvability
- To be met with bail-in bonds (*defined under Article 126a*) which satisfy the minimum bail-in quality standards, e.g. HoldCo senior bonds
  - Bail-in bonds amortization: 50% in penultimate year and 0% in final year (which do not apply to Gone Concern grandfather Tier 2 CoCos)
  - LT (5.125% CET1 trigger) Tier 2 bonds carry a higher value when included in gone-concern capital (1.5x) subject to restrictions(2)
  - SIBs are not allowed to hold trigger based capital or bail-in bonds of other Swiss or international SIBs(3)

Implementation / transition and grandfathering

- New CAO and BIO to become effective 1st July 2016
- New requirements phased in linearly over a period until end of 2019
  - Low trigger AT1 grandfathered as going-concern capital until their first call date
  - Tier 2 CoCo (low and high trigger) grandfathered as going-concern capital until the earlier of the first call date and end of 2019
  - Tier 2 CoCo can obtain 150% Gone-concern treatment as long as trigger is [>] 5.125% post 2019

Application to D-SIBs

- D-SIB expected to meet basic going-concern requirement of 12.86% RWA (4.5% LRE), but smaller to no progressive component due to their smaller size
  - Raiffeisen: 13.22% RWA / 4.625% LR | ZKB and Postfinance: no progressive component
- Gone-concern requirements to be decided based on next Federal Council evaluation report due in Feb 2017. Any potential requirements will be subject to the agreed resolution strategy and emergency planning for the three D-SIBs

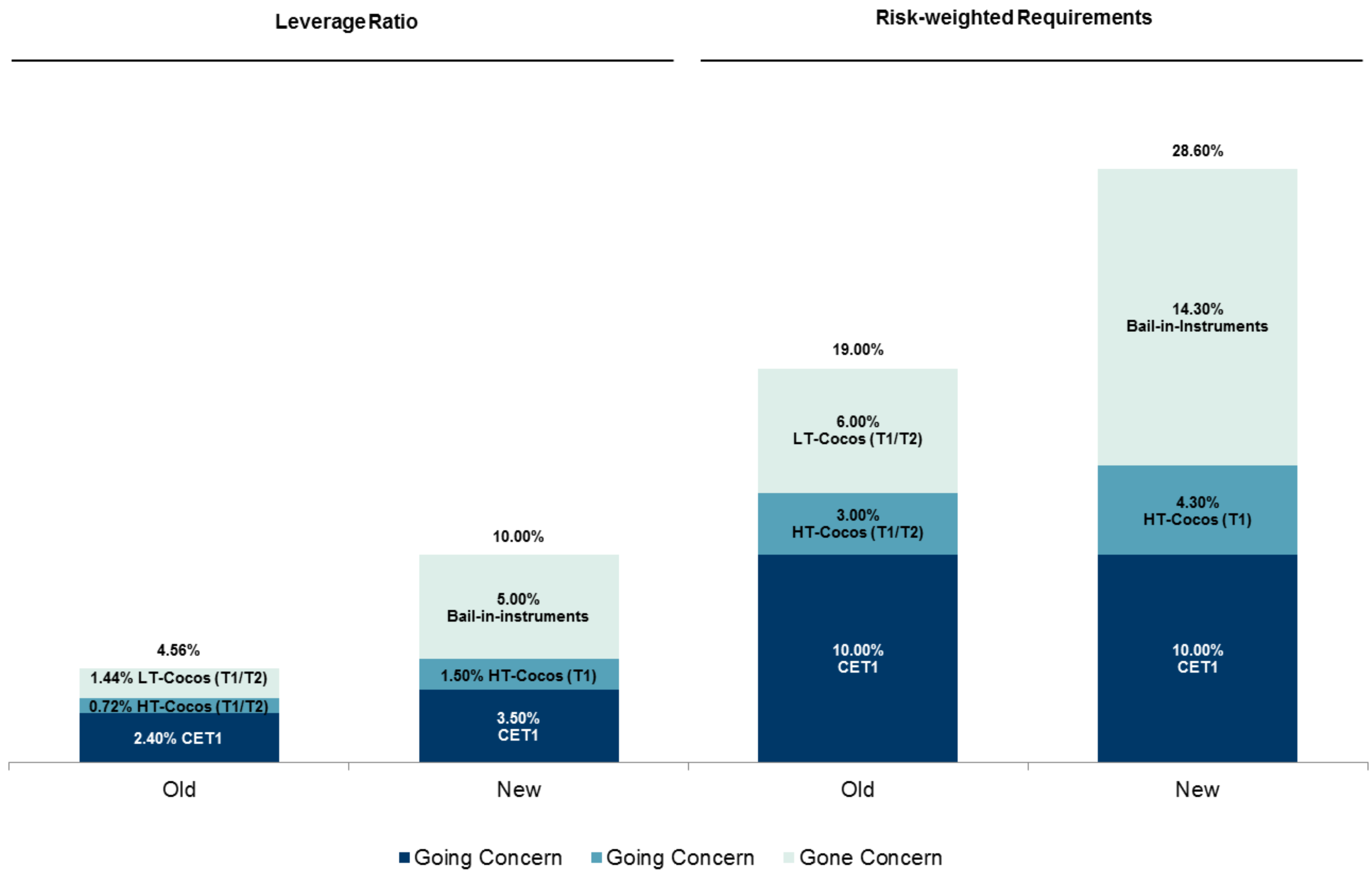
Source: "Verordnung über die Eigenmittel und Risikoverteilung für Banken und Effektenhändler", amendment by the Swiss Federal Council as of May 11, 2016 entering into force on July 1, 2016.

(1) The requirement is based on the Swiss market share and Leverage Exposure (table included in the law). Determination end of Q2 each year.

(2) Cap on potential reduction: Max. 1% of LE and max. 2.9% of RWA requirement.

(3) Exception are positions in market making or in connection with bond issuances.

Regulatory requirements: Swiss TBTF: Key Requirements and Application (2/2)



Source: FINMA, Credit Suisse

Regulatory requirements: Moody's Rating Methodology

BCA - Baseline Credit Assessment

- **Macro Profile:** captures the bank's operating and economic environment taking into account macro variables such GDP growth, real interest rates, debt to GDP, asset prices and real estate… Macro Profile for banks' ratings is composed of: **i) Sovereign Component:** economic strength, institutions and governance, susceptibility to event risk, and **ii) Banking Component:** Banking country risk, credit conditions, funding conditions, industry structure
- **Finance Profile**: captures the bank's financial health, with special focus on key solvency and liquidity ratios.

Rating Factors	Factor Weighting	Sub-factors	Sub-factor Weighting
Solvency	65%	Asset Risk	25%
		Capital	25%
		Profitability	15%
Liquidity	35%	Funding Structure	20%
		Liquid Resources	15%
Total	**100%**	**Total**	**100%**

- **Qualitative Factors:** consists on the sum of: i) profit of the year, ii) profits carried over from previous years, and iii) other distributable reserves. Monitoring ADI is particularly relevant with regard to AT1s, since the AT1 coupon payments are limited to the ADI available at the time of the coupon payment date.

Moody's Rating Methodology Summary

BCA

+ Analysis of affiliate support

Adjusted BCA

+ Analysis of Loss Given Failure

Preliminary Rating Assessment

+ Analysis of Government Support

Final Credit Ratings

Adjusted BCA – Analysis of Affiliate Support

- **Analysis of Affiliate Support:** The outcome of this analysis results in the Adjusted BCA achieved through an analysis of both the provider of support and its recipient. Affiliate support goes into the rating through three factors **i) probability of the affiliate providing support**, **ii) affiliate's capacity to provide support**, and **iii) dependence or correlation between the respective entities.**

Preliminary Rating Assessment – Loss Given Default analysis

- **Moody's Loss Given Failure (LGF):** The LGF approach is conceptually very similar to a classic loss given default analysis, but the trigger is the failure of a bank and not necessarily its default. Moody's applies two types of LGF analysis: **i) Basic LGF**, which applies to banks in jurisdictions without operational resolution regimes and uses generic notching starting from the BCA rating. This is the case for banks that it is expected to be resolved through bail-out, bankruptcy or ad hoc resolution measures, and **ii) Advanced LGF** which applies to banks that operate in Operational Resolution Regimes where generally there is a regulatory framework defining the resolution procedures, hence there is more clarity of impact and reduced potential government support.
- Moody's Advanced Loss Given Failure analysis is based on four factors:

1. **Resolution balance sheet:** the perimeter does not necessarily correspond to the consolidated group in the BCA analysis. Moody's also estimates the balance sheet at failure, and for this point depositor preference is particularly relevant. The rating agency distinguish between deposits that rank pari passu with senior unsecured debt and senior-deposits.
2. **Loss rate:** In applying LGF analysis, Moody's estimates a loss rate for the entity or entities determined to be within the same resolution perimeter. This loss rate is expressed as a percentage of the bank's tangible banking assets and is based primarily upon our consideration of two variables: **i) asset volatility** and **ii) resolution approach.** Moody's typically applies either an 8% or 13% loss rate.
3. **Subordination** and 4. **Instrument volume.**

Source: Moody's, Credit Suisse

Regulatory requirements: Moody’s Rating Methodology (2/2)

Preliminary Rating Assessment – Loss Given Default analysis (Cont.)

- **Moody’s notching uplift mechanism**: For any given class of financial instrument, the notching guidance relative to the adjusted BCA is determined by the combination of: i) the amount of subordination cushion protecting a given liability class within a resolution group (i.e the volume of more liabilities that would absorb losses first) and ii) the volume of the instrument class itself (and any equally ranked liabilities).

  Matrix below is the proposed matrix that Moody’s will be using to adjust the notches uplift. Where: i) Vertical axis is the amount of subordination below the asset class we are analysing, and ii) Horizontal axis is the amount of subordination below plus the asset class under study and other pari-passu liabilities. Example: in case of studying notching of Tier 2, in the vertical axis we’ll have: CET1+AT1, while in the horizontal axis we’ll have CET1+AT1+Tier2.

Advanced Loss Given Failure notching guidance example for an 8% loss rate

		Volume and subordination % Tangible Banking Assets						
		>= 0 <4 %	>= 4 <8 %	>= 8 <10 %	>= 10 <12 %	>= 12 <14 %	>= 14 <16 %	>= 16 %
Subordination % Tangible Banking Assets	>= 0 <4 %	-1	-1	0	0	1	1	2
	>= 4 <8 %	na	0	0	1	1	2	2
	>= 8 <10 %	na	na	1	1	2	2	3
	>= 10 <12 %	na	na	na	2	2	3	3
	>= 12 %	na	na	na	na	3	3	3

Advanced Loss Given Failure notching guidance example for a 13% loss rate

		Volume and subordination % Tangible Banking Assets						
		>= 0 <7 %	>= 7 <13 %	>= 13 <16 %	>= 16 <20 %	>= 20 <23 %	>= 23 <26 %	>= 26 %
Subordination % Tangible Banking Assets	>= 0 <7 %	-1	-1	0	0	1	1	2
	>= 7 <13 %	na	0	0	1	1	2	2
	>= 13 <16 %	na	na	1	1	2	2	3
	>= 16 <20 %	na	na	na	2	2	3	3
	>= 20 %	na	na	na	na	3	3	3

Source: Moody’s

Further technicalities on notching uplift:

i. The overall maximum upward notching from the Adjusted BCA is three.

ii. The maximum upward notching for an instrument is two notches above the Adjusted BCA when the subordination cushion below that instrument, expressed as a percentage of tangible assets, is less than the loss rate

iii. The maximum downward notching from the Adjusted BCA is one notch, which applies to instruments when the combined volume of the subordination cushion below that instrument and the volume of the instrument itself is lower than the applicable loss rate. This typically applies, therefore, to instruments at the bottom of the liability structure, which have little protection against loss and are themselves thin in terms of volume

Final Credit Ratings and Counterparty Risk – Analysis of Government Support

- **Analysis of the Government Support:** The outcome of this analysis follows a similar mechanism to the one followed in the Affiliate’s support. The three factors that determine government support are: **i)** The probability of public sector support being provided to a given debt class, **ii)** The public body’s capacity to provide support; and **iii)** The dependence, or correlation, between support provider and bank.

Additional Considerations

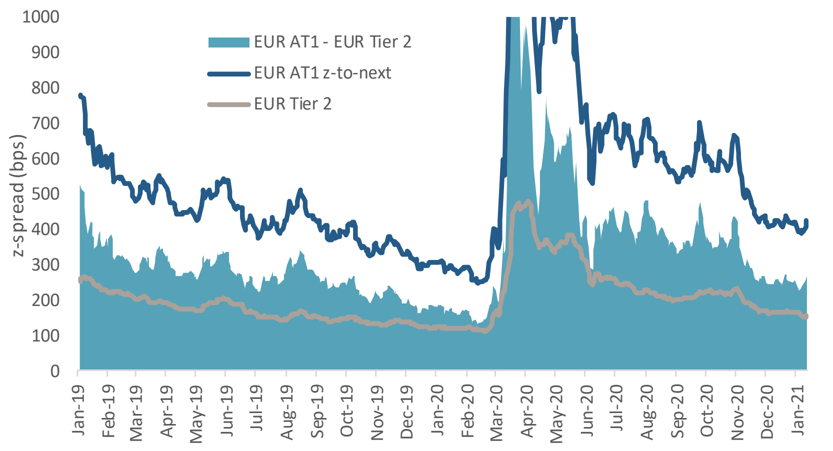
- **Outlook:** typically takes between 12 – 18 months for a decision to be taken.
- **Rating under review:** typically takes around 90 days for a decision to be taken.
- BCA sovereign cap: generally BCA cannot be higher than the sovereign rating for domestic banks.
- Debt and Deposits sovereign cap: generally debt and deposits cannot be rated 2 notches higher than the sovereign

Source: Moody’s, Credit Suisse

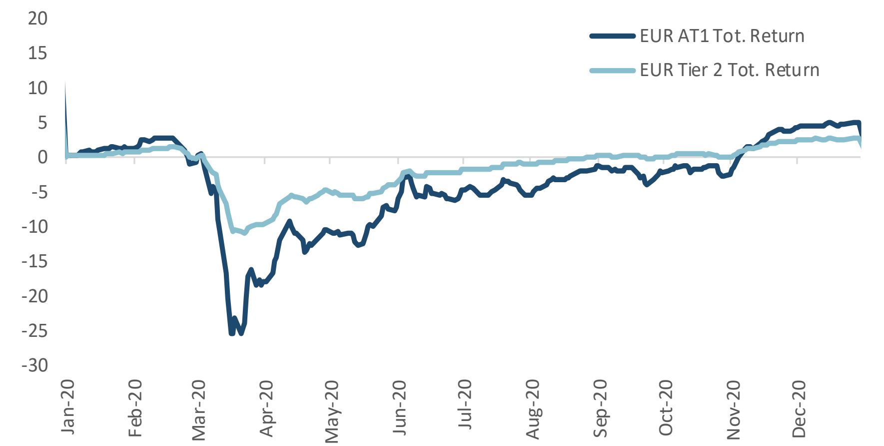
European Banks: Contingent Capital

Contingent Capital: Relative Performance AT1

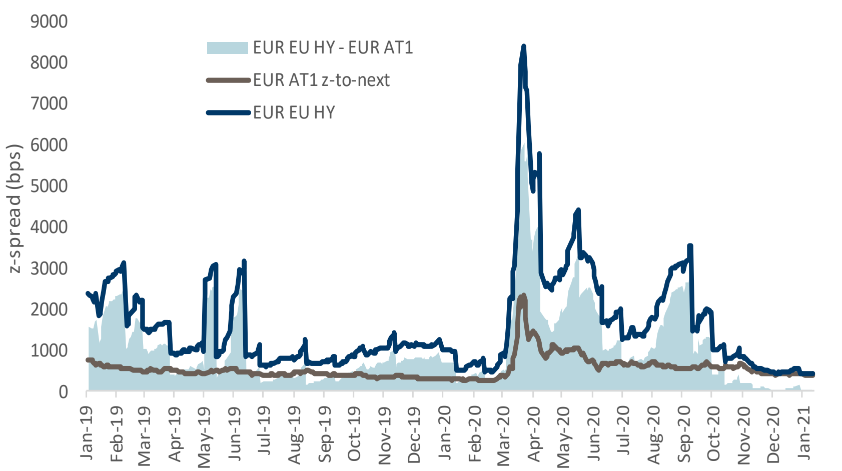
EUR AT1 vs EUR Tier 2



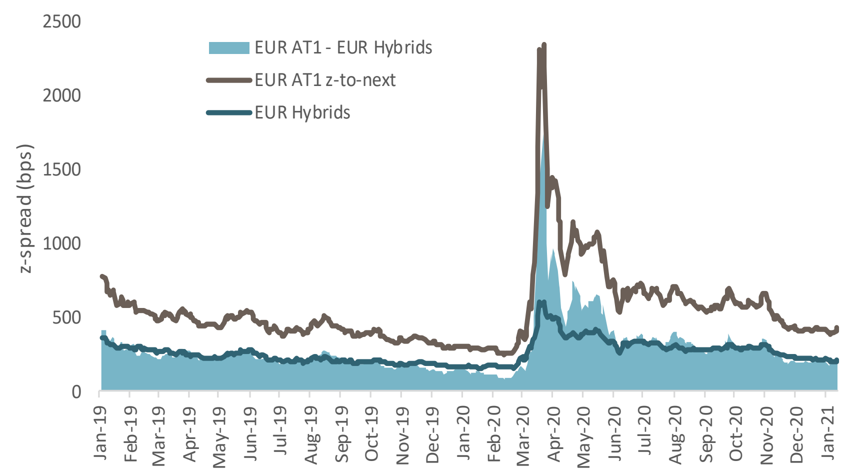
EUR AT1 vs EUR Tier 2 Total Return (%)



EUR EU HY - EUR AT1



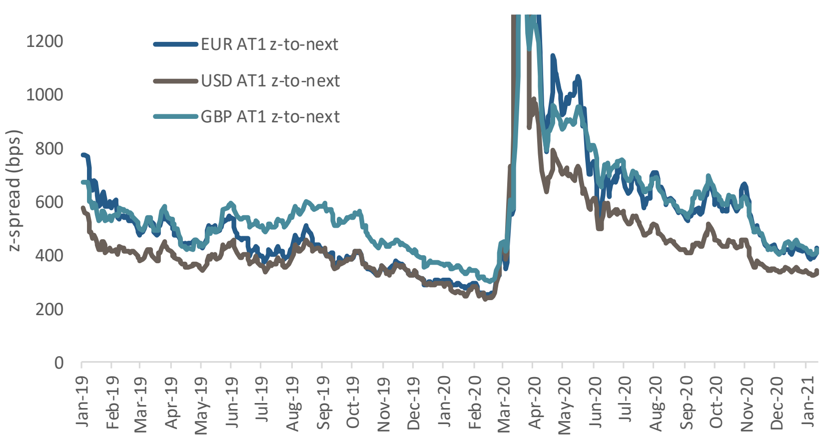
EUR AT1 - EUR Hybrids



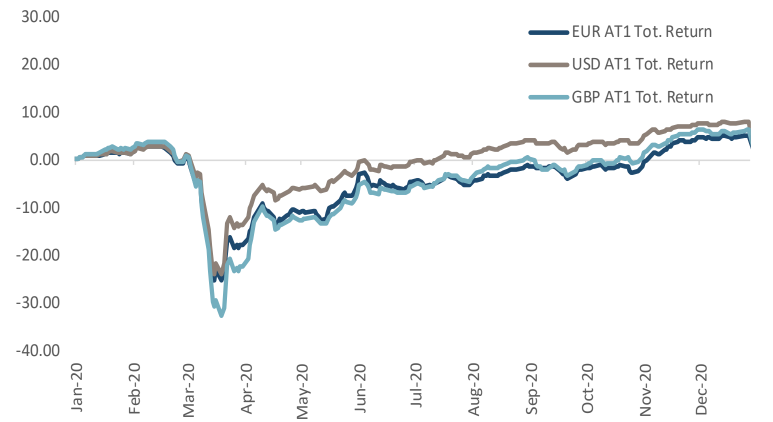
Source: Credit Suisse

Contingent Capital: AT1 performance by currency

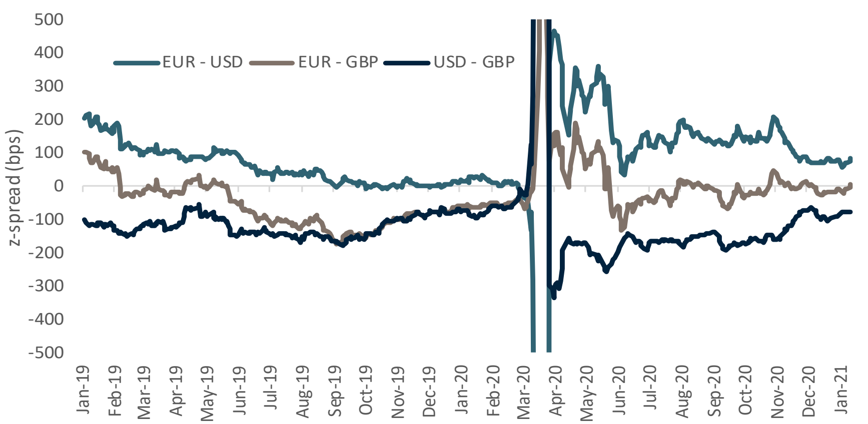
AT1 z-to-next EUR/USD/GBP



AT1 EUR/USD/GBP Total Return



AT1 z-to-next EUR/USD/GBP (differential)



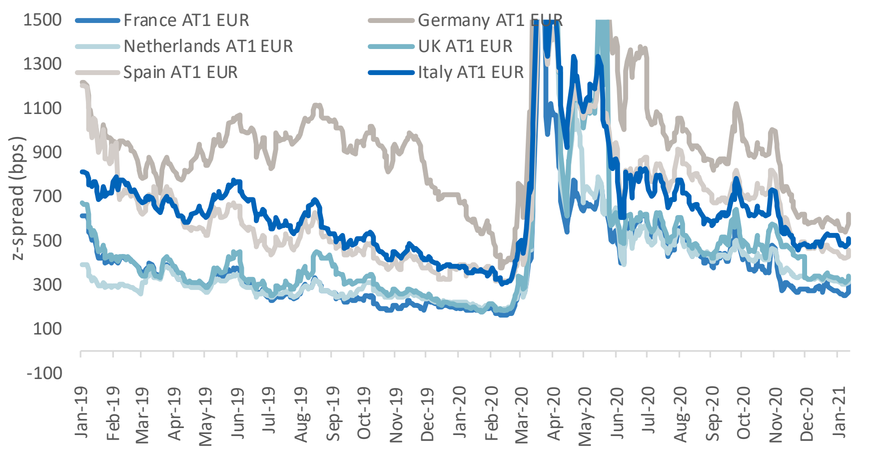
The Credit Suisse CoCo index €, $ and £ returned a total return amounting to 5.1%, 7.9%, and 6.3% respectively, in 2020, vs -20.4%, -18.2%, and -23.4% as at the 17th of March 2020.

Performance across currencies differed significantly, with $ outperforming both € and £. This outperformance is in part explained by the strong Asian demand, in our view.

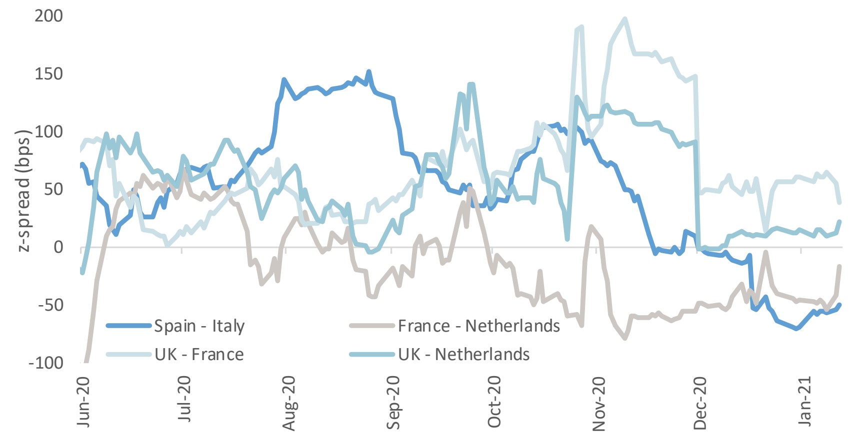
Source: Credit Suisse

Contingent Capital: Periphery vs. Core

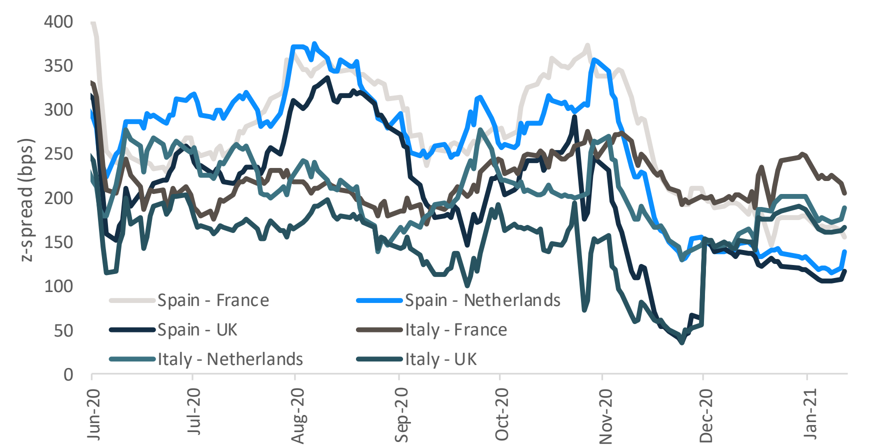
AT1 EUR by geography



AT1 EUR Peer countries



AT1 EUR Periphery vs Core



	12/01/2021	3M ago	02/01/2020
Spain - Italy	- 51	82	10
France - Netherlands	- 17	- 44	- 28
UK - France	39	86	11
UK - Netherlands	21	43	- 16

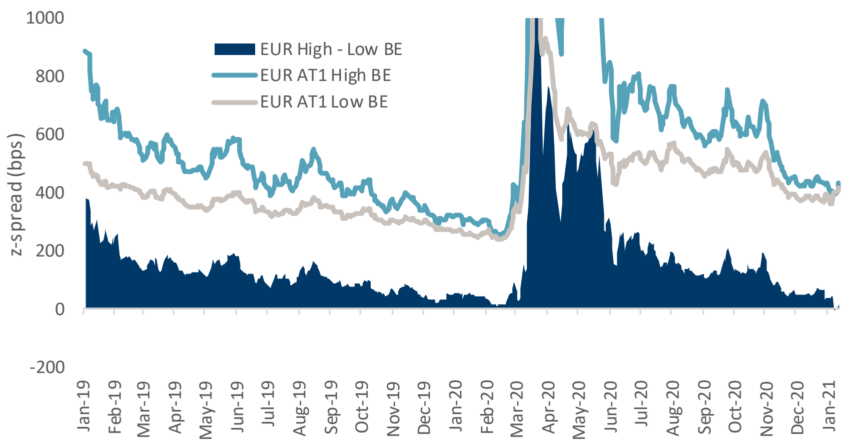
	12/01/2021	3M ago	02/01/2020
Spain - France	156	330	196
Spain - Netherlands	139	286	168
Spain - UK	117	243	184
Italy - France	206	247	186
Italy - Netherlands	189	204	158
Italy - UK	168	161	174

Source: Credit Suisse

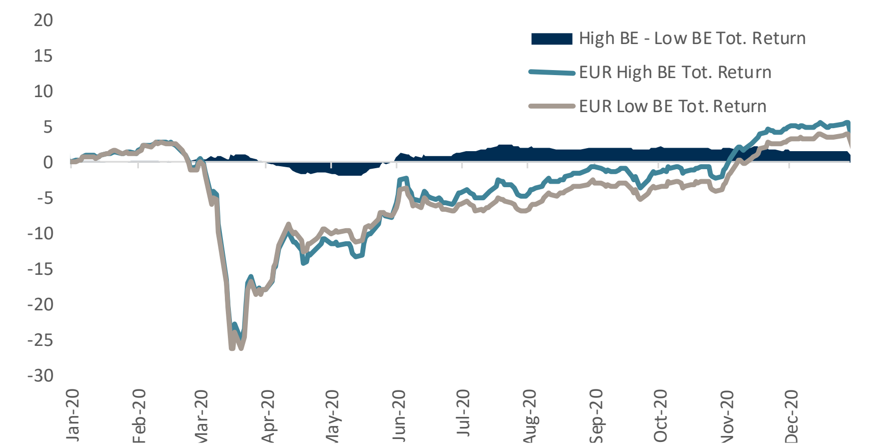
Contingent Capital: Low back-end vs. High back-end

We define a **high-back** end as an AT1 security with reset spread (or back-end spread) above 450bps, while following the same logic we define a **low back-end** as an AT1 security with a reset spread (or back-end spread) equal or below 450bps.

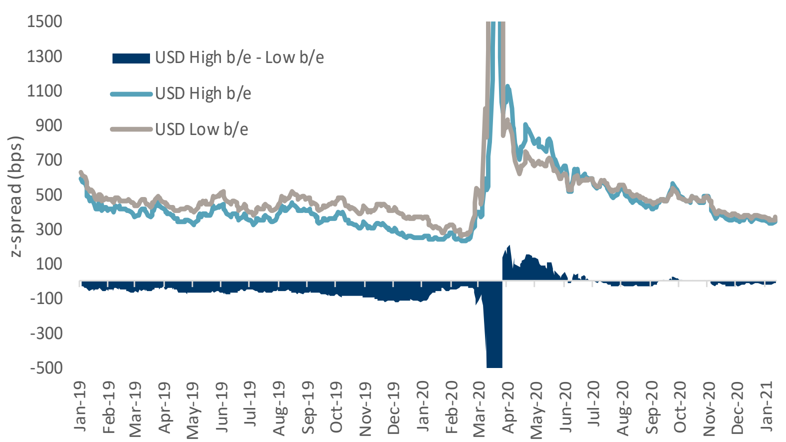
EUR AT1 High back-end vs. Low back-end



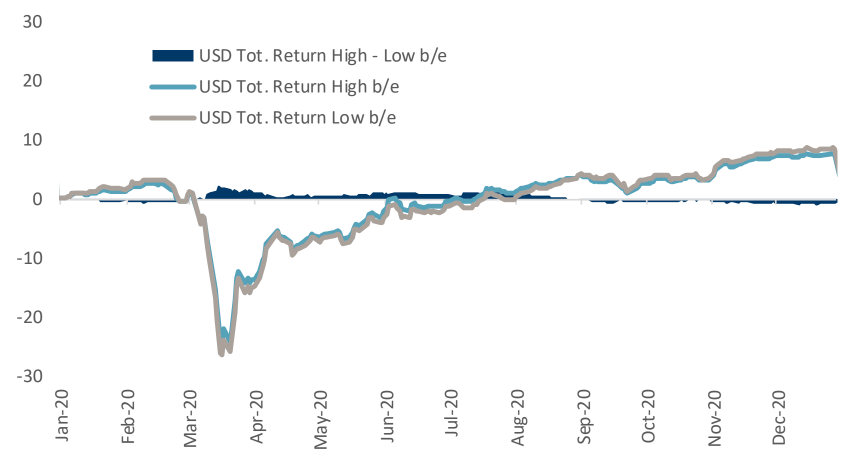
EUR AT1 High back-end vs. Low back-end Total Return



USD AT1 High back-end vs. Low back-end



USD AT1 High back-end vs. Low back-end Total Return

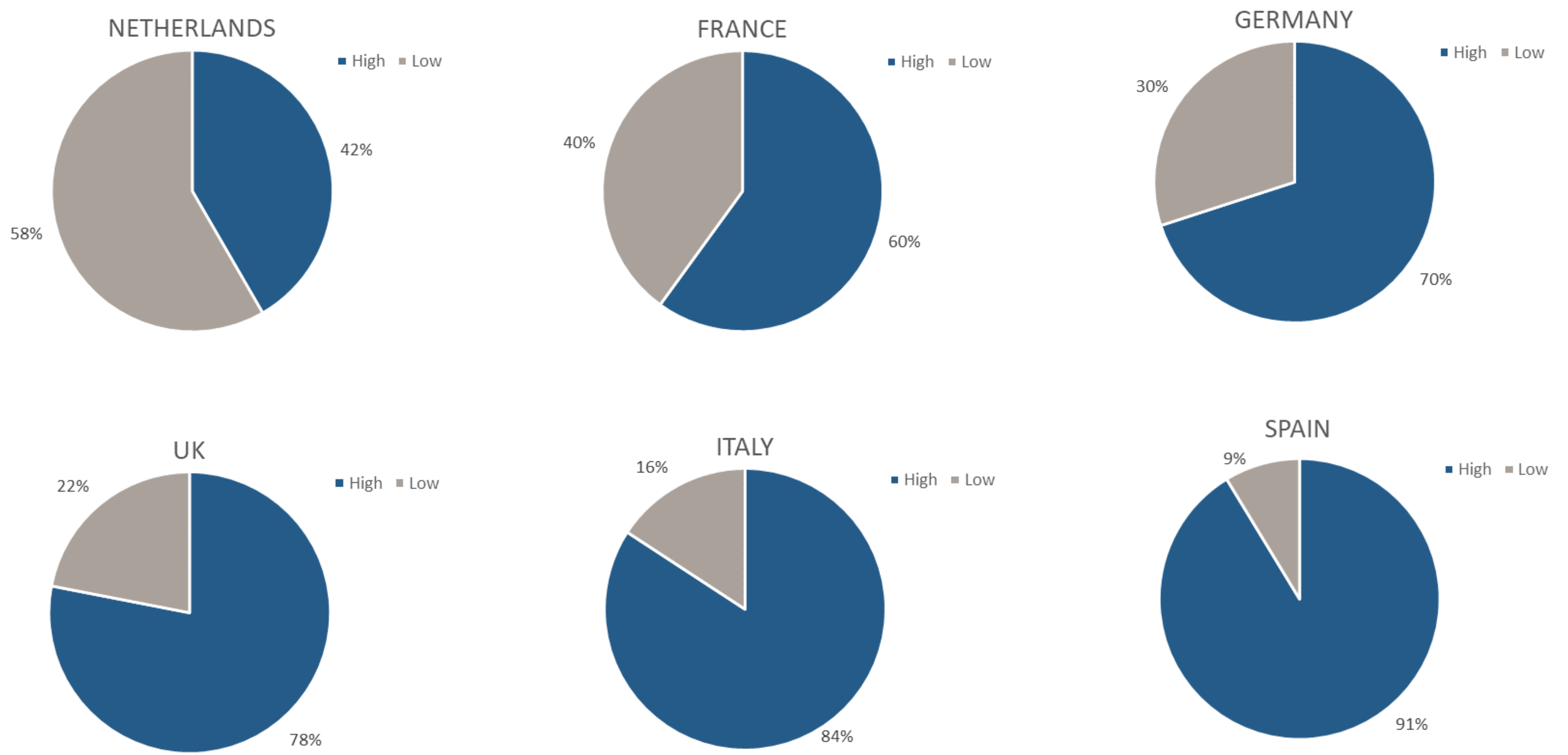


Source: Credit Suisse

Contingent Capital: Low back-end vs. High back-end (2/2)

We define a **high-back** end as an AT1 security with reset spread (or back-end spread) above 450bps, while following the same logic we define a **low back-end** as an AT1 security with a reset spread (or back-end spread) equal or below 450bps.

Percentage of High back-end/ Low back-end issued by country



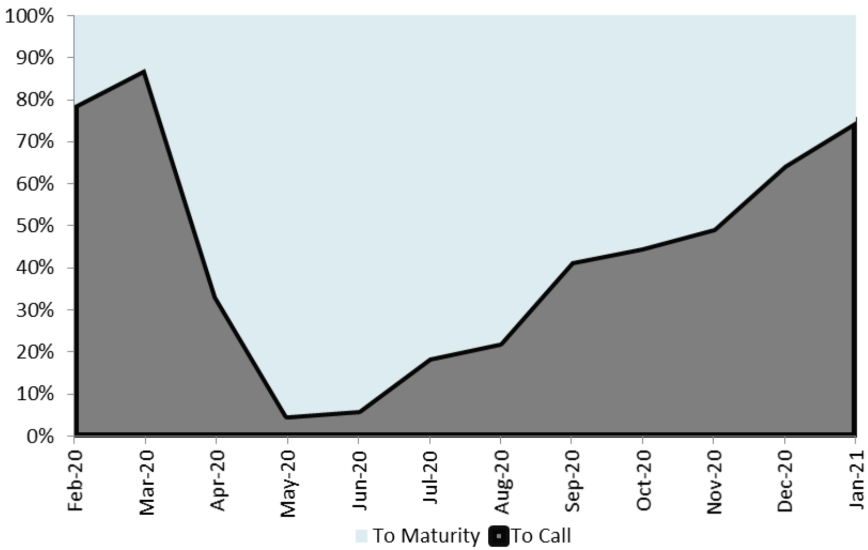
Source: Credit Suisse

Contingent Capital: Extension Risk

We define extension risk as the likelihood of an AT1 security not being called at its next call date. We observed how extension risk is highly correlated with market performance, with most of AT1 securities priced to maturity as of mid-March 2020 while c.70% of AT1 securities was priced to call in January 2020. We define an AT1 security priced to call when YtC < YtM, and vice-versa.

We define extension risk ratio as Credit Suisse € CoCo index at z-to-next divided by Credit Suisse € CoCo index at z to maturity.

% AT1 priced to call vs. % priced to maturity



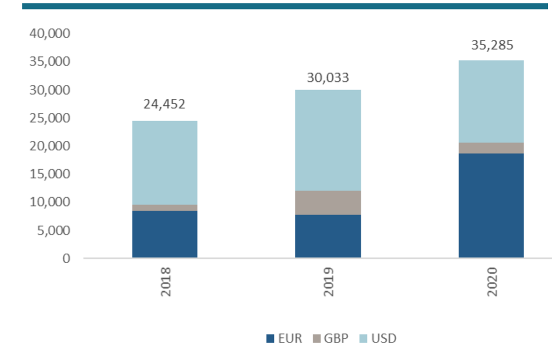
Extension Risk ratio

Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ Service Valuation at 13 January 2021

AT1 Monitor: Upcoming calls and supply

ISSUER	SECURITY	Next Call Date	First Call Date	Call announced	Issuance Date	Amount Outstanding	Call Frequency
DEUTSCHE BANK AG	DB 4.789 PERP	30/04/2025	30/04/2020	Not Called at 1st Call Date	27/05/2014	1,250	5Y
AAREAL BANK AG	AARB 7 5/8 PERP	30/04/2021	30/04/2020	Not Called at 1st Call Date	20/11/2014	300	A
LLOYDS BANKING GROUP PLC	LLOYDS 4.947 PERP	27/06/2025	27/06/2020	Not Called at 1st Call Date	01/04/2014	750	5Y
JULIUS BAER GROUP LTD	BAERVX 5.9 PERP	-	18/11/2020	12/10/2020	18/11/2015	-	5Y
ALLIED IRISH BANKS PLC	AIB 7 3/8 PERP	-	03/12/2020	23/10/2020	03/12/2015	-	A
BARCLAYS PLC	BACR 8 PERP	-	15/12/2020	23/10/2020	10/12/2013	-	5Y
HSBC BANK PLC	HSBC 5.95 PERP	29/12/2021	29/12/2020	N	29/12/2015	1,900	A
INTESA SANPAOLO SPA	ISPIM 7 PERP	19/01/2021	19/01/2021	21/12/2020	19/01/2016	1,250	S
SVENSKA HANDELSBANKEN AB	SHBASS 5 1/4 PERP	01/03/2021	01/03/2021	N	25/02/2015	1,200	5Y
UBS GROUP AG	UBS 6 7/8 PERP	22/03/2021	22/03/2021	N	21/03/2016	1,500	5Y
BNP PARIBAS	BNP 7 5/8 PERP	30/03/2021	30/03/2021	N	30/03/2016	1,500	S
SOCIETE GENERALE	SOCGEN 6 3/4 PERP	07/04/2021	07/04/2021	N	07/04/2014	1,000	5Y
BANCO BILBAO VIZCAYA ARG	BBVASM 8 7/8 PERP	14/04/2021	14/04/2021	N	14/04/2016	1,000	A
BANKINTER SA	BKTSM 8 5/8 PERP	10/05/2021	10/05/2021	N	10/05/2016	200	5Y
HSBC HOLDINGS PLC	HSBC 6 7/8 PERP	01/06/2021	01/06/2021	N	01/06/2016	2,000	5Y
CREDIT AGRICOLE SA	ACAFP 6 1/2 PERP	23/06/2021	23/06/2021	N	08/04/2014	1,000	5Y
COOPERATIEVE RABOBANK UA	RABOBK 6 5/8 PERP	29/06/2021	29/06/2021	N	26/04/2016	1,250	5Y
DZ BANK AG	DZBK Float PERP	01/08/2021	01/08/2021	N	11/11/2015	221	5Y
UBS GROUP AG	UBS 7 1/8 PERP	10/08/2021	10/08/2021	N	10/08/2016	1,100	5Y
NATWEST GROUP PLC	NWG 8 5/8 PERP	15/08/2021	15/08/2021	N	15/08/2016	2,650	S
UNICREDIT SPA	UCGIM 6 3/4 PERP	10/09/2021	10/09/2021	N	10/09/2014	1,000	A
BANCO SANTANDER SA	SANTAN 6 1/4 PERP	11/09/2021	11/09/2021	N	11/09/2014	1,500	A
NORDEA BANK ABP	NDASS 5 1/4 PERP	13/09/2021	13/09/2021	N	12/03/2015	550	5Y
SOCIETE GENERALE	SOCGEN 7 3/8 PERP	13/09/2021	13/09/2021	N	13/09/2016	1,500	S
ERSTE GROUP BANK AG	ERSTBK 8 7/8 PERP	15/10/2021	15/10/2021	N	02/06/2016	500	Q
VIRGIN MONEY UK PLC	VMUKLN 8 3/4 PERP	10/11/2021	10/11/2021	N	10/11/2016	230	A
DANSKE BANK A/S	DANBNK Float PERP	23/11/2021	23/11/2021	N	23/11/2016	3,000	5Y
UBS GROUP AG	UBS 5 3/4 PERP	19/02/2022	19/02/2022	N	19/02/2015	1,000	S
BNP PARIBAS	BNP 6 3/4 PERP	14/03/2022	14/03/2022	N	14/12/2016	750	S
BARCLAYS PLC	BACR 7 7/8 PERP	15/03/2022	15/03/2022	N	31/08/2016	1,500	Q
SWEDBANK AB	SWEDA 6 PERP	17/03/2022	17/03/2022	N	16/12/2016	500	A
DNB BANK ASA	DNBNO 6 1/2 PERP	26/03/2022	26/03/2022	N	18/10/2016	750	5Y
CAIXA GERAL DE DEPOSITOS	CXGD 10 3/4 PERP	30/03/2022	30/03/2022	N	30/03/2017	500	5Y
STANDARD CHARTERED PLC	STANLN 7 1/2 PERP	02/04/2022	02/04/2022	N	18/08/2016	2,000	5Y
DANSKE BANK A/S	DANBNK 5 7/8 PERP	06/04/2022	06/04/2022	N	18/02/2015	750	A
ING GROEP NV	INTNED 6 7/8 PERP	16/04/2022	16/04/2022	N	21/11/2016	1,000	Q
JULIUS BAER GROUP LTD	BAERVX 5 3/4 PERP	20/04/2022	20/04/2022	N	20/10/2016	325	5Y
BANCO SANTANDER SA	SANTAN 6 3/4 PERP	25/04/2022	25/04/2022	N	25/04/2017	750	S
DEUTSCHE BANK AG	DB 6 PERP	30/04/2022	30/04/2022	N	27/05/2014	1,750	5Y
SKANDINAVISKA ENSKILDA	SEB 5 5/8 PERP	13/05/2022	13/05/2022	N	23/03/2017	600	A
BANCO DE SABADELL SA	SABSM 6 1/2 PERP	18/05/2022	18/05/2022	N	18/05/2017	750	Q
BANCO BILBAO VIZCAYA ARG	BBVASM 5 7/8 PERP	24/05/2022	24/05/2022	N	24/05/2017	500	5Y
UNICREDIT SPA	UCGIM 9 1/4 PERP	03/06/2022	03/06/2022	N	21/12/2016	500	5Y
HSBC HOLDINGS PLC	HSBC 4.7 PERP	08/06/2022	08/06/2022	N	08/06/2017	1,000	Q
BNP PARIBAS	BNP 6 1/8 PERP	17/06/2022	17/06/2022	N	17/06/2015	750	5Y
SANTANDER UK GROUP HLDGS	SANUK 7 3/8 PERP	24/06/2022	24/06/2022	N	10/06/2015	750	S
BANKIA SA	BKIASM 6 PERP	18/07/2022	18/07/2022	N	18/07/2017	750	5Y
CREDIT SUISSE GROUP AG	CS 7 1/8 PERP	29/07/2022	29/07/2022	N	30/01/2017	1,500	S
BARCLAYS PLC	BACR 7 7/8 PERP	15/09/2022	15/09/2022	N	11/08/2015	1,000	5Y
HSBC HOLDINGS PLC	HSBC 5 1/4 PERP	16/09/2022	16/09/2022	N	17/09/2014	1,500	Q
CREDIT BANK OF MOSCOW (C	CRBKMO 8 7/8 PERP	10/11/2022	10/11/2022	N	10/05/2017	540	5Y
BANCO DE SABADELL SA	SABSM 6 1/8 PERP	23/11/2022	23/11/2022	N	23/11/2017	400	5Y
VIRGIN MONEY UK PLC	VMUKLN 8 PERP	08/12/2022	08/12/2022	N	08/02/2016	450	5Y
RAIFFEISEN BANK INTL	RBIAV 6 1/8 PERP	15/12/2022	15/12/2022	N	05/07/2017	650	Q

AT1 supply by currency



Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ Service Valuation at 13 January 2021

AT1 Monitor: Identifying Relative Value opportunities

This table summarises the results of the **Credit Suisse low back-end / high back-end Relative Value tracker**. In this figure we disclose a sample of pairs (low back-end vs high back-end), where one can observe some of the differentials at its lows suggesting that the pair could decompress going forward. We also show some pairs at its highs in terms of differential, hence suggesting potential compression between low back-end vs. high back-end.

Low back-end vs. High back-end

Low Back-end	High Bank-end	Diff. Back-ends	Diff. Extension (Years)	Diff. Z-sprd (bps)	Range 3M	Range 6M	Range 12M
BNP 6 5/8 PERP nc24 USD b/e: 414	BNP 7 3/8 PERP nc25 USD b/e: 515	-100	-1.40	20	100.0%	28.1%	5.4%
ACAFP 6 7/8 PERP nc24 USD b/e: 431	ACAFP 8 1/8 PERP nc25 USD b/e: 618	-187	-1.25	45	72.4%	50.4%	7.8%
RBIAV 4 1/2 PERP nc25 EUR b/e: 387	RBIAV 6 1/8 PERP nc22 EUR b/e: 595	-208	2.50	104	68.1%	69.1%	64.5%
INTNED 6 3/4 PERP nc24 USD b/e: 420	INTNED 6 7/8 PERP nc22 USD b/e: 512	-92	2.00	65	57.0%	31.7%	80.4%
BBVASM 6 1/8 PERP nc27 USD b/e: 387	BBVASM 6 1/2 PERP nc25 USD b/e: 519	-132	2.70	20	54.9%	50.2%	87.6%
SANTAN 4 3/4 PERP nc25 EUR b/e: 409	SANTAN 5 1/4 PERP nc23 EUR b/e: 499	-90	1.47	105	46.6%	84.8%	60.0%
HSBC 5 1/4 PERP nc22 EUR b/e: 438	HSBC 6 PERP nc23 EUR b/e: 533	-95	-1.03	21	42.8%	23.4%	10.6%
BACR 5 7/8 PERP nc24 GBP b/e: 491	BACR 7 1/8 PERP nc25 GBP b/e: 657	-167	-0.75	73	40.7%	15.8%	10.2%
BACR 7 3/4 PERP nc23 USD b/e: 484	BACR 8 PERP nc24 USD b/e: 567	-83	-0.75	40	38.8%	28.1%	24.5%
SOCGEN 6 3/4 PERP nc28 USD b/e: 392	SOCGEN 7 7/8 PERP nc23 USD b/e: 497	-105	4.30	27	33.4%	43.0%	86.9%
UBS 5 PERP nc23 USD b/e: 243	UBS 7 PERP nc25 USD b/e: 486	-243	-2.05	153	26.4%	24.1%	9.0%
UCGIM 3 7/8 PERP nc27 EUR b/e: 408	UCGIM 6 5/8 PERP nc23 EUR b/e: 638	-231	4.00	165	22.2%	50.5%	---
UCGIM 5 3/8 PERP nc25 EUR b/e: 492	UCGIM 7 1/2 PERP nc26 EUR b/e: 733	-241	-1.00	56	17.4%	12.8%	10.9%
ERSTBK 5 1/8 PERP nc25 EUR b/e: 485	ERSTBK 6 1/2 PERP nc24 EUR b/e: 620	-135	1.50	68	9.6%	38.2%	64.4%
CABKSM 5 1/4 PERP nc26 EUR b/e: 450	CABKSM 6 3/4 PERP nc24 EUR b/e: 649	-199	1.77	103	0.0%	24.9%	78.0%

Source: Credit Suisse, the BLOOMBERG PROFESSIONAL™ Service Valuation at 13 January 2021

AT1: AT1 risk factors

Write-down/ Equity Conversion risk

- **Point of Non-Viability/ Triggers:** Additional Tier 1 instruments can be converted into equity or written down if the level of capital falls below the instrument's trigger, or if the bank reaches the Point of Non-Viability. An example of loss absorption is the case of Banco Popular.

Coupon Cancelation risk

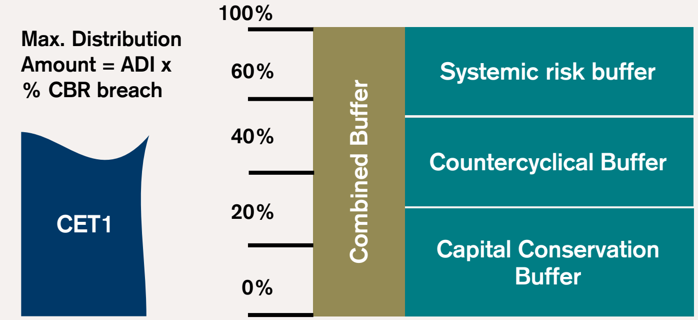
- **AT1 coupons payments are discretionary and non-cumulative.** Coupon cancelation could take place if: i) Bank management decision (unlikely), ii) Not enough ADI to pay coupon, iii) Regulatory restrictions

Extension risk

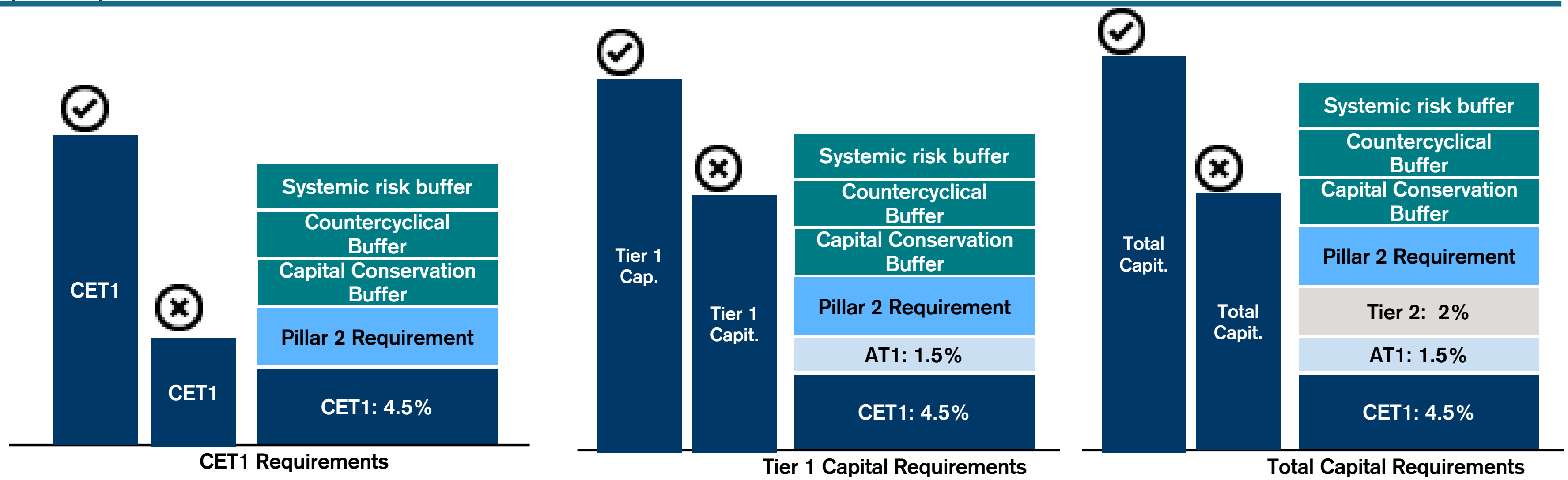
- **Extension risk** refers to the risk of a fixed income instrument not being called at its call date. In particular, in the case of Additional Tier 1 banks need the approval from the ECB before permission to call the instrument.

MDA Calculation

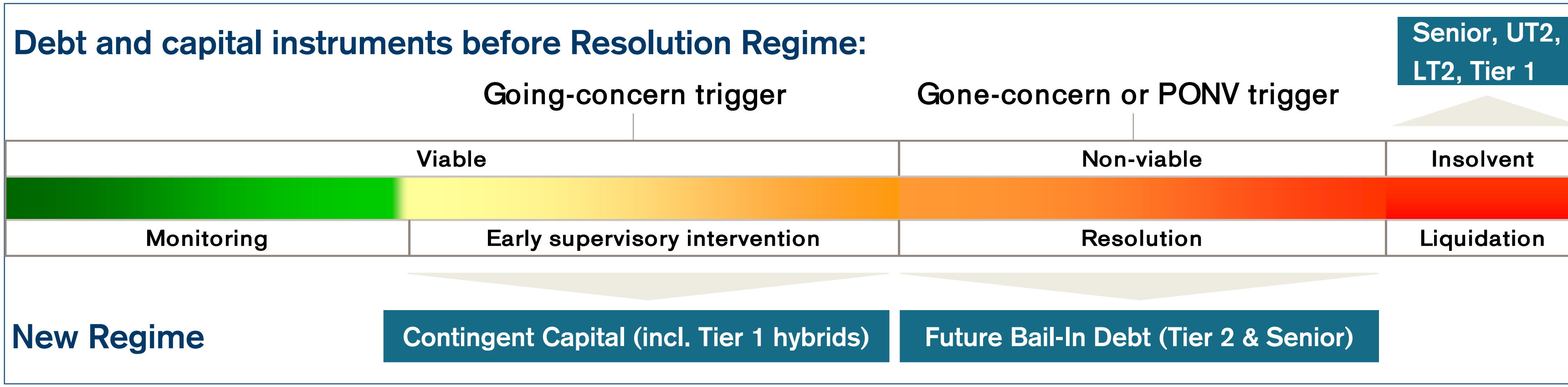
- **MDA (Maximum Distribution Amount):** when a financial institution fails to meet the Combined Buffer Requirement, the institution is requested to calculate its MDA which will lead to restrictions on: i) AT1 coupon payments, ii) Dividends, and iii) Bonus to employees



Capital Requirements



Contingent capital: Principal Loss Profile of Bail-In Debt & Contingent Capital (CoCos)



Loss profile function

Non Bail-In Bonds	**Probability of Default in Liquidation (PDL) * Loss given Default in Liquidation (LGDL)**
Bail-In Bonds	[Probability of Default in Liquidation (PDL) * Loss given Default in Liquidation (LGDL)] **+ [Probability of Loss in Resolution (PLR) * Loss given Resolution management (LGR)]**
Contingent Capital Bonds	**[Probability of Contractually Triggered Loss (PCT) * Loss given Contractual Trigger (LGT)]** + [Probability of Loss in Resolution (PLR) * Loss given Default in Resolution (LGR)] + [Probability of Default in Liquidation (PDL) * Loss given Default in Liquidation (LGDL)]
Coupon Cancellation Risk	**AT1 Hybrids have fully discretionary coupon language and coupled with the regulatory framework that restricts distributions to hybrid holders (along with ordinary dividends and management variable compensation), the risk of coupon cancellation should be factored into the valuation framework.**

Source:Credit Suisse

Contingent capital: Coupon Cancellation Dynamics – Summary

Discretionary Coupon Cancellation Risk:

– AT1 CoCo coupons must be **fully discretionary** and coupon payment is thus at management discretion

- Bank management is very incentivised to pay coupons despite discretionary nature in our view
- EU bank AT1 may not include any dividend stopper/coupon pusher > **We think it is very unlikely that a bank will pay ordinary dividends and not pay Coco coupons although that is legally possible**
- Basel allows dividend stoppers and hence Non EU AT1 CoCos have an ordinary dividend stopper

Mandatory Coupon Cancellation Risk:

- **Lack of distributable reserves: AT1 CoCos coupons must be paid from distributable reserves.** Only a portion of banks' capital, effectively retained earnings, is distributable and hence losses can deplete distributable reserves resulting in coupon cancellation. For the average European bank, Negative Return on Capital (-RoC) to deplete distributable reserves amounts to -52% and hence for the bulk of the banks, not the binding constraint in terms of capital headroom
- **Regulatory framework restrictions on distributions:** The Basel III framework, as implemented in the EU through the CRD4/CRR1, **introduced a concept that limits certain distributions** through the Maximum Distributable Amount (**MDA**) restriction **if capital falls into a defined regulatory buffer above the minimum capital requirement** (called the **Combined Buffer Requirements or CBR**). According to the MDA concept, the deeper the capital ratios of the bank fall into the regulatory buffer (CBR), the more restrictive is the ability to pay distributions including hybrid coupons (including both AT1 hybrids and legacy discretionary Tier 1 hybrids), in addition to ordinary equity dividends and management variable compensation. For average European bank, - RoC to headroom to CBR amounts to -30% and hence for the bulk of the banks, the binding constraint. The –ROC headroom will improve significantly due to confirmed and potential additional relaxation of coupon cancelation framework
- **Discretionary Regulatory Intervention** on coupons despite formal capital requirements (Pillar 1 Plus Pillar 2 + CBR) being met

Our view: While the fact that new regulatory framework (B3/CRD4) introduction of an explicit mandatory restriction on discretionary hybrid coupons clearly increased the risk of coupon cancellation (compared to the previous regulatory framework), we think the extent of coupon cancellation risk priced into AT1 CoCos are too high, and partly behind our constructive stance on the relative value of the asset class

Contingent capital: Combined Buffer Requirement (CBR) & Related MDA Restriction

- **In our view, the coupon cancellation risk due to CBR/MDA related restrictions is significantly lower than priced into valuations:**
  - **Excessive amount of risk priced in, on one methodology one can argue that nearly 477bps of CoCo spreads are due to coupon cancellation risk**
  - Confirmed and reported potential relaxation of mandatory coupon cancellation framework will reduce coupon cancellation risk and include:
    - Pillar 2 split between a requirement component and guidance component with only former relevant for MDA trigger and hence mandatory coupon cancellation risk
    - Shift to phased-in Capital Conservator Buffer (CCB) from fully loaded CCB in most EU countries
    - Potential prioritisation of hybrid coupons relative to ordinary dividends.
  - **Longer term, when CBR buffer levels are more demanding, earning volatility and hence capital volatility will be materially lower due to the new regulatory framework being materially improved to disincentivise banks from volatile/riskier strategies/products/positions which could result in losses which in turn result in capital levels falling into the buffers**
  - **Capital ratios falling into buffer does not imply coupon cancellation risk: In the higher quartiles of the combined buffer, the distribution ratios in MDA framework are high enough to pay coupons assuming the bank is profitable. (For an average bank with CET1 of 12%, Tier 1 stack of 1.5% at average coupon of 7%, the distribution to CoCo holders is only 9% of profits. This is very low compared to distribution possible under MDA of 60% in 4th quartile of buffer (of the Combined Buffer Requirement), 40% in 3rd quartile and 20% in 2nd quartile.**
  - **Management is incentivised to avoid MDA related restrictions with variable compensation one of the three distributions captured in the MDA restrictions with hybrid coupons (in addition to ordinary dividends)**

Contingent capital: Combined Buffer Requirement (CBR)

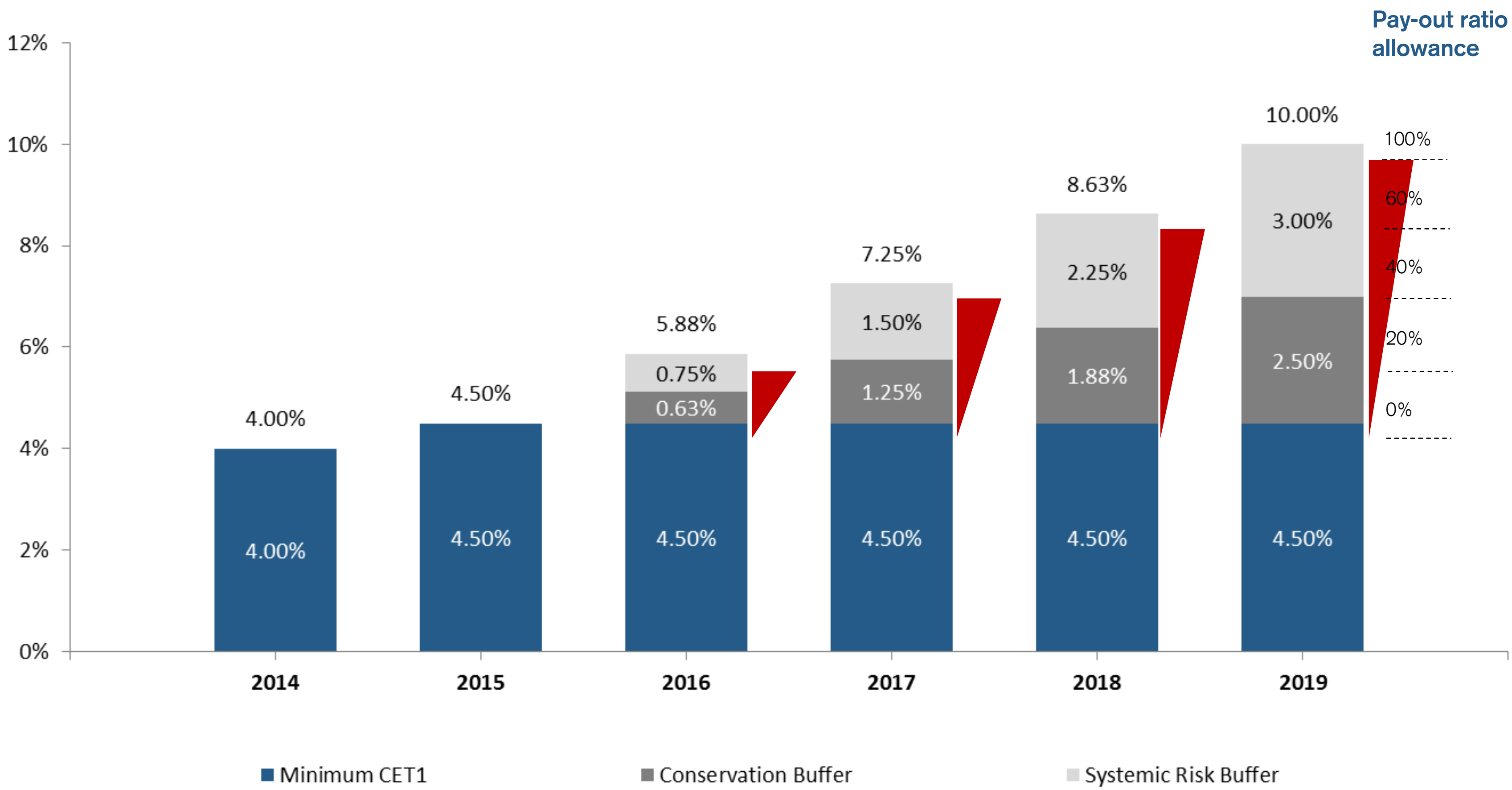
- As per CRD IV, a "**combined buffer requirement**" means the total Common Equity Tier 1 capital required to meet the requirement for the capital conservation buffer **extended by the following**, as applicable: **(a)** an institution-specific countercyclical capital buffer; **(b)** a Global Systemically Important Institutions (G-SII); **(c)** an Other Systemically Important Institution (O-SII) buffer; **(d)** a systemic risk buffer.
- As per CRD IV, the CCB is implemented from 1 January 2016, consisting of 0.625% of Common Equity Tier 1 (2017 1.25%; 2018 1.875%; 2019 2.5%). The restrictions on distributions shall apply during the transitional period between 1 January 2016 and 31 December 2018.
- A regulator may require each O-SII, on a consolidated or sub-consolidated or individual basis, as applicable, to maintain an **O-SII buffer of up to 2 %**. That buffer shall consists of and is be supplementary to CET1 capital.
- As per CRD IV, banks should be prohibited from making a distribution that would decrease their CET1 below the CBR.
- Regulators shall require institutions that fail to meet the CBR to calculate the **Maximum Distributable Amount** (MDA). Banks should be prohibited from distributing more than the MDA.
- The MDA is calculated as the sum of **1)** interim profits not included in CET1 capital, **2)** year-end profits not included in CET1 capital minus **3)** amounts which would be payable by tax if **1)** and **2)** were to be retained, times a factor which is set at **a) zero** if the CET1 ratio which is not used to meet the own funds requirement is within the first quartile (i.e. the lowest) of the CBR, **b)** at **0.2** if the CET1 is in the second quartile; **c) 0.4** if the CET1 is in the third quartile; and **d) 0.6** is if in the fourth quartile.
- The MDA should be reduced by **1)** a distribution in connection with CET1 capital; **2)** variable remuneration pay or discretionary pension benefits, or variable remuneration pay if the obligation to pay was created at a time when the institution failed to meet the CBR; and **3)** making a payment on Additional Tier 1 instruments.
- The lower and upper bonds of each quartile of the CBR are calculated as follows: Qn indicates the ordinal number of the quartile concerned.

$$\text{Lower bound of quartile} = \frac{\textit{Combined buffer requirement}}{4} \times (Q_n - 1)$$

$$\text{Upper bound of quartile} = \frac{\textit{Combined buffer requirement}}{4} \times Q_n$$

Contingent capital: Coupon Cancellation Risk Mandatory Distribution Restrictions under MDA

Illustrative example of the MDA restrictions for a bank with a 10% CET1 requirement (no countercyclical buffer)



Source: Credit Suisse

Contingent capital: Distributable Reserves Related Restriction

- **In our view, the coupon cancellation risk due to lack of distributable reserves is significantly lower than perceived:**
  - **For most CoCo issuers, the extent of capital in distributable format is very large. For the average European bank, Negative Return on Capital (-RoC) to deplete distributable reserves amounts to -52% and hence for the bulk of the banks, not the binding constraint in terms of capital headroom**.
  - **Ability to change the nature of non distributable reserves to distributable reserves is fairly high in our view but it takes time to obtain the required court and regulatory approvals**
  - **Banks' earning volatility and hence capital volatility will be materially lower due the new regulatory framework which dis-incentivise banks from volatile/riskier strategies/products/positions that could result in losses which in turn could deplete distributable reserves. Additionally, disclosure of distributable reserves to improve**
  - **Excessive amount of coupon cancellation risk priced in. Under one school of thought, one could argue that nearly 477bps of CoCo spreads are due to coupon cancellation risk**

Please note that the concept of distributable items is clearly defined in the European Commission's (EC) Capital Requirements Regulation (CRR) in article 4 paragraph (128). ***'"distributable items' means the amount of the profits at the end of the last financial year plus any profits brought forward and reserves available for that purpose before distributions to holders of own funds instruments less any losses brought forward, profits which are non-distributable pursuant to provisions in legislation or the institution's bye-laws and sums placed to non-distributable reserves in accordance with applicable national law or the statutes of the institution, those losses and reserves being determined on the basis of the individual accounts of the institution and not on the basis of the consolidated accounts."***

Contingent capital: 5.125% CoCos = PONV + Coupon Cancellation Risk

- **Trigger too low to act as going concern loss instrument:** The 5.125% CET1 trigger level is too low in our view to act as an effective going concern trigger. Particularly for larger banks, we expect the resolution authority to place a bank in resolution at the point of non viability (PONV) long before such inadequate capital ratio is reached. We think the stress test requirement of 5.5% already indicates a level of capital that will not be tolerated. The Bank of England raised the risk of the PONV point being breached before the 5.125% CET 1 ratio is reached in a Financial Stability report when it stated that "CRD IV requires AT1 to have a trigger CET1 ratio of at least 5.125%, below which the principal amount is written down or converts to a CET1 instrument. A bank with a CET1 ratio of 5.125% may, however, face issues that call into question its viability even at higher capital ratios. For example, it may struggle to access debt markets at a sustainable interest rate. So it is possible that AT1 will not convert early enough to ensure the issuer can continue as a viable going concern."
- **Relative recovery:** If we thus deem the probability of principal loss in a 5.125% trigger AT1 the same as in Tier 2, what about the relative principal loss? We struggle to see a meaningful relative recovery in Tier 2 relative to AT1 hybrids in a resolution process at the point of non-viability for most banks based on current capital structures. This is due to the typical capital structure of banks, which has fairly thin layer of AT1 hybrids (c 1.5% over time) and a Tier 2 stack not substantially higher. At the PONV, we expect both AT1 hybrids and Tier 2 thus to recover zero in most cases. Hence we think the spread differential between 5.125% AT1 hybrids and Tier 2 instruments largely compensates for coupon cancellation risk and extension risk, the latter not significant given the high back-end coupons in the majority of the current stock of securities
- **Extent of coupon cancellation risk priced-in is too high**: The average spread differential between 5.125% trigger AT1 hybrids and such banks' relevant Tier 2s amounts to **477bps.** Relative to the median AT1 hybrid spread of 279bps for the sector, it implies a level of coupon cancellation much higher than what we expect
- **Trigger levels likely to shift upwards over time:** We expect that trigger levels will shift upwards over time, supporting valuation of the 5.125% trigger Coco structures, which are more a PONV instrument with coupon cancellation risk in our view. The UK and Denmark are already requiring 7% trigger levels for instance, with Sweden requiring 8% trigger level. We think such shift to higher triggers will not be done in a manner meeting the Regulatory call conditions in our view

Contingent capital: Factors Impacting Key Valuation Parameters for Principal risk

	CoCo	Bail-In Debt & CoCo	Traditional Bank Debt, Bail-In Debt & CoCo
Probability	**Probability of Contractually Triggered Loss ("PCTL")** ■ Risk profile of business model ■ Earnings volatility ■ Volatility in capitalisation ■ CT1 trigger level relative to current CT1 level ■ Losses required to trigger as % of RWA ■ Extent of higher trigger CoCos in capital structure ■ **Alignment of interest with management** ■ **Shareholders' incentive & ability to avoid trigger**	**Probability of Loss in Resolution ("PLR")** ■ Risk profile of business model ■ Earnings volatility ■ Volatility in capitalisation ■ **Resolution trigger points** ■ **Funding & liquidity based risks in addition to capitalisation** ■ **Regulatory minimum CT1 level relative to current CT1 level** ■ Losses required to reach minimum CT1 trigger as a % of RWA ■ **Extent of medium and higher trigger CoCos in capital structure** ■ Shareholders' ability to avoid resolution process ■ **State support: Willingness to use Resolution process**	**Probability of Default in Liquidation ("PDL")** ■ Resolution process likely to be applicable to systematically important banks and non systematically important banks, hence liquidation becomes very unlikely, other than as a post-transfer tool for the remaining "bad" bank
Severity	**Loss given Contractual Trigger ("LCT")** ■ Conversion Terms: Strike price of common share conversion / Cap on number of shares to receive in conversion ■ Likely share price post conversion ■ Principal write-down terms	**Loss given Resolution ("LGR")** ■ Resolution Framework: Sequence of preference of resolution tools (Bail-In, Transfer Tool, etc.) ■ Principle of no creditor worse off than in liquidation ■ Business model lends itself best to Transfer Tool or Bail-In? ■ **Extent of subordination below relevant security** (including converted CoCos) ■ **Extent of unencumbered assets**	**Loss given Default in Liquidation ("LGDL")** ■ Traditional liquidation recovery analysis

Source:Credit Suisse

Contingent capital: Probability of Contractually Triggered Loss (PCT)

- **Extent of headroom above contractual trigger levels:** It is important to assess the capital cushion above the trigger level. In this regard, the buffer relative to the size of the loan book, the total assets, risk weighted assets, the current capital position and pre provision profits are useful. Target level of (fully loaded) CT1 on an ongoing basis is clearly important in this regard
- **Dynamic nature of trigger:** While the trigger level is fixed typically, the calculation method is not and hence future changes can have implications on the probability of trigger. Effectively, all the CoCos are defined based on phased in Basel 3 ratios however, we think that investors should consider the fully phased in ratio as well in their assessment. For instance, acceleration of the phase-in of capital deductions by some countries can be a negative development
- **Trigger point relative to PONV triggers:** It is important to consider the trigger point relative to the Point of Non Viability where other bank credit instruments will also become loss absorbent. We think that a 5% CET 1 ratio for instance is far too low and that in most cases a PONV trigger point would be reached before such a point, making the incremental probability of triggering in such Cocos not meaningfully different to the probability of triggers on the relevant PONV instruments (which include old style Tier 2 bonds). We think that such low triggers on CoCos will likely be increased over time and there is the potential that ***"today's Cocos could become tomorrow's PONV instruments"***
- **Size of the CoCo stack:** The size of the Coco buffer is important as the triggering in an early stage of distress should ideally be sufficient to avoid a resolution process and avoiding the PONV debt to absorb losses. If not, the resolution process and triggering of the PONV debt will still occur despite the triggering of the Cocos. Currently, this is not the case in most banks that have issued these securities which supports a view for tighter differentials relative to PONV sub debt. However, over time as the Coco capital cushion increases, the spread differential should in theory increase
- **Other:** Alignment of interest of Coco holders with shareholders will likely become a more relevant focus point. The balance of equity conversion Cocos relative to principal writedown Cocos in the capital structure of a bank and resultant impact of triggering on shareholders will impact the probability of triggers. Alignment of interest with management through compensation arrangements which include Cocos can also become a relevant factor

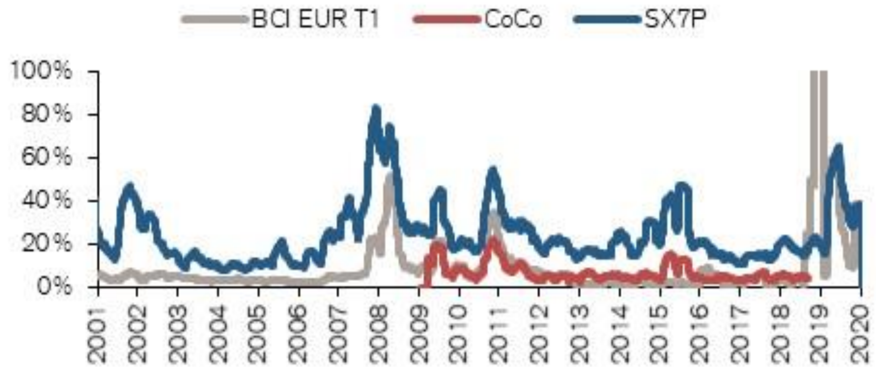
Contingent capital: Loss Given Contractual Trigger (LGT)

Loss given Contractual Trigger (LGT) or recovery value post trigger will depend on the method and terms to change the instrument from debt to equity which can be achieved via principal write-down or equity conversion. Regulators are fairly indifferent in this regard, hence almost entirely driven by pricing

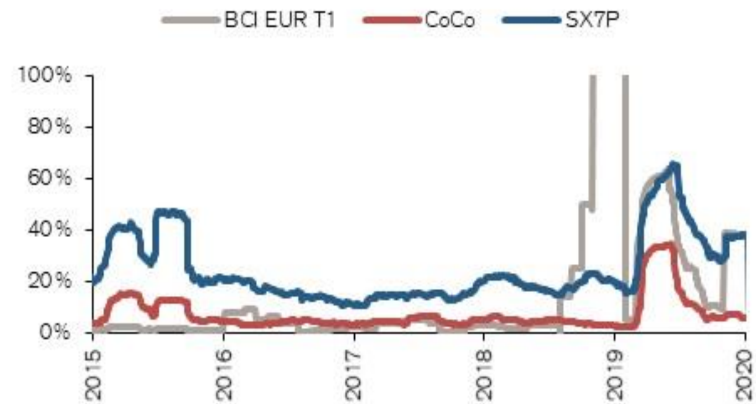
- **Permanent write-down:** Typically 100% with no write-up. Some fixed income mandates and Corporate bond index providers allow/include CoCos with write-down but not those with equity conversion features
- **Write-down/write-up:** Allowed in AT1 of EU banks but write-up is fully discretionary with the pace of write up capped to a formula linked to earnings and the portion of Cocos in capital structure. Based on the scenario of a100% write-down on hybrids (amounting to 1.5% of RWA), a targeted 10% CT1 after the write-down and RoC of 12%, it would take c.10 years before full write up of the securities. Given the slow pace of write up, the discretionary nature of the write up, the incentive of the issuer to buy such securities post a write down (rather than use discretion to write up), and the fact that coupons on the written down amount are fully discretionary, the extent of reduced loss absorbency of these securities is not substantial relative to 100% principal write down securities
- **Equity conversion:**
  - **Conversion terms are key** and will typically be at VWAP price with a floor. The depth of the floor relative to current share price is clearly relevant as losses will only be incurred if the value of the shares at conversion is lower than the floor
  - **Will equity have any value post trigger?** The crude argument is that the equity will be worth zero at trigger and hence differential to principal write down should be limited. We would argue that this will very much depend on the level of the trigger, the thickness of the CoCo stack and composition of the Coco stack in terms of write down features/equity conversion. If a PONV event can be avoided, the equity will have material value post triggering
  - **LM interest likely to be relatively high:** In an initial distress phase but before a trigger level is reached, the relative incentive for banks to tender for equity conversion hybrids relative to principal write down securities will be high. However, regulatory approval will be required for such transactions and not likely to be easily obtained in our view

Contingent capital: Historical Volatility

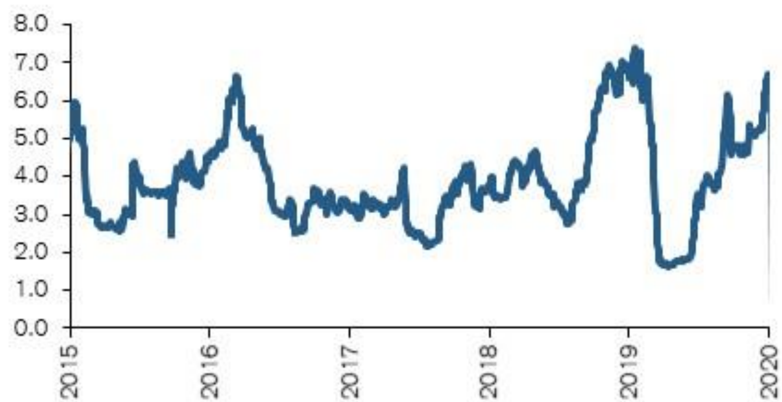
3M Historical Price Volatility



3M Historical Price Volatility



Equity Volatility relative CoCo Volatility



Our View: Equity Vol has been on average c.3.8 times higher than CoCo Vol (for period starting 2 Jan 15) while we do not expect a relative return outlook remotely at the level of Equities returning 4x CoCo returns in the long run.

Note: Based on the Credit Suisse CoCo indices

Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

European Banks: ESG

Sustainable Investing in Credit Explained

Sustainable Investing: Key Definitions (1/2)

- **What is Sustainable Investing?**
  Sustainable Investing is an investment strategy that considers ESG alongside traditional valuation criteria. Often aligned with personal values, healthy financial returns, and fostering positive change in line with the UN's Sustainable Development Goals (SDGs).
- **What is ESG?**
  Environmental, Social, and Governance, collectively "ESG," are factors that form the basis of sustainable investing approaches
- **What is a Green or a Social Bond?**
  - A Green or Social Bond is like any other bond, except that the proceeds will be exclusively applied to (re-)finance new and/or existing green or social projects
  - Green/social bonds usually carry the same rating as the issuer, as the responsibility of debt repayment lies with the issuer (and not the project)
  - Certain Social Projects may also have environmental co-benefits, and that the classification as a Social Bond should be determined by the issuer based on its primary objectives for the underlying projects

  ICMA's Green and Social Bond Principles (GBPs & SBPs)
  - The Green Bond Principles ("GBP") and Social Bond Principles ("SBPs") are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green/social bond market by clarifying the approach for issuance via four key components (Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting)
  - Aim is to provide guidance on the four key components involved in launching a credible green or social bond and aid investors by ensuring availability of information necessary to evaluate environmental impact of green bond investments or social impact for socially motivated investments
  - ICMA has released further guidance for applicability of Social and Sustainability Bonds in the context of the COVID-19 crisis
- **What is a Sustainability Bond?**
  A bond whose use of proceeds intentionally mixes Green and Social projects.

Sustainable Investing: Key Definitions (2/2)

- **What is a Sustainability-linked Bond?**
  - ICMA has published the new **Sustainability Linked Bond Principles (SLBP),** which will exist alongside the established Green, Social and Sustainability Use of Proceeds bond guidelines
  - **Sustainability-Linked Bond (SLB)** – are any type of bond instrument for which the financial and/or structural characteristics can vary depending on whether issuers achieve the predetermined ESG objectives
  - SLBs aim to further develop the key role that **debt markets can play in funding and encouraging companies that contribute to sustainability,** by providing guidelines that recommend
    i. Structuring features
    ii. Disclosures
    iii. Reporting
  - Sustainability-Linked Bonds incentivize the issuers' achievement of ESG objectives through **measuring these against Key Performance Indicators "KPIs" and Sustainability Performance Targets ("SPTs")**
  - SLBs are intended to be used for general corporate purposes, hence the use of proceeds is not a determinant in its categorization
  - The SLBP include a disclosure data checklist listing what should be disclosed, post and pre-issuance
- **What is a Sustainable Transition Bond?**
  - A proceeds and behavior-based ESG bond, with issuer establishing a Framework and providing details on a credible transition, the assets to contribute to the transition and quantitative targets and timeline
  - Balance of General Corporate Purposes and/or proceeds earmarked for thematic projects around energy transition

Sustainable Investing in Credit Explained

Illustrations of some key principles/concepts

Examples of ESG considerations include	UN Sustainable Development Goals (SDGs)
☑ **Environmental:** carbon emissions, water consumption, waste management ☑ **Social:** equal pay, employee diversity, human rights ☑ **Governance:** composition/structure of the Board of Directors, anti-corruption policy, data privacy	The United Nation's 2030 Agenda for Sustainable Development represents a **call to action** to end poverty, protect the planet, and universal peace and prosperity by 2030 ☑ Estimated USD 2.5 trillion gap for the private sector to fill in order to help meet these goals ☑ By considering ESG criteria and impact investing each client can contribute to the achievement of the SDGs

Which sectors are considered "Green"?	Which categories are considered "Social"?
Renewable energy and energy efficiency	Affordable basic infrastructure (e.g. clean drinking water, sewers, sanitation, transport, energy)
Green buildings	Access to essential services (e.g. health, education and vocational training, healthcare, financial services)
Sustainable land use (e.g. agriculture, fishery, forestry) and biodiversity conservation	Affordable housing
Clean transportation	Employment generation including through the potential effect of SME financing and microfinance
Circular economy (e.g. recycling, pollution prevention and control)	Food security
Sustainable water and wastewater management	Socioeconomic advancement and empowerment

Source (both): Credit Suisse, UN 2030 Agenda for Sustainable Development (https://sdgs.un.org/goals)

Overview of ESG Bonds

Sustainability focused capital markets alternatives

	Use of Proceeds Approach	Behavior-based / Sustainability – Linked Approach
Overall approach	**Use of Proceeds-based Label driven by underlying UoP** **UoP:** **Proceeds earmarked for thematic projects** **Green + Social UoP = Sustainability Label**	**Financings linked to sustainability performance of borrower**
Sustainable Financing Applicability	Green / Social / Sustainability Bonds Transition Bonds	Sustainability Linked Bonds Transition Bonds
Key steps/ inputs from issuer	▪ Setting up a Framework including details of eligible assets and process of selecting them / details on a credible transition, the assets to contribute to the transition and quantitative targets and timeline ▪ Second Party Opinion provider to opine on the alignment of the Framework with the Social/Green Bond Principles Management of proceeds and Reporting process to be in place ▪ For Transition: assessment of Transition framework and alignment of financed business activities and projects	▪ Defining Sustainability KPIs to which pricing is linked ▪ Target should be vetted by third party (i.e. Science Base Target Initiative) to provide a view of the materiality of the targets ▪ Few precedents in this approach include ENEL, Suzano, Novartis (on social categories), Chanel, NRG Energy, LafargeHolcim and Schneider Electric ▪ Possible appointment of a third party to validate the achievement of agreed KPIs / transition strategy and its alignment with internationally established decarbonisation pathways
Key Structural features	▪ Green Bond UoP examples include: • Energy efficiency • Pollution prevention and control • Eco-efficient and/or circular economy adapted products, production technologies and processes • Circular economy (e.g. recycling, pollution) ▪ Capex and investments related to activities focused on reduction of environmental footprint of existing activities	▪ Example of KPIs: • Recycling rate % • CO2 / GHG emissions • Social (training, diversity, education metrics) ▪ Indicative Coupon Structure: • Coupon step-up if KPIs not achieved by [15-20]% of initial spread • Enel coupon step 25bps across tranches
Sector / Issuer Access	Companies or governments with large transition / infra type projects	All companies that can improve environmental and social performance

Source: Credit Suisse, Climate Bonds Initiative/ICMA Green / Social / Sustainability-linked Bond Principles (https://www.icmagroup.org/green-social-and-sustainability-bonds/)

Sustainable Investment Approaches (1/2)

Sustainable investing can be manifested through different investment approaches

Traditional Investments	Exclusion	ESG Integration	Thematic & Impact investing			Philanthropy
			Thematic & impact aligned	Impact investing		
				Return first	Impact first	

Targeting competitive financial returns

Mitigating Environmental, Social and Governance (ESG) risks

Pursuing Environmental, Social and Governance (ESG) opportunities

Focusing on measurable high-impact solutions

Traditional Investments

- Limited or no consideration for environmental, social or governance aspects in the investment approach

Exclusion

- Systematic avoidance of exposure to controversial business areas or unethical behaviour
- Norms-based exclusions
- Values-based exclusions
- Country exclusions (sanctions)
- Exclusions based on business conduct (UN Global Compact breaches)

ESG Integration

- Consideration of financially material ESG risks and opportunities
- Based on industry-specific sustainability expertise
- Reflects the Credit Suisse house view on ESG topics
- ESG Integration in investment processes in combination with financial analysis
- Approach adapted to asset class, product characteristics and investment objective

Thematic & impact aligned

- Participation in sustainable growth themes
- Contribution to the Sustainable Development Goals (SDG)
- Alignment of investor and enterprise mission to generate impact
- Address societal challenges that target competitive financial returns

Impact investing

- Impact investing fully compliant with the IFC Principles
- Clear and direct investor contribution to the impact of the enterprises via financing growth or active ownership
- May include models where the risk and return to investors may be blended (i.e. catalytic capital to crowd in for profit investors)

Philanthropy

- Address societal challenges that do not ask to generate a financial return

→ **These different ESG investment approaches are echoing different ESG strategies and different funding options at issuer level, which is increasing the need for some standardization for issuers and investors**

Sustainable Investment Approaches (2/2)

ESG Ratings, as a good compromise to capture ESG risk and opportunities?

- **What is an ESG Score/Rating?**
  Scoring methods have evolved to provide transparency for investors and quantify corporate performance in "E", "S", and "G" categories. Numerous data providers have designed their own ESG scoring methods.

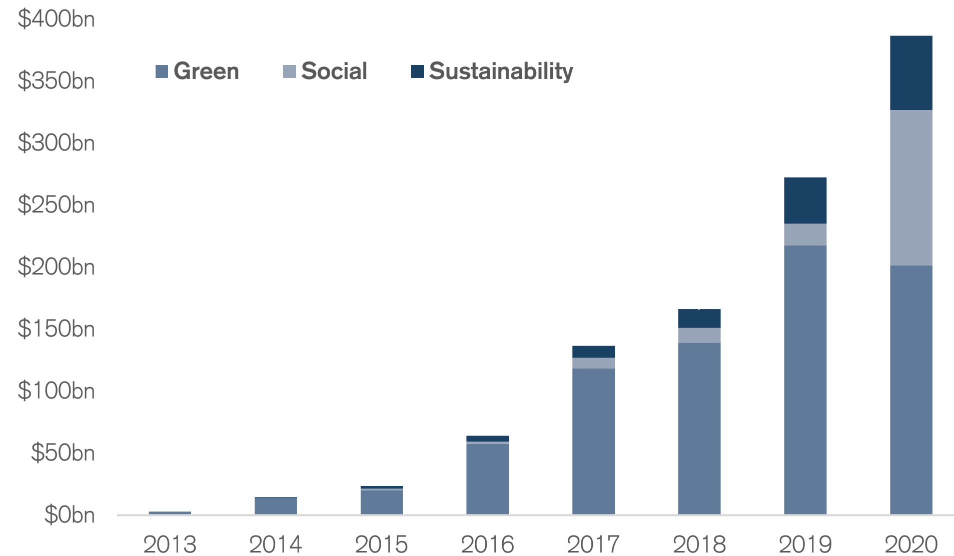
ESG Rating Considerations	ESG Rating Challenges
☑ How well is the firm managed in E, S, G? ☑ How sustainable is the respective industry? ☑ Subjective ethical concerns? ☑ Controversial business practices? ☑ Negative consequences of products and services? ☑ Positive contribution to the SDGs? ☑ Absolute or relative judgment? ☑ Drawdown risk or upside potential	☑ Lack of standardization: Low correlation (0.4–0.6) amongst different suppliers for aggregated ratings due to weighting differentials, different criteria, etc. ☑ Biases in the data: Size, region, industry, factor exposure, disclosure transparency, etc. ☑ Data quality: Robustness, data gaps, inconsistent time series, self-declarations ☑ Time relevance: Strategy and policy vs. short-term incidents and controversies ☑ Raw data versus scoring (=subjective opinion): Multiple levels of appraisal and aggregation, subjective importance of weighting ☑ Subjective perception of materiality: Depending on stakeholder and application (e.g. asset class) ☑ Lack of forward-orientation: Reported hard data versus preparedness for future challenges

Source: Credit Suisse.

ESG Bond Issuance (1/2)

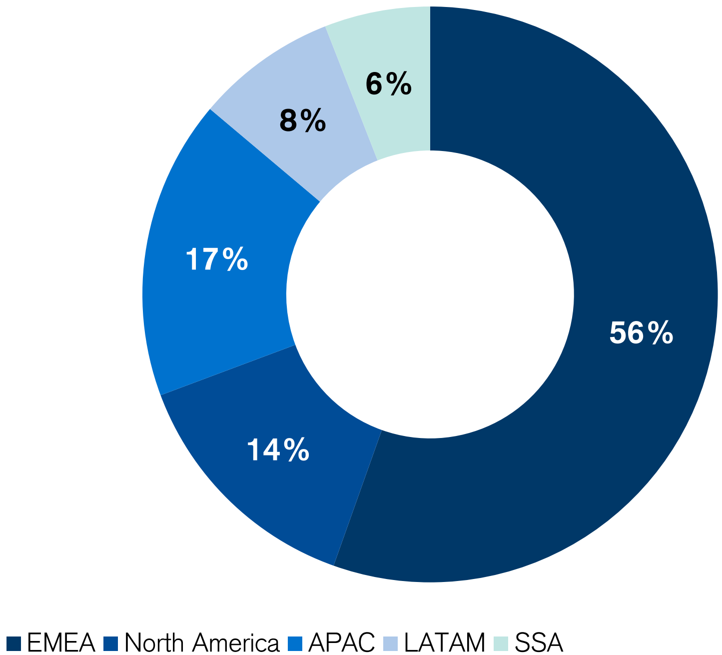
Annual Issuance

- FY18 ~ USD 170 bn
- FY19 ~ USD 250 bn
- **FC20 ~ USD 350 bn**

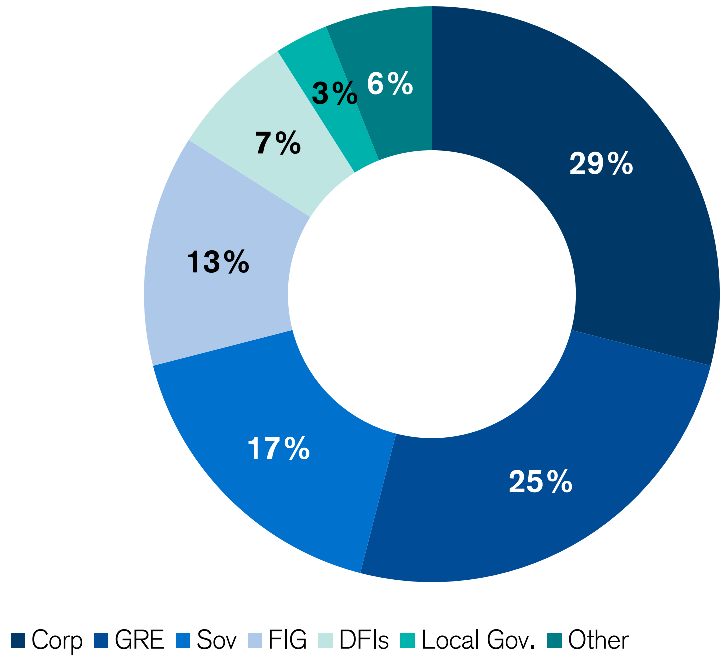


Source: Credit Suisse, Bloomberg as at 16 November 2020

ESG Bond Issuance (2/2)



EMEA is the largest market for Green bond issuance, but beginning to see an increase in North America and APAC



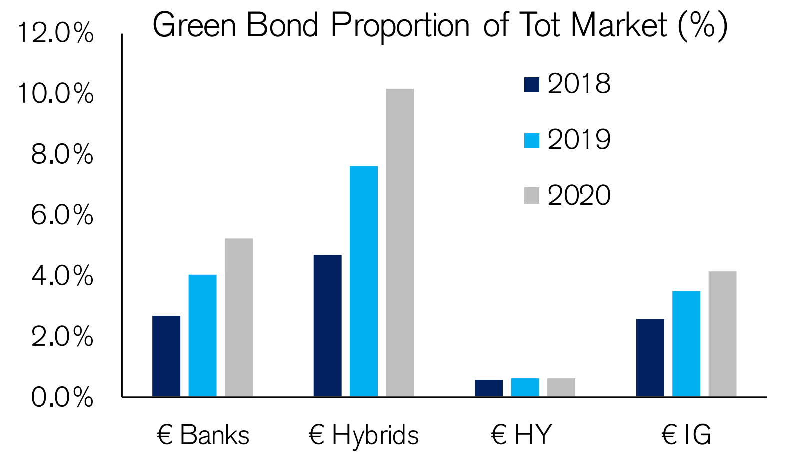
Corporates and Government-related entities make up the largest part of green issuance

Source: Climate Bonds Initiative, Bloomberg, Tot Returns.

ESG Market trends

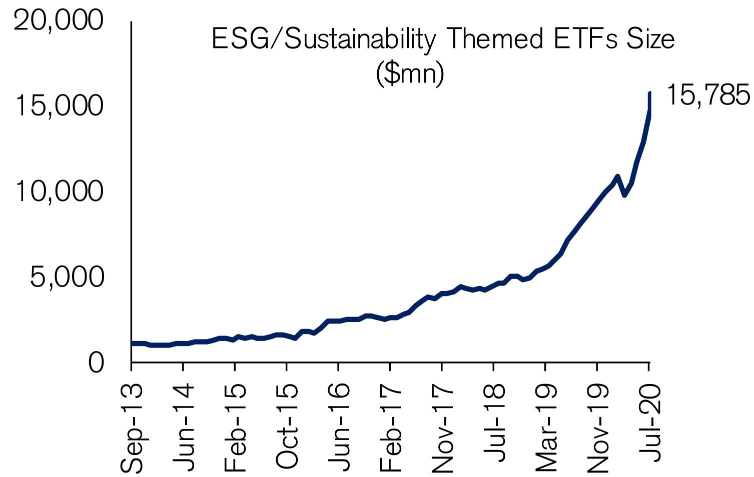
ESG Market Size vs Broad Market

The proportion of green bonds has increased significantly in most markets. Notably within our hybrid index, green bonds make up over 10% of the index.



ESG ETF Funds

ESG focused Credit funds have seen an exponential increase in just the last two years



Source: Credit Suisse.

Credit Suisse Green Bond Index

Bloomberg Ticker	LEIEGRTR
Launch date	September 2018
Sector	Corporate Government Multilateral ▪ Bills, STRIP ▪ Securitized bonds
Min Amount outstanding for inclusion	EUR 500 m
Coupon type	Fixed-rate Fixed-to-Float Floaters
Credit Quality	Only IG bonds using middle rating of M/S/F
Green criteria	Bonds must be flagged as "green" by Climate Bonds Initiative (CBI)

Source: Credit Suisse.

Credit Suisse Green Bond Index Availability and Tools

Quick and easy access to our index tool by selecting the Green Dimension for a respective credit index: **Workbench Tool**

The tool has granular ability, enabling the user to customize indices by maturity, rating, sector and much more. These reports can be saved and shared via a unique ID, as well as exported into excel.

The European Green Sub Index suite is also available to clients on Bloomberg (CSLI#GLCU <GO>).

	EUR IG	GBP IG	EUR HY	EUR Hybrids	EUR Banks
No. of issues	138	9	4	15	46
Par Amt ('000)	91,575,000	3,050,000	1,820,000	11,300,000	29,600,000
Mkt Value ('000)	95,789,093	3,292,520	1,642,361	11,586,467	30,487,533
DV01	6.164	7.65	2.479	4.028	4.728
Yield	0.39	1.36	8.27	1.78	0.27
ASW Spread	70.5	101.8	786.9	214.7	63.1
Bench Spread	98.2	116.7	893.4	243.9	90.1

Key EU Sustainability Regulations to Watch (1/2)

Significant implications for corporates and financial market participants

	EU Non-Financial Reporting Directive (NFRD)	EU Taxonomy Regulation	EU Sustainability-Related Disclosure Regulation
Who's Impacted?	Public-interest entities with >500 employees. Covers approximately 6,000 companies and groups across EU including listed companies, asset managers, banks, and insurance companies	Wide range implications for all financial market participants	Financial services firms with >500 employees including public and private fund managers, financial advisers and other financial institutions in the EU. Also applies to non-EU managers marketing into the EU.
Mandate	Publicly report information on a broad range of ESG matters on an annual basis	Framework serves the bedrock for a broad set of sustainability related EU legislations	Financial services firms with >500 employees including public and private fund managers, financial advisers and other financial institutions in the EU. Also applies to non-EU managers marketing into the EU.
Purpose	Enable the investors, consumers, and other stakeholders to evaluate the non-financial performance of large companies and encourage companies to develop a more responsible approach to business	Establish an EU-wide classification system to identify which economic activities and financial instruments can be considered environmentally sustainable and guard against “greenwashing”	Similar to Taxonomy Regulation, the Disclosure Regulation aims to avoid greenwashing and increase sustainability-related disclosures
Background	Reporting under the Directive began in 2018 using 2 non-binding guidelines. As part of the EU Green Deal, European Commission committed to review the NFRD in 2020 to strengthen quality of the disclosure	Provides definition of “environmentally sustainable” economic activities, which is 1) “substantial contribution” to one of the 6 objectives listed below; 2) does “no significant harm” to those objectives; 3) complies with "technical screening criteria specific to each objective	Regulation sets out detailed rules that will require firms to disclose how sustainability risks (ESG considerations) are part of their investment decision-making process and how their investment decisions impact on sustainability factors

Source: Credit Suisse

Key EU Sustainability Regulations to Watch (2/2)

Significant implications for corporates and financial market participants

	EU Non-Financial Reporting Directive (NFRD)	EU Taxonomy Regulation	EU Sustainability-Related Disclosure Regulation
Topics covered	Environmental protection, Social responsibility and treatment of employees, Respect for human rights, Anti-corruption and bribery, Diversity on company boards	Climate change mitigation (phase 1) Climate change adaptation (phase 1) Sustainable use and protection of water and marine resources Transition to a circular economy Pollution prevention and control Protection and restoration of biodiversity and ecosystems	Disclosure to be aligned with EU NFRD and Taxonomy regulations in accordance to their respective timelines
Timeline	2 consultations completed in 2020 Decision on new required disclosure due in 4Q 2020 Mandatory disclosure for financial year 2021	Rules on climate change mitigation/adaptation objectives would apply starting January 1, 2022. The remaining 4 objectives will be implemented starting January 1, 2023.	New regulation was passed in November 2019 and will apply starting March 10, 2021
Implications for asset managers	Mandatory reporting of non-financial information by portfolio companies helps EU-based asset managers to meet their obligations under the Disclosure Regulation	A standardized methodology based on objective-specific "technical screening criteria" to determine to what extent an investment portfolio is sustainable	New due diligence disclosures for portfolios and financial products that are promoted as sustainable; for products where sustainability is not relevant, statement is required for reasons why as well as future intentions
Implications for corporates	Companies under NFRD scope: Mandated non-financial Disclosure, Companies outside of the EU: non-EU parent/partner provide information on EU-based subsidiary/partner; supply chain/reputational risks if EU companies in the value chain are non-compliant	Increasing investor demand for granular disclosure on ESG matters, such as breakdown of revenue and capital expenditures by economic activities which will allow investors to determine level of taxonomy-alignment. Companies will need to bear the upfront cost to meet reporting standards.	Same as EU Taxonomy Regulation

Source: Credit Suisse

European Banks: Trade ideas

European Banks: Key recommendations

Additional Tier 1

EUR	
BUY BKIASM € 6.0% Perp-22	Page 96
BUY CABKSM € 5.875% Perp-27	Page 97
BUY ISPIM € 5.5% Perp-28	Page 98
BUY RABOBK € 4.375% Perp-27	Page 99
BUY SANTAN € 4.75% Perp-25	Page 100
BUY UCGIM € 7.5% Perp-26	Page 101
SELL BBVASM € 6.0% Perp-26	Page 102
USD	
BUY BACR $ 7.75% Perp-23	Page 103
BUY DB $ 7.5% Perp-25	Page 104
BUY HSBC $ 6.375% Perp-25	Page 105
BUY INTNED $ 5.75% Perp-26	Page 106
BUY SEB $ 5.125% Perp-25	Page 107
SELL BNP $ 4.5% Perp-30	Page 108
SELL CMZB $ 7.0% Perp-25	Page 109
SELL NDASS $ 6.125% Perp-24	Page 110
SELL UBS $ 5.0% Perp-23	Page 111

Tier 2

EUR	
BUY BCPPL € 3.871% 2030-2025	Page 112
BUY BGAV € 2.375% 2029-2024	Page 113
BUY BKIASM € 3.75% 2029-2024	Page 96
BUY BKIR € 2.375% 2029-2024	Page 114
BUY NOVBNC € 8.5% 2028-2023	Page 115
BUY SABSM € 5.625% 2026	Page 116
BUY STANLN € 2.5% 2030-2025	Page 117
BUY ISPIM € 3.928% 2026	Page 98
BUY DANBNK € 1.5% 2030-2025	Page 118
BUY DB € 4.5% 2026	Page 104
SELL BBVASM € 1.0% 2030-2025	Page 102
SELL PBBGR € 2.875% 2027-2022	Page 119
SELL RBIAV € 1.5% 2030-2025	Page 120
GBP	
BUY VMUKLN £ 5.125% 2030-2025	Page 121
BUY NWG £ 3.622% 2030-2025	Page 122
BUY LLOYDS £ 2.707% 2035-2030	Page 123
SELL YBS £ 3.375% 2028-2027	Page 124

Senior Non-Preferred/ HoldCo

EUR	
BUY BNP € 1.125% 2029-2028	Page 108
BUY CABKSM € 1.375% 2026	Page 97
BUY DANBNK € 0.5% 2025-2024	Page 118
BUY DB € 2.625% 2026	Page 104
BUY SABSM € 1.75% 2024	Page 116
BUY UCGIM € 2.2% 2027-2026	Page 101
SELL ERSTBK € 0.875% 2026	Page 125
SELL INTNED € 2.0% 2028	Page 106
SELL SANTAN € 1.375% 2026	Page 100
GBP	
BUY BACR £ 3.0% 2026	Page 103
BUY VMUKLN £ 4.0% 2027-2026	Page 121
BUY SANUK £ 2.92% 2026-2025	Page 100
BUY HSBC £ 2.256% 2026-2025	Page 105
SELL RABOBK £1.25% 2025	Page 99

Senior Preferred/ OpCo

EUR	
BUY NOVBNC € 3.5% 2043	Page 115

European Banks: Key recommendations

Additional Tier 1 - Rationale:

- We still view AT1 securities as attractive. In €, we keep our BUY recommendations on BKIASM € 6.0% Perp-22 despite its marginal underperformance vs. the broader Credit Suisse CoCo index as this bond still trades relatively attractive in the front end of the curve, in our view. and CABKSM Perp24. We switched out of the CABSKM € 6.75% Perp-24 which outperformed to go into the newly issued CABKSM € 5.875% Perp-27.
- For low back-end AT1 securities, like in September we remain neutral on this segment with two BUY and two SELL recommendations. We switched out of the SANTAN € 5.25% Perp-23 high b/e which outperformed to go into the SANTAN € 4.75% Perp-25 low b/e.
- With regard to currencies, following the YtD outperformance in $ and despite the outperformance of € AT1 securities since September 2020, we keep favouring € AT1 securities and we have now 5 BUY and four SELL recommendations in $. In $ we took profit on our BUY recommendations in BACR $ 8.0% Perp-24, INTNED $ 6.5% Perp-25 and LLOYDS $ 6.75% Perp-26, which all outperformed. We also took profit on BACR £ 6.375% Perp-25 which also outperformed and have no more recommendation on £ AT1 securities.
- Regarding our SELL recommendations, BBVASM (removed when the US subsidiary was sold, cf. CS European Credit Morning Comment dated 16th November 2020) and CMZB outperformed the broader index but we remain of the view they trade expensive based on their credit profile and have a SELL recommendation in BBVASM € 6.0% Perp-26 and CMZB $ 7.0% Perp-25.

Tier 2 - Rationale:

- IG Tier 2 is close to fair value in our opinion. Hence, we took profit on ERSTBK € 1.0% 2030-2025, INTNED € 1.0% 2030-2025 and FRLBP € 3.0% 2028, with all three outperforming the Credit Suisse € IG Tier 2 sub-index since September 2020. We have now two BUY and two SELL recommendations in the IG Tier 2 sub-segment.
- HY Tier 2 remains attractive in our view and we have a number of new BUY recommendations such as DANBNK € 1.5% 2030-2025 and DB € 4.5% 2026 while we keep our BUY recommendations in BCPPL € 3.871% 2030-2025, BKIASM € 3.75% 2029-2024, or NOVBNC € 8.5% 2028-2023, despite their outperformance. In SABSM we switched out of the SABSM € 5.375% 2028-2023, which outperformed, to go into the SABSM € 5.625% 2026.
- In £ we remain constructive on the VMUKLN complex and we switched out of the VMUKLN £ 7.875% 2028-2023, which outperformed the broader Credit Suisse £ Tier 2 index, to go into the new VMUKLN £ 5.125% 2030-2025. We also have a BUY recommendation in the new LLOYDS £ 2.707% 2-35-2030 as well the NWG £ 3.622% 2030-2025.

Senior Non-Preferred/HoldCo & Senior Preferred/OpCo - Rationale:

- SNP is now close to the levels of January 2020. Nonetheless, we still view the asset class as attractive with a more supportive technical backdrop in terms of issuance. Indeed, in our view, expectations in terms of issuance are now well anchored while the Single Resolution Board's latest MREL policy is also less demanding in terms of subordination requirement. Lastly, in our view, the spread differential between Senior non Preferred and Tier 2 does not fully factor in the better recovery prospect of the former.
- We keep our BUY recommendations on BNP € 1.125% 2029-2028, which performed broadly in line with the broader Credit Suisse € SNP index, and CBAKSM € 1.375% 2026, which outperformed, and add a BUY recommendation in DANBNK € 0.5% 2025-2024 and DB € 2.625% 2026.
- In Senior Preferred, we view this segment as fairly valued and as such we only have a BUY recommendation on NOVBNC € 3.5% 2043.

European Banks: Bankia SA

Additional Tier 1: **BUY BKIASM € 6.0% Perp-22**

Tier 2: **BUY BKIASM € 3.75% 2029-2024**

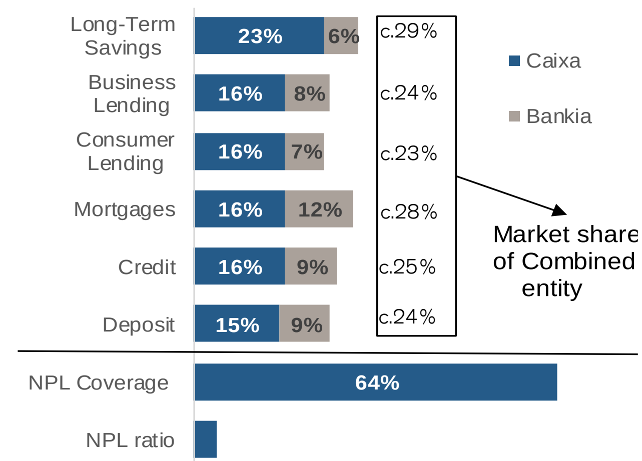
- We reiterate our constructive view on Bankia SA with a **BUY recommendation on BKIASM € 6.0% Perp-22 AT1** and a **BUY on BKIASM € 3.75% 2029-2024** supported by Bankia's: **1) Strong capital position** with a CET1 ratio amounting to 16.0%; **2) Conservative loan book** with c.57% of its loan book made up of residential mortgages; **3) Improving trend in asset quality** with an NPL ratio amounting to 4.9% in Q3 20 and an NPA ratio amounting to 6.2%; **4**) **Strong liquidity profile** with an LCR of 191%, an NSFR of 126% and a Loans-to-Deposits ratio of 92.3%; and **5) A strong combined entity** as a result of the merger with CaixaBank SA.
- **With regard to capital,** the fully loaded CET1 ratio increased to 14.79% in Q3 20 from 13.02% in FY19, leading to a buffer of 641bps over regulatory requirements and an organic capital generation of 23bps. After the CCR2 Quick Fix, the CET1 ratio would increase to 15.48% (15.77% on a pro-forma basis after software adjustments). The fully-loaded leverage ratio also increased to 5.22% vs 5.16% in FY19, and after the CCR Quick Fix would increase to 5.73% (5.84% on pro-forma basis after software adjustments).
- **Relatively conservative loan book**, with c.57% of the total loan book being residential mortgages, c.39% corporate and SME loans, and 4% consumer lending.
- **In terms of asset quality**, the Non-Performing Assets (NPA) ratio amounted to 6.2% in Q3 20, down from 6.4% in FYE19. The NPA coverage ratio increased to 52.2% vs 48.7% in FY19.
- **Regarding loans under moratoria**, c.6.6% of Bankia performing mortgages were under moratoria as at Q3 20 (up from 6.4% in Q2 20), while in terms of consumer finance c.7.3% of consumer loans were under moratoria in Q3 20 (up from 6.7% in Q2 20).
- **Bankia reported solid liquidity metrics** with a Liquidity Coverage Ratio (LCR) of 191%, a Net Stable Funding Ratio (NSFR) of 126% and Loans-to-Deposits (LtD) ratio of 92.3%. The TLTRO borrowing amounted to €22.9bn as at Q3 20.
- **The bank complies with its MREL requirements.** Bankia reported an MREL ratio of 24.97% vs a requirement of 23.66%.
- **Merger with CaixaBank:** As per the plan announced by the management on the 18th of September 2020, the combined entity becomes a strong credit, in our view, on the back of: **1) strong asset quality metrics with a pro-forma** NPL ratio of 4.1% and a coverage ratio of 64%, **2) robust solvency** (CET1 of 11.6% with a buffer of 315bps), **3) significant cost synergies potentially reaching c.€770m**, **4) strong funding and liquidity position** and **5) enhanced profitability.**

Bankia main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	16.0%	14.3%	14.3%
Tier 1 ratio	17.8%	16.0%	15.9%
Total Capital ratio	20.6%	18.3%	18.1%
Leverage ratio	5.6%	5.5%	5.9%
NPL ratio	4.9%	4.9%	5.0%
NPL coverage ratio	58%	56%	54%
Cost of Risk (CoR)	81bps	73bps	26bps
LCR	191%	181%	204%
RoE	1.9%	2.2%	4.2%

Source: Company data, Credit Suisse

Key metrics CaixaBank + Bankia



Note: NPL metric is for the combined entity

Source: Company data, Credit Suisse

Additional Tier 1: **BUY CABKSM € 5.875% Perp-27**
Senior Non Preferred : **BUY CABKSM € 1.375% 2026**

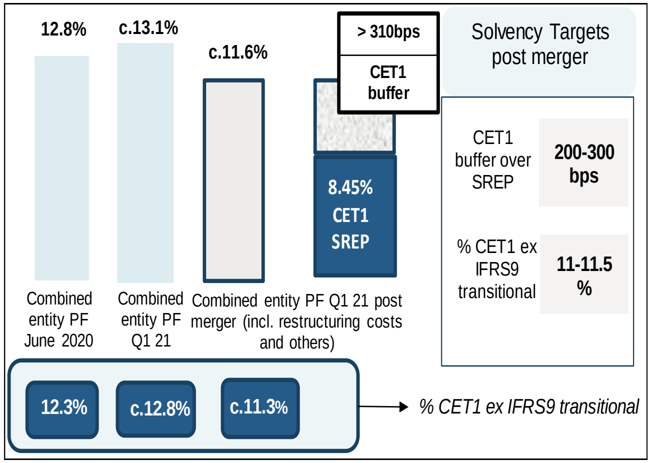
- We recommend a **BUY CABKSM € 5.875% Perp-27 AT1** out of CABKSM € 6.75% Perp-24 and we reiterate our **BUY on CABKSM € 1.375% 2026 SNP**, on the back of CaixaBank: **1) Robust solvency position** (fully loaded CET1 12.2% resulting in a Maximum Distributable Amount (MDA) buffer of 410bps); **2) Supportive issuance backdrop** with CaixaBank already meeting its MREL requirement (24.4% as of Q3 20 and subordinated MREL of 20.9% as at Q3 20); **3) Disciplined risk management** approach which led the group to reiterate the FY20 CoR guidance in the range of 60-90bps, mainly due to frontloading majority of the provisions in H1 20 (annualised Q3 20 amounted to 40bps; Q2 20 127bps while the 9M annualised CoR amounted to 84bps); **4) Sound asset quality** with an NPL ratio amounting to 3.5% as at Q3 20 and **5) A strong combined entity** as a result of the merger with Bankia.
- **Merger with Bankia:** As per the plan announced by the management on the 18th of September 2020, the combined entity becomes a strong credit, in our view, on the back of: **1) Strong asset quality metrics** (NPL ratio of 4.1%); **2) Robust solvency** (CET1 of 11.6% with a buffer of 315bps); **3) Sizeable cost synergies**; **4) Strong funding and liquidity position**, and **5) Enhanced profitability.**
- **Asset quality:** the combined entity would have a **NPL ratio of 4.1%** with a coverage ratio of 64% (post PPA adjustments).
- **With regard to loans under moratoria**, CaixaBank's management announced that developments in Q3 20 were "more positive" than forecast at the time of the Q2 20 results, with more than 90% of mortgages under moratoria already paying either in part or in full.
- **Capital Position:** the combined entity would have a fully loaded CET1 ratio of 11.3% post merger in Q1 21, with a buffer of 285bps. The phased-in CET1 ratio would amount to 11.6%, with a buffer of 315bps; both in terms of phased-in and fully loaded within or above the target range of **1)** CET1 11-11.5% and **2)** buffer of 250-300bps. Though the fully loaded CET1 ratio of the combined entity would fell from 12.8% as of June 2020 to 11.3% in Q1 21, the buffer remains within the target range of the group even after incorporating a full 50bps headwind from TRIM and another 40bps headwind from negative credit risk migration throughout FY21.
- **Cost synergies:** around €770m are expected in annual cost savings (c.€540m post-tax), as disclosed by the group during the presentation of its merger plan.

CaixaBank main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.7%	12.3%	12.0%
Tier 1 ratio	14.7%	13.8%	13.5%
Total Capital ratio	17.0%	16.0%	15.7%
Leverage ratio	5.3%	5.1%	5.9%
NPL ratio	3.5%	3.5%	3.6%
NPL coverage ratio	65%	63%	67%
Cost of Risk (CoR)	40bps	127bps	14bps
LCR	224%	198%	179%
RoE	4.2%	4.7%	6.4%

Source: Company data, Credit Suisse

Solid solvency position of CaixaBank + Bankia



Source: Company data, Credit Suisse

European Banks: Intesa Sanpaolo SpA

Additional Tier 1: **BUY ISPIM € 5.5% Perp-28;** Tier 2: **BUY ISPIM € 3.928% 2026**

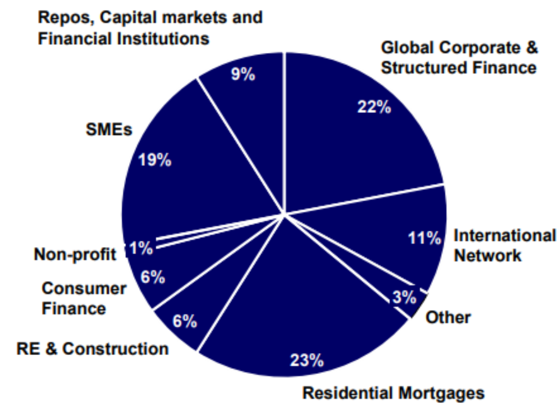
- We recommend a **BUY on ISPIM € 5.5% Perp-28 AT1; and a BUY on ISPIM € 3.928% 2026 Tier 2** on the back of Intesa Sanpaolo SpA's solid credit profile underpinned by: **1) Strong capital metrics** with a pro-forma CET1 amounting to 15.2% including the impacts linked to the acquisition of UBI Banca; **2) Disciplined risk management approach**, which led the bank to reiterate its CoR guidance for 2020 of 90bps unchanged from Q2 20, and guiding for a CoR in 2021 of 70bps, **3) Encouraging trend in asset quality**, with a NPL ratio amounting to 6.9% as at Q3 20 (5.9% pro-forma the securitisation announced in December 2020), down from 7.6% as at FYE19; and **4) Strong credit profile of the combined entity** resulting from UBI Banca integration.
- **Above peers solvency metrics:** Common Equity Tier 1 (CET1) ratio amounted to 15.2% (or 15.9% excluding the negative impact from the combination with UBI Banca, ~+100bps in Q3). The entity is committed to maintaining a CET1 ratio of 13%, when taking into account the potential cash distribution from reserves in light of the 2019 net income allocated to reserves, subject to ECB approval. In terms of distributions, the entity plans a payout ratio of 75% in 2020 and 70% in 2021 (before the updated ECB's dividend policy from the 15th of December 2020). **Intesa's loan book is skewed towards non-financial companies**, with loans to SMEs amounting to 19%, Global Corporate and Structured Finance amounting to 22%, residential mortgages amounted to 23% of the bank's total lending exposure (cf. pie chart).
- **Strong track record in improving asset quality:** The stock of NPL improved to €29.0bn (€24.6bn pro-forma) from €64.5bn in 2015; down by 55%. The stock of NPL including UBI Banca amounted to €35.6bn as at Q3 20. The NPL ratio fell to 6.9% (5.9% pro-forma) on a standalone basis, and amounts to 7.0% combined with UBI Banca.
- **With regard to cost of risk**, the bank reiterated its 2020 CoR guidance at 90bps unchanged vs Q2 20 and also confirmed the guidance for 2021 CoR at 70bps.
- **In terms of loans under moratoria**, 9% of Intesa's loan book was under moratoria as at mid-October 2020 (10% including UBI Banca). In particular, c.3% of Intesa's household loans were under moratorium, while c.7% of loans to companies were under moratorium. In terms of total volumes, this is equivalent to c.€37bn of loans (or c.€48bn when including UBI Banca). In line with peers, most of the loans under moratoria account for entreprise lending (c.73% of the total loans under moratoria in the case of Intesa).
- **Solid liquidity position**, with over €280bn in liquid assets. Intesa's Loans-to-Deposits ratio amounted to 90% as at Q3 20, and to 89% when including UBI Banca. The Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR) remained above 100% in both cases.
- **New strategic plan:** Intesa plans to release a new business plan by the end of 2021, as soon as the macroeconomic scenario becomes clearer.

Intesa Sanpaolo main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.5%	14.6%	13.9%
Tier 1 ratio	18.0%	16.5%	15.3%
Total Capital ratio	20.6%	19.2%	17.7%
Leverage ratio	6.6%	6.6%	6.7%
NPL ratio	6.9%	7.1%	7.6%
NPL coverage ratio	54%	53%	55%
Cost of Risk (CoR)	88bps	89bps	53bps
LCR	> 100%	> 100%	> 100%

Source: Company data, Credit Suisse

Intesa Loan Book (excl. UBI Banca)



Source: Company data, Credit Suisse

European Banks: Cooperatieve Rabobank UA

Additional Tier 1: **BUY RABOBK € 4.375% Perp-27**
Senior Non Preferred: **SELL RABOBK € 1.25% 2025**

- We reiterate our **BUY on RABOBK € 4.375% Perp-27 AT1** and we add a **SELL on RABOBK 1.25% 2025**, with the former still being relatively attractive despite its outperformance from September last year, while the latter trades expensive vs. peers, in our view. We do think that Cooperatieve Rabobank UA has a solid credit profile on the back of a **1) Stable business model** with a leading franchise in the food and agricultural segments; and **2) Robust capital position** with a CET1 amounting to 16.6% as at Q3 20 (CET1 target >14%); **3) Adequate asset quality**, with an NPL ratio amounting to 2.7% as at H1 20, down from 3.0% as at FYE19.
- **Relatively well positioned to cope with Covid-19 economic impacts,** with only c.5% of the bank's loan portfolio potentially highly impacted, while c.23% is expected to have a moderate impact, and c.72% of the loan book is expected to have a low impact.
- **Rabobank has a strong capital position**, in our view, with a CET1 ratio at 16.6% well above the 2022 ambition of >14%, which compares to 16.3% as at FYE19.
- **In terms of funding**, Rabobank intends to meet its MREL requirement with a combination of Own Funds, subordinated instruments and NPS only. The current MREL requirement amounts to 28.58%, while Rabobank MREL buffer amounts to 29.8%, which suggests that MREL issuance should be manageable.
- Regarding **asset quality**, overall the NPL trend improved with an NPL ratio of 2.7% vs 3% in FYE19, a further decline in volumes due to its timely execution of its NPL strategy. However, given the future uncertainties the bank expects an impact of the COVID-19 pandemic on NPL ratios, in line with the banking sector.
- **With regards to Cost of risk** (CoR), it amounted to 69bps as at H1 20 as a result of the additional provisions booked due to Covid-19 impacts, below the European average of c.90bps. This compares to 21bps as at H1 19.

Cooperative Rabobank Outlook 2022 and longer term goals

2022 ambition	June 2020	Ambitions 2022	Ambitions longer term
CET1 ratio	16.60%	>14%	>14% (FL)
Cost/Income ratio	65.30%	Low 60%	mid 50%
RoE	1.10%	6-7%	>8%

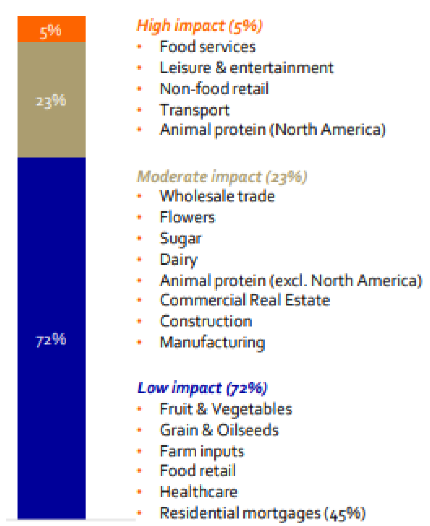
Source: Company data, Credit Suisse

Cooperative Rabobank main ratios

	H1 20	H1 19	FYE 19
CET1 ratio	16.6%	15.8%	16.3%
Tier 1 ratio	18.4%	18.4%	18.8%
Total Capital ratio	24.3%	24.4%	25.2%
Leverage ratio	5.9%	5.9%	6.3%
NPL ratio	2.7%	3.2%	3.0%
NPL coverage ratio	23%	19%	20%
Cost of Risk (CoR)	69bps	21bps	23bps
LCR	160%	124%	132%
RoE	1.1%	5.9%	5.3%

Source: Company data, Credit Suisse

Exposure to Covid-19 sensitive sectors



Source: Company data, Credit Suisse

European Banks: Banco Santander SA

Additional Tier 1: **BUY SANTAN € 4.75% Perp-25**

Senior Holdco: **SELL SANTAN € 1.375% 2026** and **BUY SANUK £ 2.92% 2026-2025**

- We recommend a **BUY on SANTAN € 4.75% Perp-25 AT1 out of SANTAN € 5.25% Perp-23, a SELL on SANTAN € 1.375% 2026 SNP and a BUY on SANUK £ 2.92% 2026-2025 HoldCo**. Overall, we remain constructive on Banco Santander SA on the back of: **1) An adequate solvency position with a CET1 ratio amounting to** 11.98%, in the upper-end of its target 11-12% target, or c.312bps above requirements; and **2) A strong geographic diversification** with a good balance between developed and emerging markets (cf. pie chart); and **3) A strong liquidity profile**, with an LCR amounting to 171% and an NSFR at 117%.
- **With regard to Cost of Risk,** in Q3 20, new loan loss provisions amounted to €2,535m vs Bloomberg consensus at €3,299m. In addition, Santander improved its CoR guidance to 130bps from 140-150bps for 2020.
- **Regarding asset quality**, the **NPL ratio** improved to 3.15% from 3.26% in H1 20 with a coverage ratio amounting to 76.0% (72.0% H1 20).
- **Loans under moratoria**, amounted to €114bn, or 13.0% of the loan book. Out of the total loans under moratoria, c.€75bn have already expired, and just 2% of them migrated into stage 3, which suggests an encouraging trend in our view.
- **Well diversified geographically** (cf. graph right) **and across business segments.** Revenue breakdown: **1) Retail Banking** €9,226m; up 7.6% QoQ, **2) Corporate and investment banking** €1,397m; up 2.4% QoQ and **3) Wealth management and insurance** €498m; up 5.9% QoQ.
- **With regard to liquidity and funding,** the Liquidity Coverage Ratio (LCR) amounted to 171.0% (FY19: 147.0%) and the Net Stable Funding Ratio (NSFR) remained at 117.0% as at June 2020. The estimated TLAC ratio amounted to 23.2% of RWA in Q3 20, vs 23.1% in H1 20.
- With regards to **consolidation**, on the 17th November 2020, Banco Santander Chairperson stated, as reported by Bloomberg, that the bank was not planning to participate in traditional bank consolidation and it was instead **considering to expand its digital platform**.

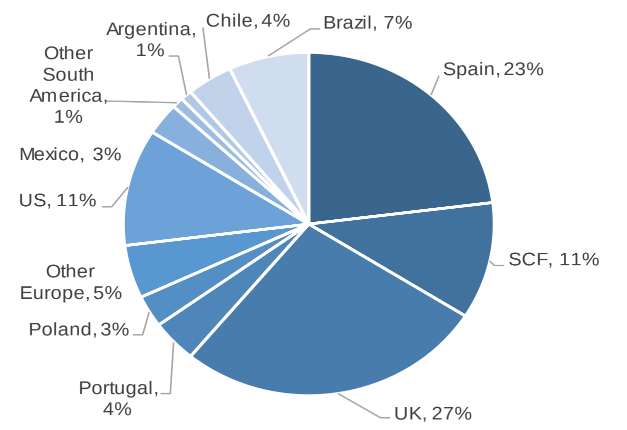
- **Santander UK plc has a strong credit profile**, in our view. We consider that Santander UK's **loan portfolio is conservative** with c.80% being prime retail mortgage with an average LTV of 43%. The total loan book amounted to £209.3bn, while the corporate lending amounted to just £28.6bn or c.14% of the total loan book. Santander UK had a strong solvency position, with a CET1 ratio at 14.4% and an UK leverage ratio of 4.9%.

Banco Santander main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.0%	11.8%	11.7%
Tier 1 ratio	13.6%	13.5%	13.1%
Total Capital ratio	15.6%	15.5%	15.1%
Leverage ratio	5.2%	4.8%	5.1%
NPL ratio	3.2%	3.3%	3.3%
NPL coverage ratio	76%	72%	68%
Cost of Risk (CoR)	127bps	126bps	100bps
LCR	171%	175%	163%
RoE	8.5%	-7.1%	6.6%

Source: Company data, Credit Suisse

Loan Portfolio split by geography



Source: Company data, Credit Suisse

Additional Tier 1: **BUY UCGIM € 7.5% Perp-26**
Senior Non Preferred: **BUY UCGIM € 2.2% 2027-2026**

- We reiterate our BUYs on UniCredit SpA's 7.5% Perp-26 AT1 and € 2.2% 2027-2026 SNP, despite both outperforming since September, mainly driven by UniCredit's **1) Disciplined risk management** and with Cost of Risk guidance confirmed at c.100-120bps for 2020; **2) Solid capital metrics** with CET1 ratio amounting to 15.2%; **3) Supportive issuance backdrop with** UniCredit being already compliant with MREL transitional targets; and **4) Commitment to deliver the targets** of UniCredit's strategic plan "Team 23". We reiterated our positive stance on UniCredit in our Trade note dated the 15th of September 2020.
- **Risk Management:** The NPE ratio amounted to 4.7% or €22.7bn in Q3 20, from an NPE ratio of 16.0% or c.€77.8bn in 2015 and NPE ratio of 6.1% or c.€28.8bn in Q3 19. UniCredit's disciplined risk management was also demonstrated with the Non-Core rundown being confirmed by year-end 2021 (€5.9bn as at Q3 20, €7.9bn as at Q2 20, <€4.3bn 2020 target, also in May 2018 the rundown was brought forward to 2021 from 2025).
- **The CoR guidance provided** on the 22nd of April 2020 was reiterated on the 6th of August 2020 and confirmed at 100-120bps again on the 5th of November 2020 (63bps as at Q3 20, 77bps as at Q2 20, 104bps as at Q1 20), with the group also confirming the guidance for 2021 at the bottom-end of the 70-90bps range.
- **Capital Metrics:** the fully-loaded CET1 ratio amounted to 14.41% in Q3 20 (13.85% as at Q2 20) leading to a Maximum Distributable Amount (MDA) buffer of 538bps vs the management target of 200-250bps. The group confirmed that MDA buffer will remain above 300bps for 2020 and 2021.
- **Supportive issuance backdrop** following the completion of its 2020 TLAC funding plan, with a transitional TLAC ratio of 24.90% (or 22.40% excl. the 2.5% senior preferred allowance vs. a 2023 expected requirement >21.6%), resulting in a TLAC buffer of 648bps as at Q3 20 and 534bps as at Q2 20, above the target range of 50-100bps.
- **The group is on track to meet the FY20 underlying net profit target of c.€800m** and confirmed the 2021 target of €3-€3.5bn. UniCredit's overall performance remained solid in Q3 20, with a net profit amounting to €680m (company compiled consensus of €334m); up by 62% QoQ. This resulted in an RoTE amounting to 5.3% vs 3.3% in Q2 20.

UniCredit main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.2%	14.5%	13.2%
Tier 1 ratio	17.3%	16.6%	14.9%
Total Capital ratio	19.9%	19.4%	17.7%
Leverage ratio	5.7%	5.6%	5.5%
NPL ratio	4.7%	4.8%	5.0%
NPL coverage ratio	61%	63%	65%
Cost of Risk (CoR)	63bps	77bps	71bps
LCR	183%	143%	145%
RoTE	5.3%	3.3%	6.7%

Source: Company data, Credit Suisse

Commitment to deliver Team 23 targets

	FY'23	FY'20	9M 20	
Gross NPE ratio	< 3.8%	5.0%	**4.7%**	√
Costs (€ bn)	10.2	10.2	**7.3**	**on track**
CET MDA Buffer (bps)	200-250		**538**	√
RoTE	> 8.0%	8.0%	**5.3%**	**on track**
Tangible Equity (€ bn)	60	53	**51**	**on track**

Source: Company data, Credit Suisse

European Banks: Banco Bilbao Vizcaya Argentaria SA

Additional Tier 1: **SELL BBVASM € 6.0% Perp-26;** Tier 2: **SELL BBVASM € 1.0% 2030-2025**

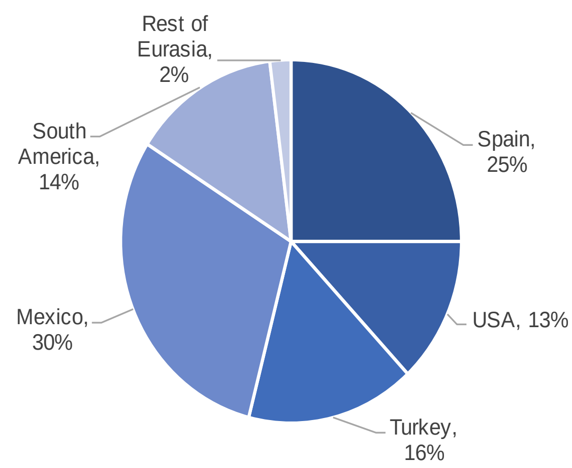
- Banco Bilbao Vizcaya Argentaria SA (BBVA) has an adequate credit profile, in our view. However, we recommend a **SELL on BBVASM € 6.0% Perp-26** and also a SELL on **BBVASM € 1.0% 2030-2025 Tier 2** on the back of its relative **expensive valuation versus peers, based on its risk profile**. In our view, BBVA has **1) A strong capital level** on the back of the sale of its US business to PNC; **2) A resilient asset quality**, with an NPL ratio stable QoQ at 3.8% (FYE19: 3.8%) and a coverage ratio of 85%; **3) A robust liquidity profile**, with an LCR ratio amounting to 159% (129% FYE19) and an NSFR to 127%. Nonetheless, this is offset by a **significant exposure to Emerging Markets**, especially after the disposal of the US subsidiary. Mexico and Turkey together accounted for 64% of the business net profit in 9M 20.
- **Cost of Risk (CoR):** loan provisions in Q3 20 declined to €928m compared with €1,571m in Q2 20 resulting in a YtD CoR of 169bps (vs 204bps in Q2 20). BBVA expects provisions to progressively converge towards normalised levels, leading to an improvement on its CoR FYE20 guidance to 150-160bps.
- **Exit from US**, on 16th November 2020, BBVA announced the sale of its US subsidiary to The PNC Financial Services Group, Inc. (PNC) for **€9.7bn ($11.6bn) in cash**, hence reinforcing significantly the group's capital position.
- **Strong capital position:** BBVA expects a c.294bps positive impact on its CET FL ratio as a result of the sale of its US subsidiary, leading to a pro-forma ratio of c.14.46% vs (Q3 20: 11.52%) with a MDA buffer of c.340bps. In particular, BBVA's CET1 capital amounted to €39.7bn as at Q3 20, increasing to €41.7bn pro-forma (+€0.6bn capital gains and +€1.5bn linked to deconsolidation of goodwill and other intangibles, tax losses carried forward and impact of other comprehensive income).
- **Potential M&A and capital distribution:** We do think that after the capital surplus as a result of the sale of its US subsidiary, BBVA will keep its options open to deploy capital in its core markets and to increase distributions to shareholders. Therefore, we do not expect the current above-peers solvency metrics to remain.
- **Termination of M&A discussions with Banco de Sabadell,** on the 27th November 2020: BBVA in a press release declared that the conversations in relation to a potential merger transaction with Banco de Sabadell came to an end **without having reached an agreement.**
- **The banks' exposure to Emerging Markets is high**. As as 9M 20, before the disposal of its US subsidiary, the gross income breakdown was as follows: **i)** Mexico 30%, **ii)** Turkey 16%, **iii)** South America 14%, **iv)** Spain 25%, **v)** US 13%, and **vi)** Others 2%.

BBVA main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.0%	11.6%	12.0%
Tier 1 ratio	14.0%	13.3%	13.6%
Total Capital ratio	16.0%	15.9%	15.9%
Leverage ratio	6.4%	6.1%	6.7%
NPL ratio	3.8%	3.7%	3.8%
NPL coverage ratio	85%	85%	77%
Cost of Risk (CoR)	97bps	151bps	102bps
LCR	159%	159%	129%
RoE	6.1%	4.1%	9.9%

Source: Company data, Credit Suisse

9M 20 Gross Income Breakdown (€17.6bn)



Source: Company data, Credit Suisse

European Banks: Barclays Plc

Additional Tier 1: **BACR $ 7.75% Perp-23**

Senior Non Preferred / Holdco: **BUY BACR £ 3.0% 2026**

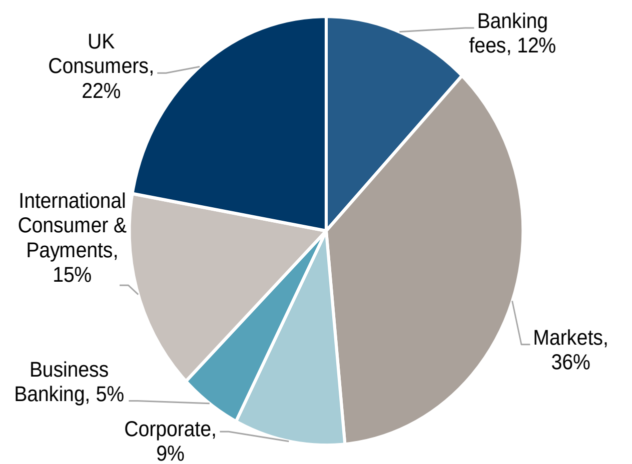
- We recommend a BUY on Barclays Plc which has an attractive relative value in our view, mainly driven by Barclays' **1) Well diversified earnings mix** with the strong Corporate and Investment Bank (CIB) performance helping to offset recent income headwinds in the consumer businesses while net interest income accounted for only 37% of total income, offsetting some of the rates environment headwind; **2) A resilient profitability** with a disclosed RoTE of 3.8% for the first nine months of 2020; **3)** A **contained loan loss rate deterioration**, despite being above the European average, with the cost of risk amounting to 164bps in the first nine months of 2020, with Consumer, Cards and payments accounting for 34% of the group's impairment charge
- **As regards its capital position**, Barclays' CET1 ratio improved by 40bps QoQ to 14.6%, while the UK spot leverage ratio amounted to 5.2%.
- **With regard to liquidity position**, Barclays' liquidity coverage ratio (LCR) amounted to 181%, above the European weighted average of 165.7% as at Q2 20 based on EBA data. Barclays' liquidity pool amounted to £327bn or 23% of the group's balance sheet. Barclays' loan to deposit ratio amounted to a strong 70% which compares to .European weighted average of 116.1% as at Q2 20, based on EBA data
- As regards **Q3 20 results**, Barclays reported ahead of expectations net profit of £611m (company-compiled estimate £201m), up c.7x QoQ (Q2 20: £90m), mainly due to a c.63% QoQ decrease in loan loss provisions amounting to £608m (CoR of 69bps vs 179bps in Q2 20). This resulted in an improved RoTE amounting to 5.1% vs 0.7% in Q2 20. The bank reported a PBT (ex. litigation & conduct charges) of £1,223m (company-compiled consensus £507m). CIB PBT was £1,003m (ex. L&C) vs. the company-compiled consensus of £580m. In particular, **i)** FICC trading amounted to £1,000m (company-compiled consensus £858m); up by 23% YoY (US peers +25%) led by credit and **ii)** Equity trading amounted to £691m (company-compiled consensus £518m); up by 50% YoY (US peers +15%) driven by derivatives. Cards, Consumers & Payments (CC&P) PBT amounted to £190m (ex. L&C) versus company-compiled consensus loss of £50m with revenue down 23% YoY but up 26% versus Q2 driven by a US spend recovery and increased merchant acquiring turnover. Barclays UK PBT was £221m (ex. L&C) versus company-compiled consensus of £148m
- **Looking ahead**, Barclays expects the **H2 20 impairment charge to be materially** below that of H1 20 and it is likely that the full year 2021 impairment charge will be below that of 2020..
- **With to respect its MREL issuance plan**, Barclays disclosed an MREL ratio of 32.8% vs a requirement of 29.9% to be implemented by January 2022.

Barclays main ratio

	Q3 20	Q2 20	FYE 19
CET1 ratio	14.6%	14.2%	13.8%
Tier 1 ratio	18.7%	17.8%	17.6%
Total Capital ratio	22.5%	21.7%	21.6%
Leverage ratio	5.2%	5.2%	5.1%
NPL ratio	2.5%	2.5%	1.8%
NPL coverage ratio	45%	44%	41%
Cost of Risk (CoR)	69bps	179bps	54bps
LCR	181%	186%	160%
RoTE	5.1%	0.7%	5.9%

Source: Company data, Credit Suisse

Split of Q3 20 YTD group income by customer



Source: Company data, Credit Suisse

European Banks: Deutsche Bank AG

Additional Tier 1: **BUY DB $ 7.5% Perp-25;** Tier 2: **BUY DB € 4.5% 2026**
Senior Non Preferred / Holdco: **BUY DB € 2.625% 2026**

- We recommend a BUY on Deutsche Bank AG across the capital structure, driven by Deutsche Bank's **1) Successful restructuring** with 11th consecutive quarter of YoY cost reductions and €3.3bn in adjusted cost reduction while the Capital Release Unit RWAs reduction was on target at €39bn (2020 target €38bn); **2) Adequate capital position** with a Common Equity Tier 1 ratio of 13.3% (target >12.5%) and a fully-loaded leverage ratio of 4.4% (target 4.5%) as at Q3 20; **3) Strong asset quality** with a provision for credit losses of 47bps (2020 target 35-45bps), half the European average expected for 2020 **4) Sound liquidity** with an LCR of 151% as at Q3 20, liquidity reserves of €253bn and a Loans to Deposit ratio of 75.3%.
- This is partially offset by the fact Deutsche Bank **needs to deliver a sustainable profitability** going forward with the company-compiled consensus expecting a RoTE of 3.5% by 2022 when management targets 8% or a profit of €4.5bn
- **As regards capital,** Deutsche Bank CET1 ratio remained stable QoQ at 13.3% (company-compiled consensus 13.1%. The leverage ratio increased by 20bps QoQ to 4.5%.
- **With respect to asset quality**, the NPE ratio remained quite stable at 1.5% QoQ with 50bps increase in the coverage ratio amounting to 33.5%. Deutsche bank has a high quality of loan book and the CoR for Q3 20 amounted to 25bps (69bps Q2 20, 44bps Q1 20, 17bps FY19). Regarding the exposure at default (EaD), amounting to €474bn, 56% belong to the investment grade.
- **With regard to profitability,** Deutsche Bank's overall performance was strong and **ahead of market expectations,** with a PBT of €482m (company-compiled consensus €428m); up QoQ, mainly driven by profit growth in the Core Bank, together with lower losses in the Capital Release Unit. Net profit after AT1 costs was €182m vs. a company-compiled consensus of -€120m, with an annualised RoTE of 1.3% in Q3 20.
- **Net revenues** split across segments: **i) Corporate Bank**: €1,254m (Q2 20: €1,336m, company-compiled estimate €1,301m) o/w Global Transaction bank: €893m (Q2 20: €969m) and Commercial Banking: €361m (Q2 20: €367m); **ii) Investment Banking**: €2,365m (Q2 20: €2,678m, company-compiled estimate €1,962m) o/w Fixed income and Currency (FIC): €1,802m (Q2 20: €1,200m, company-compiled estimate €1,455m); Origination & Advisory: €755m (Q2 20: €751m, company-compiled consensus €522m) and Others: €213m (Q2 20: €187m); **iii) Private Bank**: €2,033m (Q2 20: €1,951m, company-compiled estimate €1,969m); **iv) Asset Management:** €563m (Q2 20: €549m, company-compiled estimate €547m); **v) Corporate and others**: €-240m (Q2 20: €-160m, company-compiled estimate €-26m) and **vi) Capital release unit:** €-36m (Q2 20: €-66m, company-compiled estimate €-150m).

Deutsche Bank main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	13.3%	13.3%	13.6%
Tier 1 ratio	15.4%	15.3%	15.6%
Total Capital ratio	17.6%	17.5%	17.4%
Leverage ratio	4.5%	4.3%	4.3%
NPL ratio	1.5%	1.4%	1.1%
NPL coverage ratio	33%	33%	40%
Cost of Risk (CoR)	25bps	69bps	17bps
LCR	151%	144%	141%
RoE	1.3%	-0.6%	-9.5%

Source: Company data, Credit Suisse

Financial targets for FY20 and FY22 and progress

	FY20	FY22	9M20	
Adjusted costs	€19.5bn	€16.7bn	**€14.9bn**	**on track**
LLP (€ bn) / CoR (bps)	35-45bps	€1.2bn	**47bps**	√
Leverage ratio	4.5%	c.4.5%	**4.4%**	**on track**
CET1 ratio	atleast 12.5%	> 12.5%	**13.3%**	√
Capital release unit RWA	€38bn	-	**€39bn**	**on track**
RoTE	-	8%	**6%**	**on track**
Cost/Income ratio	-	70%	**87.2%**	**-**

Source: Company data, Credit Suisse

European Banks: HSBC Holdings Plc

Additional Tier 1: **BUY HSBC $ 6.375% Perp-25**
Senior Non-Preferred/ HoldCo: **BUY HSBC £ 2.256% 2026-2025**

- In our view, HSBC Holdings Plc trades relatively attractive based on **1)** An **expected reduction in trade tensions** between the US and China; **2)** A **well above average profitability** with a disclosed RoTE of 4.9% in 9M 20 despite the COVID; **3)** A **well diversified business mix** across segments and geographies with Wealth and Personal Banking (WPB) accounting for 43% of 9M 20 revenues, Global Banking and Markets (GBM) for 31% and Commercial Banking for 26%; **4) Sound credit fundamentals** with an above average CET1 ratio and in line with average leverage ratio; and **5)** A **widespread restructuring** for which HSBC already expects to beat its previous guidance on costs and RWAs reduction.
- **With respect to capital ratios,** HSBC has a strong capital position, with a phased in CET1 ratio of 15.6% and fully loaded CET1 ratio of 15.4%; above the medium term target of 14-14.5% and up 60bps and 40bps QoQ, respectively. The leverage ratio amounted to 5.4%.
- HSBC reported Q3 20 results, **ahead of market expectation,** with a net profit of $1,359m (company-compiled consensus $882m), mainly driven by **1)** Much lower than forecast expected credit losses (ECL) amounting to $785m (company-compiled consensus $2,018m) and **2)** a 7% QoQ decrease in operating expenses amounting to $8,041m. The reduction in ECL, reflecting a stabilization in the forward economic outlook from Q2 20, led to an improved cost of risk of 30bps vs 149bps in Q2 20. HSBC confirmed the ECL guidance for 2020 to be at the lower end of $8-13bn and provided an ECL guidance for 2021 in the range of $4-6.1bn.

HSBC main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.6%	15.0%	14.7%
Tier 1 ratio	18.4%	17.8%	17.6%
Total Capital ratio	21.2%	20.7%	20.4%
Leverage ratio	5.4%	5.3%	5.3%
NPL ratio	0.8%	0.7%	0.6%
NPL coverage ratio	36%	37%	36%
Cost of Risk (CoR)	30bps	149bps	27bps
LCR	147%	148%	150%
RoE	3.2%	0.5%	3.6%

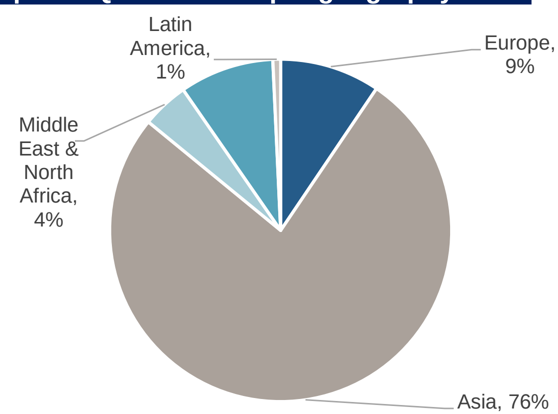
Source: Company data, Credit Suisse

Commitment to deliver 2020-2022 targets

	FY'22	FY'20E	9M 20	
RWA reduction	> $100bn	c.$50bn	**$41bn**	**on track**
Adjusted costs	< $31bn	-	**$22.4bn**	**on track**
Cost programme save	c.$4.5bn	$1bn	**$0.6bn**	**on track**
CET1 ratio	14-14.5%	15.0%	**15.6%**	**on track**
RoE	10-12%	-	**3.2%**	**-**

Source: Company data, Credit Suisse

Split of Q3 20 PBT as per geography



- **As regards its 2020-2022 financial targets,** HSBC expects to reduce the group's 2022 annual cost base beyond the original $31bn target, by exceeding the $4.5bn gross cost savings target. HSBC also expects to exceed its $100bn gross risk-weighted asset ('RWA') reduction target by the end of 2022. This is expected to allow more resources to be allocated to areas of competitive advantage, higher returns and growth.

European Banks: ING Groep NV

Additional Tier 1: **BUY INTNED $ 5.75% Perp-26;** Senior Holdco: **SELL INTNED € 2% 2028**

- We remain constructive on ING Groep NV, as described in our IG Trade of the Week mainly driven by its **1) Robust capital position** with a Common Equity Tier 1 (CET1) ratio above average at 15.3%, up 30bps quarter-on-quarter (QoQ) and c.280bps above its 12.5% ambition, providing a solid 480bps buffer over regulatory requirements. The leverage ratio amounted to 4.7% above its target at >4%; **2) Resilient pre-provision profit** (PPP) of €2,014m in Q3 20, excluding volatile items (€2,143m Q2 20, €2,329m Q1 20, €2,198m Q2 19); **3)** Expectation that its **Cost of Risk (CoR) will decline in H2 20** vs. 9M 20 when its CoR amounted to 53bps (H1 20: 64 bps; Q3 20: 30bps; Q1 20: 42bps, Q2 20: 85bps, cf. Credits on the Move publication dated the 7th of September) and **4) Robust funding structure** with High Quality Liquid Assets (HQLA) amounting to €141bn as at Q3 20 (Q2 20: €137.5bn; Q1 20: €135.6bn), a Liquidity Coverage Ratio (LCR) of 132% (Q2 20: 130%) and a disclosed loan-to-deposit ratio of 99% (Q2 20: 102%). Therefore we recommend a **BUY on INTNED $ 5.75% Perp-26, switching out of INTNED $ 6.5% Perp-25 AT1**, which outperformed since September 2020, while we also reiterate our **SELL on INTNED € 2% 2028 Senior HoldCo**, even though this security already underperformed the broader Credit Suisse € SNP index.
- ING appeared **in various reports during 2019 as contemplating a potential merger with Commerzbank AG**, before the German press (Handelsblatt in June 2019) reported that ING "lost interest" in such a transaction. While we believe that crossborder Mergers & Acquisitions (M&A) will materialize in due course, we are also cognizant of the facts that a number of hurdles hinder this process in the short-term (cf. Association for Financial Markets in Europe or AFME's Consultation response dated 1st of October).

ING Groep main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.3%	15.0%	14.6%
Tier 1 ratio	17.2%	16.9%	16.7%
Total Capital ratio	20.0%	19.6%	19.1%
Leverage ratio	4.7%	4.3%	4.6%
NPL ratio	1.7%	1.6%	1.4%
NPL coverage ratio	31%	31%	32%
Cost of Risk (CoR)	30bps	85bps	18bps
LCR	132%	127%	127%
RoE	6.0%	2.3%	9.4%

Source: Company data, Credit Suisse

ING Targets

Financial Ambitions		Actual 2019	Q3 20	Target
Capital	CET1 ratio	14.6%	15.3%	**above 12.5% (Basel IV) (earlier 13.5%)**
	Leverage ratio	4.6%	4.7%	**>4%**
Capital	RoE (IFRS-EU Equity)	9.4%	5.1%	**10-12%**
	Cost/Income ratio	56.6%	60.9%	**50-52%**
Dividend	Dividend (per share)	€0.24 (interim dividend 2019)	-	**50% pay-out ratio**

Source: Company data, Credit Suisse

Compliance issues have been addressed

While we acknowledge that in 2018 ING Groep NV was negatively impacted by **shortcomings in the area of know your customer (KYC)**, ING took measures to enhance its compliance culture and capabilities. This included enhancing its KYC files where necessary and working on various structural improvements in its compliance policies, tooling, monitoring and governance. Consequently, we do not see KYC-related issues as a spread mover going forward.

Additional Tier 1: **BUY SEB $ 5.125% Perp-25**

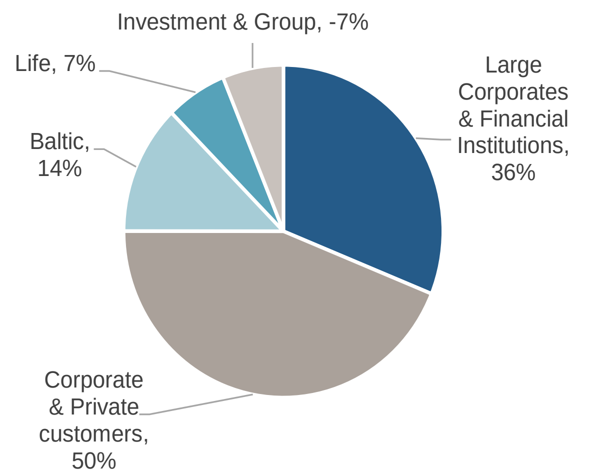
- We recommend a BUY on SEB $ 5.125% Perp-25 AT1, which trades retaltively attractive in our view, based on SEB's **1) Strong capital ratios** with a Common Equity Tier 1 ratio of 19.4% as at end September 2020; **2) Sound organic capital accretion** with an underlying capital generation amounting to 2.2% as a % of risk exposure amount in the last twelve months, supported by an above average RoE of 8.8% in the first nine months of 2020; **3) A sound balance sheet** with an extremely contained deterioration in the cost of risk with the net expected credit loss level reaching only 30bps and **4) A manageable anti-money laundering outcome** based on SEB's good profitability and capital levels.
- **As regards capital,** SEB reported strong capital ratios with its CET1 ratio improving to 19.4% with a Maximum Distributable Amount buffer of 570bps (410bps Q2 20), very much above the target buffer of 150bps. The capital base & MREL eligible debt ratio amounted to a high 38.7%; above the minimum requirement of 29.9%, with a buffer of 880bps. The leverage ratio was adequate at 4.6%. SEB also benefits from a **strong underlying capital generation** with a return on risk exposure amount amounting to 2.2% in the last 12 months (2.7% 2019; 3.7% 2018; 2.6% 2017; 1.8% 2016 and 3.0% 2015).
- **Regarding SEB's loan book,** the corporate credit portfolio amounted to Skr1,368bn, skewed more towards Large Corporations & Financial institutions. Regarding the Swedish households mortgages, the average Loans to value amounted to 53.9%. No mortgage lending has a LTV greater than 85%.
- **SEB reported Q3 20 results ahead of market expectations,** with net profit up by 40% QoQ, to Skr4,766m (Bloomberg consensus estimate Skr4,488m), mainly due to 59% QoQ decrease in expect credit losses (ECL) corresponding to a net credit loss level of 19bps. This led to an increased RoE amounting to 11.7%. The YTD ECL amounted to Skr5.3bn (Skr1.1bn Q3 20; Skr2.7bn Q2 20 and Skr1.5bn Q1 20). The bank reiterated its 2020 guidance cost of risk to be below Skr6bn (consensus Skr6.2bn) and its 2021 cost target of Skr23.2bn (current consensus Skr23.3bn).
- **SEB provided the following financial targets: i)** Long term aspiration of a 15% RoE; ; **ii)** c.150bps of CET1 ratio above minimum requirement and **iii)** Dividend pay-out > 40% of EPS.
- **With respect to anti-money laundering (AML),** while SEB included in its Q3 report that it "has received requests from authorities... including US authorities to provide information concerning measures against money laundering", management insisted this was not incremental information from the previous comment provided in Q2 20. Specifically, management differentiates between "ongoing dialogue" and a "sanctions process." To its knowledge it is not involved in a "sanctions process" by the US authorities and as such the new disclosure is entirely consistent with its messages as of Q2 20.

SEB main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	19.4%	17.8%	17.6%
Tier 1 ratio	21.2%	19.7%	20.8%
Total Capital ratio	23.7%	22.2%	23.3%
Leverage ratio	4.6%	4.3%	5.1%
NPL ratio	1.0%	0.9%	0.7%
Cost of Risk (CoR)	19bps	46bps	10bps
LCR	139%	138%	218%
RoE	11.7%	8.7%	13.8%

Source: Company data, Credit Suisse

Operating Profit (9M 20) split across segments



Source: Company data, Credit Suisse

European Banks: BNP Paribas SA

Additional Tier 1: **SELL BNP $ 4.5% Perp-30**
Senior Non Preferred: **BUY BNP € 1.125% 2029-2028**

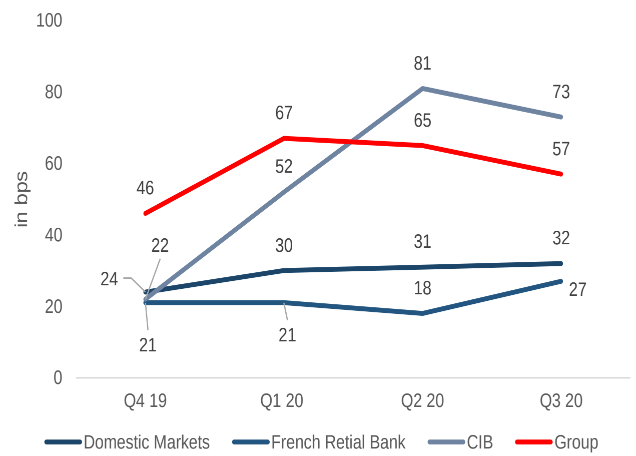
- We recommend a **SELL on BNP $ 4.5% Perp-30 AT1, with this low back-end security now being fully valued in our view**. In April 2020, we recommended a BUY on this security in April sector Preferences & Top Trade Ideas and we subsequently took profit on it in our September Sector Preferences & Top Trade Ideas, after its outperformance. However, regarding the Senior Non-Preferred asset class, we do see value and we reiterate our BUY on **BNP € 1.125% 2029-2028, after broadly performing in line with the Credit Suisse € SNP sub-index**.
- BNP Paribas SA has a solid credit profile in our view, given its **1) Cost of Risk (CoR) remained benign** during 2020, amounting to 57bps as at Q3 20, and within its target of 40-60bps for FYE20; **2) Strong asset quality metrics**, with the NPL ratio unchanged at 2.2% from FYE19 and an NPL coverage ratio amounting to 71%; **3) Solid capital metrics**, with a CET1 ratio amounting to 12.6% and leverage ratio amounting to 4.4% as at Q3 20 and **4) Resilient and diversified business model**, with revenues supported in Q3 20 by the strong performance in BNP's CIB division
- **BNP's business model is well diversified, in our view.** Revenue split as: **1)** Domestic markets €3,867m (Q2 20: €3,721m); up by 3.9%, **2)** International Financial Services €3,943m (Q2 20: €4,027m); and **3)** Corporate & Institutional Banking (CIB) €3,372m (Q2 20: €4,123m).
- BNP maintains a **disciplined risk approach with regard to its loan book**, which is reflected in the bank's CoR at 57bps in Q3 20 (Q2 20: 65bps, Q1 20: 67bps). The current levels are within BNP's estimates of c.40-60bps for FYE20. BNP also expects CoR in 2021 to be below the FYE20 levels.
- **Robust asset quality**, with an NPL ratio amounting to 2.2% in Q3 20, unchanged vs FYE19. The NPL coverage ratio amounted 71% in Q3 20, broadly unchanged vs. H1 20 and FYE19.
- **Strong capital metrics**, with a CET1 ratio amounting to 12.6% and also above BNP's 2020 ambition of c.12%. Regarding the potential for a 2019 catch-up dividend, BNP noted that it does not intend to retain excess capital. The bank also guided that the potential for a buyback could be considered in the future. Leverage ratio amounted to 4.4%.
- Lastly, the **bank reiterated its 2020 profit guidance**, where the bank expects a limited impact on as a result of second lockdowns.
- **As regards SNP issuance**, BNP's TLAC ratio was 23.8% vs. a requirement of 20.02% with €51bn in SNP outstanding and after having issued €13.2bn in 2020

BNP main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.6%	12.4%	12.1%
Tier 1 ratio	14.1%	13.9%	13.5%
Total Capital ratio	16.3%	15.9%	15.5%
Leverage ratio	4.4%	4.0%	4.6%
NPL ratio	2.2%	2.2%	2.2%
NPL coverage ratio	71%	72%	74%
Cost of Risk (CoR)	57bps	65bps	39bps
LCR	147%	133%	121%
RoE	7.3%	7.7%	8.5%

Source: Company data, Credit Suisse

Cost of Risk by business line



Source: Company data, Credit Suisse

European Banks: Commerzbank AG

Additional Tier 1: **SELL CMZB $ 7.0% Perp-25**

- We recommend a SELL on CMZB $ 7.0% Perp-25 AT1 which does not particularly trade attractive on a relative value basis in our view on two main grounds, **1)** A **structurally weak profitability** with Commerzbank being expected to report a net loss of based on the company-compiled average consensus of €323m in 2020 and €111m in 2021 while most banks are expected to be profitable in 2021. Also, Commerzbank's Return on Tangible Equity (RoTE) is forecast to reach only 2.5% in 2022, based on the company-compiled consensus. This compares to an weighted average return on equity of 5.7% in Q9 19, based on EIOPA data and **2)** In turn, this means that Commerzbank has **one of the lowest cost of risk break-even point** in Europe (cf. Credits on the Move dated 1st of June, EU Banks Q1 20 results: Focus on cost of risk and capital). As matter of fact, despite the fact is guiding for a cost of risk below the European average of c.90bps for this year, at only 48-55bps. Despite this below average cost of risk, Commerzbank is expected to be loss making this year
- This partially offset by the fact hat Commerzbank has **1) Adequate but below average CET1 and leverage ratios** and **2) Strong and better than average asset quality**.
- However, in our opinion, based on Commerzbank's weak structural profitability and much lower than average cost of risk break-even point, **CMZB $ 7.0% Perp-25 AT1 does not offer compelling attractive value vs. stronger peers** such as Danske Bank A/S or Skandinaviska Enskilda Banken AB Perp-25 AT1 $ securities, for instance.
- **With regard to capital**, Commerzbank is **adequately capitalized** with a CET1 ratio of 13.5% vs. a CET1 ratio target of 13.0%, **but it is below the European weighted average** of 14.7% as at Q2 20 based on EIOPA data. The leverage ratio amounted to 4.9%, and was also below the European weighted average of 5.3% as at Q2 20 based on EIOPA data.
- **With respect to asset quality, Commerzbank reported a strong and better than the European average** NPE ratio of 0.9% (weighted European average 2.5% as at end June based on EIOPA data). The stock of NPE amounted to €4.7bn, split as €2.3bn Corporate Clients, €2.0bn Private and small business customers and €0.4bn Others and Consolidation). Regarding the exposure at default (EaD), the Travel sector amounted to only 0.9% of the portfolio, with 33% of portfolio investment grade and Oil & Gas exposure amounted to only 1.1% of the total exposure with 78% investment grade.
- With its Q3 20 results, **Commerzbank reported lower loan loss provisions than expected**, at €272m in Q3 20 (company compiled consensus of €303m), and included a €181m provision for the COVID impact, of which €111m related to single cases and €70m was a top-level adjustment. **Commerzbank reiterated its 2020 risk result guidance of €1.3-1.5bn, resulting in a cost of risk of 48-55bps.**

Commerzbank main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	13.5%	13.4%	13.4%
Tier 1 ratio	15.3%	14.8%	14.3%
Total Capital ratio	18.0%	17.6%	16.8%
Leverage ratio	4.9%	4.8%	5.1%
NPL ratio	0.9%	0.8%	0.9%
NPL coverage ratio	70%	73%	73%
Cost of Risk (CoR)	53bps	58bps	14bps
LCR	130%	127%	135%
Net RoTE	-1.6%	3.2%	2.5%

Source: Company data, Credit Suisse

Financial Targets for FY20

	FY20	previous guidance
Revenue growth YoY	**largely supported revenue in PSBC-CC more strongly impacted by coronavirus**	largely stable revenue in core customer business
Absolute Cost base	**slightly below last year level**	at last year level
Risk result	**–€1.3bn to –€1.5bn (CoR 48-55bps)**	–€1.0bn to -€1.4bn
Net result	**negative net result**	no formal guidance
CET1 ratio	**≥ 13%**	≥ 12.5%

Source: Company data, Credit Suisse

European Banks: Nordea Bank Abp

Additional Tier 1: **SELL NDASS $ 6.125% Perp-24**

- While we acknowledge that Nordea Bank Abp has an **overall strong credit profile**, we recommend a **SELL on NDASS $ 6.125% Perp-24 AT1** after its outperformance vs. the Credit Suisse CoCo $ index in 2020. Indeed, this security trades through the average of the Credit Suisse CoCo $ index, despite being a **low back-end security**.
- Overall, **Nordea's credit profile reflects: 1)** Strong capital metrics with a CET1 ratio amounting to 16.4%; **2)** Resilient asset quality and reassuring Cost of Risk outlook with a guidance of CoR below c.41bps for FYE20; and **3)** Well diversified loan book with limited exposure to Covid-19 most impacted sectors.
- **Regarding capital, Nordea's CET1 ratio** amounted to 16.4% in Q3 20, (Q2 20: 15.8%, Bloomberg consensus: 15.8%), with a capital buffer of c.620bps above MDA requirements. Total capital ratio amounted to 19.9% (Q2 20: 20.1%). Regarding Risk-Weighted Assets (RWAs), went down to €150,559m with a limited credit REA migration during Q3.
- **With regard to the Cost of Risk outlook**, Nordea's **credit outlook remained unchanged in Q3 20**, with total FYE20 net loan losses projected to be **below €1bn**. In particular, the group expects CoR to be below 41bps for FYE20.
- Nordea's loan book is **well diversified accross segments**, in our view, with c. 48% of the total loan book in mortgages, c.44% in corporate lending, while the remaining c.8% is consumer lending.
- **Regarding Nordea's exposure to Covid-19 most vulnarable sectors:** out of the total corporate exposure: **i)** c.€13bn (or 4% of the corporates exposure) was significantly impacted by the COVID-19, **ii)** c.€64bn (21% of the corporates exposure) was partially affected by the COVID-19, and **iii)** c.€225bn (75% of the corporates loan book) was not significantly afffected.

FY22 Targets

Cost Income Ratio	RoE
50%	>10%
Capital Policy	**Dividend policy**
150-200bp management buffer above requirements	60-70% payout to shareholders. Excess intended to distributed through buy backs

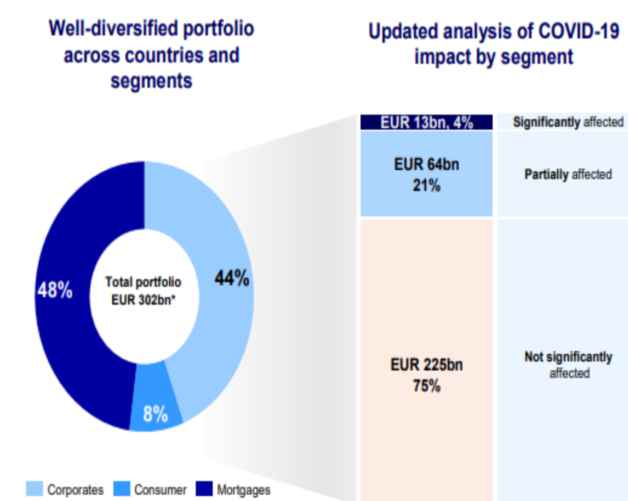
Source: Company data, Credit Suisse

Nordea main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	16.4%	15.8%	16.3%
Tier 1 ratio	18.2%	17.6%	18.3%
Total Capital ratio	19.9%	20.1%	20.8%
Leverage ratio	5.0%	4.9%	5.3%
NPL ratio	1.7%	1.7%	1.8%
NPL coverage ratio	43%	43%	37%
Cost of Risk (CoR)	0bps	115bps	18bps
LCR	172%	160%	166%
RoE	10.6%	3.1%	5.0%

Source: Company data, Credit Suisse

Nordea's loan book sensitivity to Covid-19



Source: Company data, Credit Suisse

European Banks: UBS Group AG

Additional Tier 1: **SELL UBS $ 5.0% Perp-23**

- We recommend a SELL on UBS $ 5.0% Perp-23 AT1 which has the **lowest back-end coupon in the AT1 market** at $ 5-year swap + 243.2bps, and at current trading levels this AT1 security does not offer much upside in our view. In 2020, this security already unperformed the Credit Suisse CoCo $ index with a lower total return than the broader index.
- In terms of **fundamentals** UBS Group AG displays solid credit metrics in terms of capital, asset quality, liquidity or profitability.
- **As regards capital**, UBS is well capitalised with a CET1 ratio amounting to 14.0% (pro-forma basis; up by 70bps QoQ) and 13.5% after adjusting for potential buy-backs plan of $1.5bn (vs company-complied consensus of 13.6%), well within the guidance of c.13% or range of 12.7-13.3%. The Maximum Distributable Amount (MDA) buffer amounted to 380bps.
- UBS reported Q3 20 results **ahead of market expectations,** with a net profit of $2,093m (company-complied consensus $1,557m); up 70% QoQ; supported by better performance than expected across most segments, resulting in a return on CET1 capital of 21.9% (company-compiled consensus 16.1%). The RoE also improved to 14.4% vs 8.6% in Q2 20.
- **Across segments, i) Investment Bank's (IB)** adjusted PBT amounted to $422m (company complied consensus $235m). FICC revenues $533m (company-complied consensus $466m) were +41% YoY, adjusted Equity revenues $1,100m (company-compiled consensus $927m) were +19% YoY and Global Banking revenues $651m (company-complied consensus $462m) were +44% YoY, **ii) Global Wealth Management's (GWM)** adjusted PBT amounted to $1,023m vs. company-complied consensus $921m. AUM were higher than consensus at $2,754bn (company-complied consensus $2,645bn) with adjusted gross margin of 63bps in line with consensus and adjusted net margin at 15bps; +1bp higher than consensus and **iii) Personal & Corporate's (P&C)** adjusted PBT amounted to $298m (company-complied consensus $287m) and Asset Management adjusted PBT amounted to $168m (company-complied consensus $150m) on stronger revenues) The corporate centre adjusted pretax loss was -$248m vs. consensus -$222m.
- **As regards the French cross-border matter,** in February 2019, the Paris Court of First Instance imposed fines of €3.7bn on UBS, and awarded the French state civil damages of €800m. This judgment was issued in connection with a litigation matter related to cross-border business activities with French residents between 2004 and 2011/2012. UBS has appealed the decision of the Court of First Instance. The appeal process is pending and a de novo trial has now been scheduled for 8-24 March 2021.
- In terms of **redemption**, UBS has two AT1 securities for call in 2021 (UBS $ 6.875% Perp-21 and UBS $ 7.125% Perp-21 with $1,500m and $1,100m outstanding, respectively) and issued $750m in AT1 last year with the UBS $ 5.125% Perp-26

UBS main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	13.5%	13.3%	13.7%
Tier 1 ratio	19.2%	18.7%	20.0%
Total Capital ratio	21.0%	20.6%	22.2%
Leverage ratio	5.5%	5.5%	5.7%
RoE	14.4%	8.6%	5.2%
LCR	154%	155%	134%
TLAC ratio	35%	33%	35%

Source: Company data, Credit Suisse

Diversified growth momentum

Segments	9M 19	9M 20	Comments
AuM- invested assets	$858bn	**$980bn**	$58bn net new money
P&C- net new business volume growth	5%	**8%**	CHF 5.1bn net new loans
GWM- loans	$176bn	**$201bn**	$18bn net new loans
GWM- transaction based income	$2.3bn	**$2.8bn**	23% growth YoY
IB- income	$5.6bn	**$7.4bn**	32% growth YoY

Source: Company data, Credit Suisse

European Banks: Banco Comercial Portugues SA

Tier 2: BUY BCPPL € 3.871% 2030-2025

- We remain constructive on Banco Comercial Portugues SA's credit profile and reiterate our **BUY recommendation on BCPPL € 3.871% 2030-2025 Tier 2.** This security trades wide in our view relatively to the Credit Suisse € Tier 2 Bank Capital Index. Also, despite its outperformance since September last year, this security underperformed the borader index over the course of 2020. From a fundamental viewpoint, our recommendation is based on the following: **1) Robust solvency position** with a leverage ratio amounting to 6.7% as at Q3 20, while its CET1 ratio amounted to 12.4% and its total capital ratio to 15.7%, **2) Improving asset quality**, with an NPE ratio amounting to 6.5% as at Q3 20 vs. 7.7% in 2019, **3) Sound liquidity profile**, with an LCR amounting to 243% and NSFR amounting to 140%. This is partially offset by the expected deterioration in asset quality metrics by year-end 2021.
- **Background:** BCP **improved its credit metrics** significantly with the capital position being strengthened by a €1.3bn capital raising in February 2017. In our view, BCP also benefits from **anchored equity investors** (i.e. Fosun, Sonangol) as well as its international business diversification (i.e. Poland and Mozambique).
- **With regard to the Cost of Risk**, in Q3 20 loan impairment charges decreased by 9.5% QoQ to €136.9m (Bloomberg consensus estimate of €200.0m), resulting in a CoR 98bps vs 109bps in Q2 20. The annualized CoR amounted to 89bps vs 73bps for same period last year. In Portugal the CoR amounted to 90bps vs 74bps for same period last year.
- **BCP continued to improve its asset quality metrics during 2020,** with the stock of NPEs amounting to €3,663m as at Q3 20 (Q2 20: €3,934m). In its domestic operations, the NPEs amounted to €2,701m (Q2 20: €2,908m). The group **NPE ratio** amounted to 6.5% in Q3 20 (Q2 20: 7.0%) and in Portugal the NPE ratio amounted to 7.0% (Q2 20: 7.6%).
- With respect to **loans under moratorium** in Portugal: **1) Household loans** under moratorium amounted to €4.2bn, o/w 91% were mortgages, with 98% of the total performing and **2) Company loans** amounted to €4.7bn, o/w 88% were performing.
- **Liquidity profile remains robust** with LCR ratio of 243% (Q2 20: 249%) while the net stable funding ratio (NSFR) amounted to 140% (Q2 20:137%).
- With respect to the **solvency position**, the CET1 amounted to 12.4% (Q2 20: 12.1%); 357bps in excess of the minimum SREP requirement. and the total capital ratio amounted to 15.7% (Q2 20: 15.6%); 240bps in excess of the minimum SREP requirement.
- **Sonangol is monitoring possible consolidation**, on the 2nd December 2020 BCP in a regulatory filing commented on the news published with respect to the participation of Sociedade Nacional de Combustíveis de Angola, EP (Sonangol) in the share capital of the bank. Sonagol owns c.19.49% of BCP as at December 2020 (source: Bloomberg).

BCP main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.4%	12.1%	12.2%
Tier 1 ratio	13.5%	13.3%	13.4%
Total Capital ratio	15.7%	15.5%	15.6%
Leverage ratio	6.7%	6.6%	7.0%
NPE ratio	6.5%	7.0%	7.7%
NPE coverage ratio	62%	58%	58%
Cost of Risk (CoR)	98bps	109bps	72bps
LCR	243%	249%	216%
RoE	3.4%	2.6%	5.1%

Source: Company data, Credit Suisse

BCP Strategic Plan and targets

	9M 19	9M 20	Strategic Target (pre-Covid-19)
CET1	12.30%	12.40%	~12%
RoE	6%	3.40%	~10%
Cost to Income	49%	49%	~40%
Loan-to-deposit	88%	86%	<100%
NPE stock	€4.6bn	€3.7bn	~€3bn
Cost of Risk	73bps	89bps	<50bps

Source: Company data, Credit Suisse

European Banks: BAWAG Group AG

Tier 2: **BUY BGAV € 2.375% 2029-2024**

- We reiterate our **BUY on BGAV € 2.375% 2029-2024 Tier 2,** despite its underperformance in 2020, as we remain constructive on BAWAG's credit profile, as expressed in our [IG Trade of the Week dated the 12th of February 2020]. This stems from BAWAG's: **1) Above average capital generation** with c.80bps of CET1 generated in 9M 20, **2) Robust Solvency position** with a CET1 post dividend of 14.0% in Q3 20; ahead of Company compiled consensus of 13.5%, with an MDA buffer above 400bps, **3) Strong asset quality** with an NPL ratio amounting to 1.5% as at Q3 20, and **4) Stable business model** and increasing focus on lower risk retail and SME segment .
- **Solid capital metrics:** The CET1 ratio, post dividends, improved to 14.0% vs company collected consensus of 13.5% (13.4% Q2 20, 12.7% Q1 20 and 13.3% FY19); with an MDA trigger buffer > 500bps and ahead of the updated target of 12.25%, with a buffer > 300bps above the MDA trigger of 9.13%. The improvement in the CET1 was driven by the bank's capital generation, amounting to c.50bps through earnings and c.30bps through OCI from improving credit spreads as well as lower RWAs (€20.2bn in Q3 20). Throughout 2019 the bank generated c.230bps of CET1. The software intangibles would have an impact of +25bps, to be recognized in Q4 20. BAWAG's risk-weighted assets density (RWAs over total assets) remains above average at c.45%.
- **With regard to asset quality,** in our view BAWAG has solid asset quality metrics with an NPL ratio amounting to 1.5% vs 1.8% in Q3 19. The NPL cash coverage ratio improved to 43% from 36% in Q3 19.
- **BAWAG's Cost of Risk (CoR) amounted to 49bps in Q3 20** despite the bank's credit loss assumptions being based on the ECB's adverse GDP scenario (-12.6% for Eurozone GDP for 2020 and +3.3% in FY21, as per the ECB's June 2020 adverse scenario). The bank expects the CoR for H2 20 to be below H1 20.
- **Comfortable liquidity profile**, with a Liquidity Coverage Ratio (LCR) amounting to 190% as at Q3 20, with a liquidity buffer of c.€8.8bn (or c.€11.8bn when including other marketable securities). Customer deposits represented c.60% of the bank's funding, while wholesale funding secured amounted to 9%, wholesale funding unsecured to 8%, TLTRO funds to 11% and equity and others amounted to 13%.
- **Stable business model focused on the retail segment:** BAWAG geographic footprint is on the so-called DACH region (Deutschland, Austria, Schweiz). The bank's loan book is skewed towards retail and SME lending, with a total exposure of €18.5bn (out of which 60% being housing loans), and €13.9bn in corporate and public sector lending. To note that out of the total retail and SME exposure, 84% is secured lending.

BAWAG main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	14.0%	13.4%	13.3%
Tier 1 ratio	16.3%	14.8%	14.7%
Total Capital ratio	19.6%	17.0%	17.0%
Leverage ratio	6.4%	5.9%	6.5%
NPL ratio	1.5%	1.5%	1.7%
NPL coverage ratio	43%	39%	37%
Cost of Risk (CoR)	49bps	74bps	27bps
LCR	190%	209%	146%
RoTCE	9.3%	7.4%	13.5%

Source: Company data, Credit Suisse

Outlook for FY20 and Medium term targets

	FY19	FY20	Medium Term target
Net interest income	€879m	↑ 4%	RoTCE > 15%
Fees and commission	€284m	↓ c.10%	
Other income	€78m	€0m for FY	
Operational expenses	€530m	↓ c.5%	Cost/ income ratio < 40%
Risk Costs	€69m	H1 20 < H1 20	
RoTCE	16.1%	c. 10%	

Source: Company data, Credit Suisse

Tier 2: **BUY BKIR € 2.375% 2029-2024**

- We reiterate our **BUY on BKIR € 2.375% 2029-2024 Tier 2**, which still trades relatively wide in our view vs. the Credit Suisse € Tier 2 Bank Capital Index, despite its outperformance since September 2020. Bank of Ireland has, in our view, a **sound credit profile** on the back of: **1) Robust solvency position**, with a CET1 ratio fully loaded amounting to 13.5% and a CET1 ratio phased-in at 14.8%; **2)** Despite the increase in the NPE ratio from 4.4% as at FYE19 to 5.8% as at Q3 20, we note that half of the increase was driven by the implementation of the new Definition of Default regulatory framework, while the group's NPE coverage ratio increased significantly from 37% as at FYE19 to 47% as at Q3 20; and **3) A strong liquidity profile**, with an LCR ratio amounting to 149% and liquid assets amounting to c.€30.8bn.
- **With regard to asset quality,** NPEs remained broadly stable since H1 20, after the increase seen in the first six months of 2020. The stock of NPEs amounted to €4.6bn as at Q3 20, vs. €3.5bn as at FYE19. This increase was due to **i)** c.€0.6bn inflows from credit migration in non-property SME and corporate, and property and construction portfolios, and **ii)** c.€0.5bn as a result of the implementation of the new Definition of Default regulatory framework. On the other hand, NPE coverage ratios increased by 10pp HoH, from 37% as at FYE19 to 47% as at H1 20. Due to market conditions, the bank did not implement NPE disposal transactions in the first 9 months of 2020.
- **With regards to Bank of Ireland's solvency metrics**, the CET1 ratio amounted to 13.5% on a fully loaded basis, while amounted to 14.8% on a phased-in basis. In Q3, the group's **organic capital generation** more than offset the negative impact on capital arising from investments in the bank's transformation programme, including c.30bps from voluntary redundancy restructuring costs, and others. Bank of Ireland also reinforced its total capital metrics with the issuance of AT1 securities of €975m in 2020, filling the group's Pillar 1 and P2R requirements for AT1.
- **Strong liquidity profile**, with liquid assets amounting to €30.8bn, increasing by €3.6bn since FY19, reflecting lower loan volumes and increased customer deposits of €3.2bn since the start of the year. In particular the LCR ratio improved to 149% vs 138% in FYE19.
- With respect to **payment breaks** provided to the customers, the total exposure in Ireland amounted to €1.9bn, down from c.€6bn as at H1 20 results. In the UK the total exposure amounted to €0.8bn, down from €4.1bn as at H1 20. All in all, the total loans under payment break declined from €10.1bn as at H1 20, to €2.7bn as at Q3 20.

Bank of Ireland main ratios

	Q3 20 update	Q2 20	FYE 19
CET1 ratio	14.8%	14.9%	15.0%
Tier 1 ratio	16.3%	16.3%	16.3%
Total Capital ratio	19.2%	18.7%	18.6%
Leverage ratio	6.8%	6.8%	7.1%
NPE ratio	5.8%	5.8%	4.4%
NPE coverage ratio	n/a	47%	37%
Cost of Risk (CoR)	n/a	222bps	26bps
LCR	149%	149%	138%

Source: Company data, Credit Suisse

Payment breaks – total balance outstanding (Oct-20)

Ireland	Mortgages	Consumer	SME	Total
No. of accounts	6.4K	1.9K	2.8K	11.1K
Exposure	€1.1bn	€28m	€0.8bn	€1.9bn
% of accounts	4%	1%	2%	2%
% of portfolio	5%	2%	9%	5%
UK	**Mortgages**	**Consumer**	**SME**	**Total**
No. of accounts	4.3K	3.9K	0.7K	8.9K
Exposure	€0.7bn	€44m	€19m	€0.8bn
% of accounts	3%	1%	1%	2%
% of portfolio	3%	1%	1%	3%

Source: Company data, Credit Suisse

European Banks: Novo Banco SA

Tier 2: **BUY NOVBNC € 8.5% 2028-2023**
Senior Preferred: **BUY NOVBNC € 3.5% 2043**

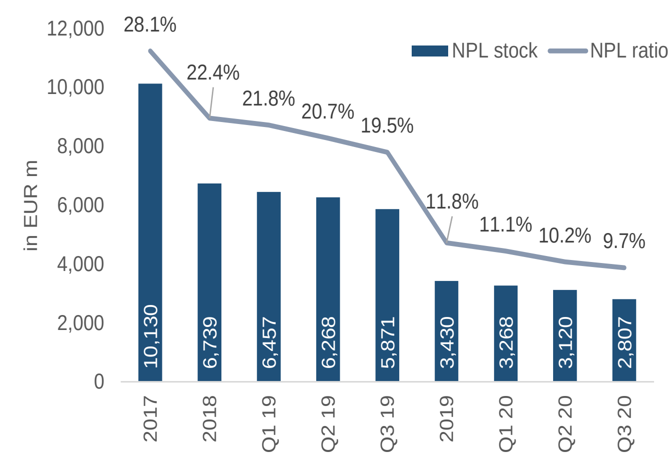
- We remain constructive on Novo Banco SA, mainly driven by three considerations: **1)** The **successful de-risking strategy of the bank**, **2)** The **resilient operating performance** in its core bank, and **3)** our view that **Novo Banco will ultimately receive from the Resolution Fund the remaining portion still available in the Capital Contingent Agreement (CCA),** which amounted to c.€914m as at year-end 2019. Therefore, we reiterate our **BUY on NOVBNC € 8.5% 2028-2023 Tier 2** and **a BUY on NOVBNC €3.5% 2043 Senior Preferred**, even though both securities significantly outperformed since September 2020. However, over the course of 2020 the NOVBNC € 8.5% 2028-2023 underperformed the broader Credit Suisse € Tier 2 index
- **Successful de-risking strategy**: the stock of NPLs went down by c.50% YoY amounting to €2.8bn vs €5.9bn at year-end 2019, which led the NPL ratio to improve to 9.7%, converging but still above its Portuguese peers (average NPL 6.5%, source Bloomberg). The bank for the first time reached a single-digit NPL ratio compared to 33.4% in 2016 (FYE 19: 11.8%; 9M 19: 19.9%). Novo Banco planned to sell a further c.€1.2bn of exposures, through a large NPE transaction (Nata 3), which was reportedly interrupted due to the market conditions caused by the COVID-19.
- **Core bank performance**: In the recurrent bank segment, the overall performance was robust with a net profit of €98m. Net Impairments and Provisions increased by €22m, leading to a cost of risk of 73bps (FYE 19: 91bps). Regarding its loan book, the average LTV for mortgage loans amounted to 48%. In corporates loans, the bank has a c.15.9% market share. We also note that in September 2020 Novo Banco's CEO was reported as expecting the bank to report a profit in 2021.
- As of 9M 20, **moratorium granted** totalled c.€7.1bn representing c.28% of the loan book, however in-line with some of its domestic peers. Split as moratorium % of loan book: **1)** Corporates: 33%; and **2)** Retail: 21%.
- **Novo Banco's phase-in CET1 ratio amounted to 12.0% as at Q3 20** (stable vs end-June 2020) and the Total Capital Ratio to 13.9% (increasing vs 13.5% in end-June 2020).
- On 26 November 2020 the Portuguese Parliament approved an amendment that prevented a €476m fund transfer to the Resolution Fund. However, as also noted by Moody's, "Portugal's prime minister publicly stated that the Portuguese government will honour the contractual agreements it had signed as part of the bank's sale agreement, which includes granting the necessary funds to the resolution fund to recapitalise Novo Banco under the terms and conditions of the CCA".

Novo Banco main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.0%	12.0%	13.5%
Tier 1 ratio	12.0%	12.0%	13.5%
Total Capital ratio	13.9%	13.5%	15.1%
Leverage ratio	6.9%	7.3%	8.4%
NPL ratio	9.7%	10.2%	11.8%
NPL coverage ratio	76%	63%	53%
Cost of Risk (CoR)	197bps	211bps	232bps
LCR	140%	155%	143%

Source: Company data, Credit Suisse

NPL Evolution



Source: Company data, Credit Suisse

European Banks: Banco de Sabadell SA

Tier 2: **BUY SABSM € 5.625% 2026**
Senior Non Preferred: **BUY SABSM € 1.75% 2024**

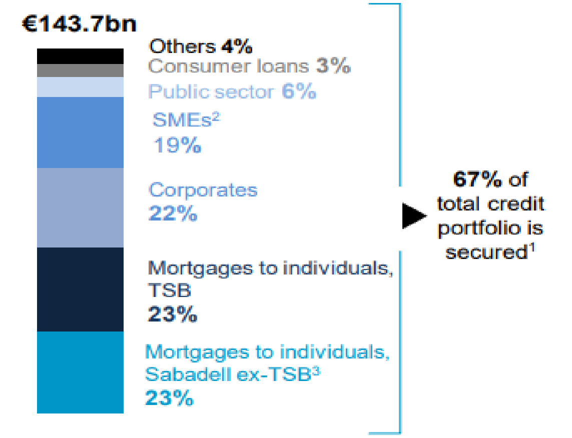
- We remain constructive on Banco de Sabadell SA, in line with our previous IG Trade of the Week publication, dated the 8th of June 2020. Hence, we recommend a **BUY on SABSM € 5.625% 2026 Tier 2,** switching out of the SABSM € 5.375% 2028-2023 Tier 2, and we reiterate our **BUY on SABSM € 1.75% 2024 SNP**. In our view, Sabadell's fundamentals are still not fully reflected at its current trading level, based on the following: **1)** Our recommendations were and are still based on a standalone basis approach, however we think that **the new strategic plan** with increased focus on the domestic operations and a potential disposal of TSB Banking Group plc increases the likelihood of a disposal of the bank ultimately. Further details will be announced in Q1 21; **2)** The **CoR trend is supportive**, with Sabadell improving its CoR guidance to 85-90bps for 2020; and **3) Solvency metrics are adequate**, with the CET1 FL amounting to 12.0%, in line with its 11.75%-12.0% guidance for 2020.
- In our view, Sabadell maintains **better than expected asset quality trends supported by a lower CoR guidance**, revised down to 85-90bps (earlier 90bps-95bps), which is manageable in our view, and in line with the c.90bps European banks average 2020 CoR guidance, as we detailed in our publication dated 1 June 2020.
- **Regarding SME exposure**, this amounts to c.20% at group level, broadly in line with the European average. Corporate and SME lending combined, amounts to c.42% of the group performing loans, with over c.80% of this EAD being rated investment grade.
- **Strong liquidly position**, total liquid assets amounted to €48bn, while the LCR ratio amounted to 206%. The loan-to-deposit ratio was 98%.
- **New strategic plan after the transaction with BBVA fell through:** On the 27th November 2020, Sabadell announced that it is planning to release a new strategic plan in Q1 21. The bank stated that it will **prioritise its Spanish domestic business**, while analysing strategic alternatives for creating shareholder value with regard to the group's international assets. In our view, **this could involve exploring the sale of its UK subsidiary TSB**. While the bank will be focused on reorganizing its domestic operations, we do think that this new strategic plan is a step towards the disposal of the bank and further M&A discussions in the near future.
- Nonetheless, on a standalone basis Sabadell's **capital metrics remained solid,** with CET1 FL ratio amounting to 12% (+9bps QoQ). The bank expects a CET1 ratio FL guidance between 11.75% - 12.00% for 2020. This range takes into account the expected Covid-19 impacts, the sale of the asset management subsidiary and the real estate developer, but excludes any potential capital gains arising from the SME supporting factor, IT software deductions and IFRS 9 or any other capital relief measures.

Sabadell main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.9%	12.7%	12.5%
Tier 1 ratio	14.4%	14.2%	13.9%
Total Capital ratio	16.5%	16.3%	15.7%
Leverage ratio	5.3%	4.7%	5.0%
NPL ratio	3.8%	4.0%	3.8%
NPL coverage ratio	57%	56%	50%
Cost of Risk (CoR)	88bps	107bps	52bps
LCR	206%	214%	172%
RoE	1.5%	2.0%	5.9%

Source: Company data, Credit Suisse

Sabadell loan book breakdown



Source: Company data, Credit Suisse

Tier 2: BUY STANLN € 2.5% 2030-2025

- We reiterate our **BUY on STANLN € 2.5% 2030-2025**, despite its outperformance, on the back of the bank's: **1) Robust capital position** with CET1 ratio of 14.4%, above the target range of 13-14%; **2) Strong liquidity profile** with an LCR of 142% and a Loans-to-Deposits ratio of 63.8%; **3) Improved risk metrics** after a strong derisking exercice started in 2013 and further intensified in 2015, and **4) Sizeable reduction in net exposures of highly sensitive Covid-19 sectors**. Hence we remain constructive on Standard Chartered as per our IG Trade of the Week dated the 30th June 2020.
- **Capital position:** The CET1 ratio amounted to 14.4% in Q3 20 up by 60bps from 2019 (above the medium term target of 13-14% and 440bps in excess of the minimum SREP requirement). The UK leverage ratio remained broadly stable at 5.2% since FYE19.
- **Improved risk management**: Standard Chartered has derisked its balance sheet since 2013, and increased its derisking efforts even further from 2015 with a reduction in loans concentration to single borrowers but also with an improvement in portfolio diversity. Moreover, the exposure to COVID-19 vulnerable sectors (including oil & gas, commodity traders, metals & mining and aviation) declined since 2015, with net nominal exposure down to just c.8% from c.25% in H1 15 for oil & gas and commodity traders (cf. table below). The CoR improved to 74bps in Q3 20 and the group expects credit impairments for H2 20 to remain below H1 20. The coverage ratio of stage 3 loans before/after collateral amounted to 58%/76% respectively from 60%/80% in Q2 20, mainly reflecting new inflows into stage 3 where the group is confident that there is a low probability of incurring a significant loss. The proportion of investment grade corporate exposures increased by 2pp to 59%.
- **Strong liquidity:** Standard Chartered disclosed a loans-to-deposits ratio of 63.8% (64.2% FYE19; 65.6% 9M 19) while the group's LCR amounted to 142% (144% FYE19; 133% 9M 19).
- **Improved profitability:** Standard Chartered reported its Q3 20 underlying results ahead of market expectations, with a net profit of $428m (Bloomberg consensus estimate of $313m), leading to an improved RoTE of 4.4%. The group is on track to maintain its costs below $10bn (c.$7.2bn in 9M 20). In 2021 expenses are likely to increase YoY given the ambitious digital investment plans, but are expected to remain below $10bn.

Exposure to Vulnerable sectors

	Oil & Gas		Commodity Traders		Metals & Mining		Aviation	
	Q2 15	Q3 20	Q2 15	Q3 20	Q2 15	Q3 20	Q2 15	Q3 20
Net exposure ($ bn)	25.8	**8.7**	25.0	**8.8**	10.0	**5.0**	7.2	**4.3**
% investment grade	46%	**93%**	30%	**90%**	22%	**88%**	30%	**89%**
% < 1 year maturity	39%	**54%**	88%	**91%**	57%	**76%**	27%	**26%**
% High risk assets	14%	**2%**	11%	**0%**	39%	**7%**	13%	**4%**

Source: Company data, Credit Suisse

Standard Chartered main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	14.4%	14.3%	13.8%
Tier 1 ratio	16.5%	16.5%	16.5%
Total Capital ratio	21.4%	21.5%	21.2%
Leverage ratio	5.2%	5.2%	5.2%
Stage 3 ratio	2.8%	2.6%	2.7%
NPL coverage ratio	58%	60%	68%
Cost of Risk (CoR)	74bps	92bps	27bps
LCR	142%	149%	144%
RoTE	4.4%	3.5%	6.4%

Source: Company data, Credit Suisse

Standard Chartered Group's profile

- Standard Chartered has operations in 60 markets, and across four business lines that include corporate and institutional banking (CIB), retail banking (RB), commercial banking (CB) and private banking (PB).
- CIB and RB are the group's largest revenue drivers, contributing 47% and 34% of the group's total revenue respectively, in 2019.
- By geography, the largest contributors to revenue were the Greater China and North Asia, and ASEAN and South Asia regions, with contributions of 40% and 28%, respectively, during 2019.

Tier 2: **BUY DANBNK € 1.5% 2030-2025**

Senior Non Preferred / Holdco: **BUY DANBNK € 0.5% 2025-2024**

- We recommend a BUY on DANBNK € 1.5% 2030-2025 Tier 2 and DANBNK € 0.5% 2025-2024 SNP, based on Danske Bank A/S' **1) Strong capitalisation** with a Common Equity Tier 1 ratio of 18.2%; **2) Strong asset quality** with a disclosed NPL ratio of 1.3% (1.4% year-end 2019) and loan impairment charges amounting to a well below average of 44bps in the first nine months of 2020; **3) Improving profitability** with the net profit for the year being revised upward to Dkr4.0-4.5bn from at least Dkr3bn previously, while Danske Bank targets a RoE of 9-10%in 2023 and **4)** Ability to cope with the aftermath of the current money-laundering investigations, in our opinion.
- **As regards capital,** the bank is well capitalised with a CET1 ratio of 18.2% (17.9% fully-loaded) vs a company-compiled consensus of 17.4%; up by 60bps QoQ and 460bps in excess of the minimum SREP requirement. Danske Bank expects an RWA increase in the Dkr20-30bn range , which would translates into a 50-70bps headwind to its CET1. The leverage ratio was adequate at 4.4% as at Q3 20
- **With respect to asset quality**, the stock of NPLs decreased to Dkr34.3bn from Dkr35.7bn in Q2 20, down 4% QoQ, In terms of exposed sectors **i) Oil-related exposure** decreased to Dkr20.9bn from Dkr21.7bn in Q2 20, which amounted to 0.8% of the total group credit exposure and **ii) Retail** amounted to Dkr26.0bn from Dkr26.5bn in Q2 20, where the net NPL ratio decreased to 6.6% from 7.5% in Q2 20
- With regard to **liquidity**, the Liquidity Coverage Ratio amounted to 160%; up by 20pp from Q4 19. At the end of September 2020, the subordination requirement was equivalent to Dkr196bn while the subordinated MREL-eligible liabilities amounted to Dkr242bn.
- **Regarding the current money laundering investigations**, until early 2016, Danske Bank had in its Estonian branch a portfolio of some thousands customers residing outside Estonia (the Non-Resident Portfolio). The Estonian branch and the Non-Resident Portfolio had become part of Danske Bank when in 2007 Danske Bank acquired Finnish-based Sampo Bank. The Estonian branch had its own IT platform. This meant that the branch was not covered by the same customer systems and transaction and risk monitoring as Danske Bank. Over the nine years from 2007 through 2015, the flow converted into EUR for both the c.10,000 customers in the Non-Resident Portfolio and the 15,000 customers subject to investigation was c.€200bn. Danske Bank decided to donate the gross income from the customers in the period from 2007 to 2015, estimated at Dkr1.5bn. As of Q3 20, Danske Bank's **internal investigation into the non-resident portfolio was expected to be completed by Q4 20. Danske Bank continues to be in close dialogue with authorities in Denmark, the US, Estonia and France.**

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Danske Bank main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	18.2%	17.6%	17.3%
Tier 1 ratio	20.5%	19.9%	20.4%
Total Capital ratio	23.3%	22.1%	22.7%
Leverage ratio	4.4%	4.4%	4.6%
NPL ratio	1.3%	1.3%	1.4%
NPL coverage ratio	82%	89%	78%
Cost of Risk (CoR)	22bps	24bps	8bps
LCR	160%	156%	140%
RoE	5.1%	5.7%	9.6%

Source: Company data, Credit Suisse

Outlook for FY20

	FY20
Net interest income	**Same level as FY19**; as margin pressure and higher funding cost will offset continued volume growth
Net fees income	**Revised downward:** slightly lower than FY19, as improved developments in finacial markets have partly offset lower re-mortgaging activity
Costs	**Revised downward:** to c. DKK 28bn from previous target of DKK 28-29bn. In addition, might also include small extraordinary amortisation of intangible assets
Impairments	Loan impairment charges expected to be **slightly higher,** with most impairments recognised in 9M 20
Net profit	**Revised upward:** in the range of DKK 4-4.5bn from earlier target of DKK 3.0bn; due to improved development in financial markets and progress in underlying business

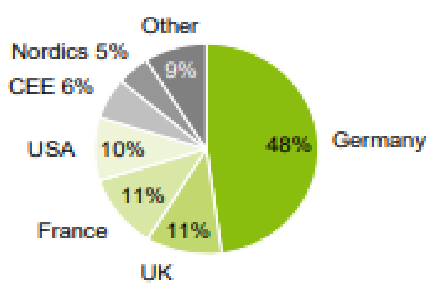
Source: Company data, Credit Suisse

European Banks: Deutsche Pfandbriefbank AG

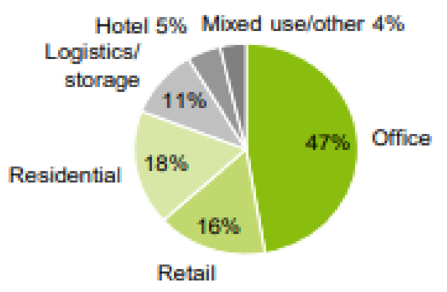
Tier 2: **SELL PBBGR € 2.875% 2027-2022**

- We reiterate our **SELL on PBBGR € 2.875% 2027-2022 Tier 2**, despite its underperformance since September 2020, as this security still trades relatively tight, in our opinion. From a fundamental standpoint we note that Deutsche Pfandbriefbank (pbb): **1) Is a specialist bank focused on Commercial Real Estate and Public Finance projects**, with operations manly in Germany, UK, France, US, CEE and Nordic countries; **2) Has one the weakest CoR breakeven point** (cf. Credits on the Move publication dated the 1st of June 2020) and **3) A significant reliance on wholesale funding** with deposits of only €3.1bn vs. financing volumes of €44.4bn. This is partially offset by **resilient asset quality metrics** in 2020 YtD, with an NPL ratio amounting to 0.8% as at Q3 20 (0.9% 2019) and **adequate solvency metrics**, with a CET1 ratio amounting to 15.3% and a leverage ratio of 5.7%.
- **NPL ratio amounted to** 0.8% in Q3 20 (0.9% Q2 20). The stock of NPL declined by c.€5m QoQ to €495m. The Stage 3 coverage ratio amounted to only 20% (13% Q2 20, 11% FYE19).
- **Liquidity position remained adequate** with no major impact from credit lines, and with the Liquidity Coverage Ratio (LCR) above 150%.
- With respect to the **capital positions**, the CET1 ratio amounted to 15.3% vs 15.8% in Q2 20; 580bps in excess of the minimum SREP requirement. The Tier 1 ratio amounted to 17.0% vs 17.5% in Q2 20. The total capital ratio amounted to 20.4% vs 21.1% in Q2 20; 740bps in excess of the minimum SREP requirement. The risk weighted assets amounted to €17.8bn vs €17.4bn in Q2 20. The leverage ratio amounted to 5.7% as at Q3 20, above the European average of 5.3%.
- **In terms of Outlook**, due to the uncertainties regarding COVID-19 developments, pbb refrained from providing a concrete guidance, however, it remained confident to achieve a solid positive full-year result 2020 while uncertainty with regards to risk provisioning persists.

REF portfolio EAD (By region)



REF Portfolio EAD (By segment)



Source: Company data, Credit Suisse

Deutsche pbb main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.3%	15.8%	15.2%
Tier 1 ratio	17.0%	17.5%	16.9%
Total Capital ratio	20.4%	21.1%	20.4%
Leverage ratio	5.7%	5.1%	5.4%
NPL ratio	0.8%	0.9%	0.9%
NPL coverage ratio	20%	13%	11%
LCR	>150%	>150%	>150%
RoE	4.3%	1.6%	6.9%

Source: Company data, Credit Suisse

Deutsche Pfandbriefbank AG (pbb) Profile

Deutsche Pfandbriefbank (pbb) is a German-based commercial real estate lender with a complementary public investment finance business. The bank's total assets amounted to €60.2bn as at Q3 20.
The total bank's portfolio amounted to €44.4bn, split as:

- **Real Estate Finance (REF):** €26.8bn (cf. further details provided in Figure on the left).
- **Public Investment Finance (PIF)** €5.9bn
- **Value Portfolio (VP):** €11.7bn

The bank's strategic portfolio is composed of REF and PIF.

Tier 2: **SELL RBIAV € 1.5% 2030-2025**

- We reiterate our SELL recommendation on RBIAV € 1.5% 2030-2025 Tier 2, based on Raiffeisen Bank International AG's (RBI) **1) Significant exposure to emerging markets**, with **Russia accounting for c.9% of total assets and 51% of net profit** in the first nine months of 2020; **2)** An **adequate but below the European weighted average CET1 ratio** of 13.1% and 12.5% excluding the net profit for the nine months of the year and **3) A loan book much more focused than average on corporates** with retail exposure accounting for only 20.4% of total exposure at end September 2020
- This is partially offset by a marginally below average provisioning ratio the first nine of the year of 79bps vs. the European average of c.90bps as well as sound liquidity with the above average liquidity coverage ratio of 170% (European weighted average 165.7% as at end-June based on EBA data)
- **As regards asset quality**, NPEs declined by 9% YoY to €2,837m (€3,111m end-September 2019), resulting in an NPE ratio of 1.9% and a coverage ratio of 63.8%; (1.9% Q2 20, 2.0% Q1 20, 2.3% Q3 19).

RBI group main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	12.5%	13.2%	13.9%
Tier 1 ratio	14.6%	14.6%	15.4%
Total Capital ratio	17.3%	17.5%	17.9%
Leverage ratio	6.1%	6.1%	6.7%
NPL ratio	1.9%	1.9%	2.4%
NPL coverage ratio	64%	63%	61%
Cost of Risk (CoR)	79bps	69bps	26bps
LCR	170%	160%	140%
RoE	7.7%	6.5%	11.0%

Source: Company data, Credit Suisse

RBI group performance across segments

(€ mn)	Core income Q3 20	Core income QoQ	PAT Q3 20	PAT QoQ	CoR (bps) Q3 20	CoR (bps) QoQ	Loans to customers & NIM Q1 20	Loans to customers & NIM Q3 20
Central Europe	286 (NII; Net fees)	NII -6%; Net fees +7%	53	-7%	39	-17bps	29,334; 2.13%	29,571; 1.74%
Southern Europe	309	-1%; +22%	110	+96%	84	-37bps	16,259; 3.48%	16,140; 3.18%
Eastern Europe	370	-12%; +7%	151	+9%	124	-60bps	12,756; 5.59%	11,598; 5.00%
Group Corporates & Markets	240	-12%; +4%	50	-58%	96	+86bps	31,766; 1.17%	33,186; 1.00%

Source: Company data, Credit Suisse

- **With respect to capital ratios**, RBI's CET1 ratio was below average at 13.1% (12.5% excluding results while the 2019 initial dividend proposal remains deducted from the CET 1 ratio with an impact of 41bps). The recently announced securitization of a loan portfolio worth €3.3bn (consisting of private real estate financing in Austria) would strengthen the ratio by 10bps.
- RBI reported **Q3 20 results broadly in line with expectations** with a net profit of €230m (company-compiled consensus €215m), up by 20% QoQ; which resulted in an RoE amounting to 7.7%. The cost/income ratio improved to 54.2% vs 55.9% in Q2 20.
- **Regarding the outlook for 2020, RBI commented i)** It expects to generate a consolidated RoE in the mid-single digit range; **ii)** The provisioning ratio for 2020 is expected to be c.75bps; **iii)** RBI aims to achieve a cost/income ratio of c.55% in the medium term; **iv)** In the medium term, the bank targets a consolidated RoE of c.11%; **v) RBI** confirmed its CET1 ratio target of c.13% for the medium term. Based on this target, the bank intends to distribute between 20 - 50% of consolidated profit.

Author(s): Stéphane Suchet, Marc Sanchez Roger

Tier 2: **BUY VMUKLN £ 5.125% 2030-2025**
Senior HoldCo: **BUY VMUKNLN £ 4.0% 2026-2025**

- We remain constructive on Virgin Money UK plc despite its outperformance in 2020. We recommend a **BUY on VMUKLN £ 5.125% 2030-2025 Tier 2,** switching out of the VMUKLN £ 7.875% 2028-2023, and we reiterate our **BUY VMUKNLN £ 4.0% 2026-2025 Senior HoldCo**. Our positive view on Virgin Money UK plc was discussed in more detail in our IG Trade of the week, dated the 6th of August 2020. Our constructive view stems from Virgin money's **1) Conservative loan book**, with c.82% of it being mortgages, **2) Strong solvency metrics**, with a CET1 amounting to 13.4%, and **3) Supportive issuance backdrop** with Virgin Money already meeting its 1st of January 2022 MREL requirement (28.4% as of FY 19/20).
- Virgin Money is the 7th largest bank in the UK with **total assets** amounting to c.£90bn, focusing on retail and SME clients. Virgin Money has in our view a **conservative risk profile** with c.82% of its loan book being mortgages with an average LTV of just 57% (only 6% above 85% LTV).
- **Asset quality** remained resilient in the context of the Covid-19 pandemic with a Stage 3 loans ratio amounting to 1.2% as at end-September 2020, down from 1.3% as at FYE18/19.
- **With regard to loans under moratoria**, in mortgages, just £2.5bn are under **payment holidays** or 4% of portfolio active vs 20% in H1 20. From a total matured payment holidays, c.98% returned to payment with **just 2% in arrears**.

Virgin Money main ratios

	FYE 19/20	H1 20	FYE 18/19
CET1 ratio	13.4%	13.3%	17.5%
Tier 1 ratio	17.2%	16.6%	17.5%
Total Capital ratio	20.2%	19.1%	20.1%
Leverage ratio	4.8%	4.9%	4.3%
NPL ratio	1.2%	1.1%	1.3%
NPL coverage ratio	16%	18%	14%
Cost of Risk (CoR)	68bps	63bps	21bps
LCR	140%	148%	152%
RoTE	0.6%	4.6%	10.8%

Source: Company data, Credit Suisse

- **Annualised cost of risk remained broadly contained during 2020, at 68bps** in FYE 19/20 (FYE 18/19: 21bps). CoR split as: **1)** Mortgages 16bps; **2)** Personal 423bps, increase driven by provision overlay increases in loans and overdraft and **3)** Business: 212bps, driven by further conservatism in model assumptions. Virgin Money commented that CoR is expected to remain higher than historical levels due to the challenging environment, however below the FY20 level.
- The **underlying RoTE** amounted to 0.6%, with an expectation of RoTE in the low double digits area for the medium term. **NII** remained resilient at 1.56% within guidance range.
- **Capital position**, CET1 ratio was robust at 13.4%, +10bps QoQ, with an MDA buffer of c.£950m or 390bps in excess of the minimum SREP requirement. The group expects a transitional CET1 ratio of c.13% by FY21. Also, the bank is well capitalised with a fully-loaded CET1 ratio of 12.2% as at end September 2020.
- The **MREL ratio** increased to 28.4% vs 26.6% in FY19; 110bps in excess of the minimum MREL requirement of 27.3% expected by 1st of January 2022. The group stated that this means future MREL issuance will be focused on building a prudent management buffer over the expected end-state MREL requirement, **with £0.5bn to £0.75bn of further MREL eligible senior unsecured issuance planned in FY21.**

Tier 2: **BUY NWG £ 3.622% 2030-2025**

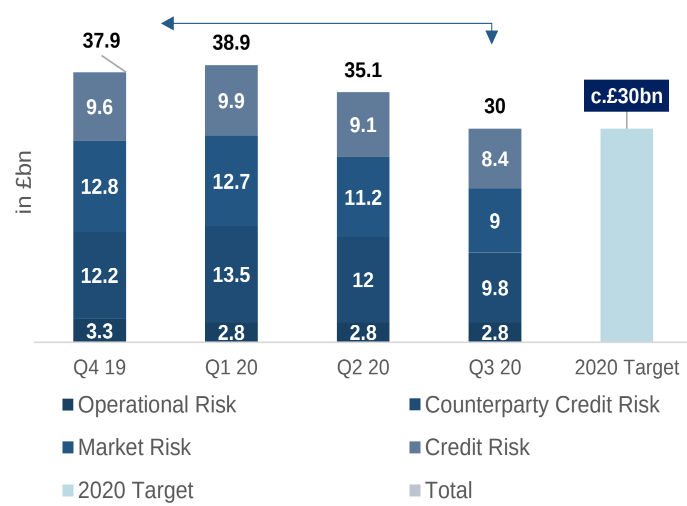
- We recommend a BUY on NWG £ 3.622% 2030-2025 based on NatWest Group Plc's (NWG) **1) Extremely strong capital ratios with a Common Equity Tier 1** of 18.2% and 17.2% fully-loaded. In the medium term, NWG aims a CET1 ratio to be between 13-14%. The UK leverage ratio amounted to a high 6.2% (5.8% year-end 2019); **2) Sound asset quality** with a stable Stage 3 ratio of 1.8% (1.9% end-June 2020, 1.9% year-end 2019); and **3) Strong funding and liquidity profile** with a liquidity coverage ratio of 157% (166% Q2 20), representing £61.8bn of headroom above 100%.
- With respect to **expected credit loss (ECL)**, NWG reported a loan impairment ratio of 115bps in the first nine months of the year and 28bps in Q3 20. NWG commented it believed the **full year impairment charge was likely to be at the lower end of the £3.5-4.5bn** range (£3,112m in the first nine months of 2020) following the limited level of defaults across lending portfolios and associated ECL stage migration within the third quarter.
- Regarding **payment holidays**, Retail Banking payment holidays declined significantly from the peak and amounted to c.4% or £6.2bn as at end-September 2020 (c.14% Q2 20 or £21.3bn and c.22% or £33.6bn at the peak) and in Commercial banking payment holiday amounted to c.8% or £9.5bn (c.11% or £12.9bn as at end-June 2020).
- NWG's **exposure to sectors which are vulnerable to the COVID-19** amounted to c.£28.8bn from a total loan book value of £370.6bn, split as **i)** Airlines £2.3bn, **ii)** Transport £5bn, **iii)** Leisure £10.3bn, **iv)** Oil & Gas £1.8bn and **v)** Retail £9.4bn.
- As regards **liquidity**, loans and advances to customers amounted to £354bn in Q3 20 (£352bn in Q2 20) and customer funds amounted to £418bn, up by 2% QoQ, resulting in a loan to deposit ratio 85% (Q2 20: 86%). The net stable funding ratio amounted to 147% (Q2 20: 144%).
- With respect to its **derisking process**, NWG expects RWAs to be below its previous guidance of £185-195bn (£173.9bn as at end-September 2020). Lastly, for NatWest Markets RWAs are expected to be c.£30bn for FY20.
- Lastly, on the 17th of December 2020 Moody's affirmed NWG's ratings at Baa2, Positive, reflecting " [ ] the group's strong capital, sound funding and liquidity, and the reduced level of market and operational risks but also the likely asset quality deterioration and profitability challenges deriving from the economic shock caused by the coronavirus pandemic."

NatWest main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	18.2%	17.2%	16.2%
Tier 1 ratio	20.5%	19.4%	18.5%
Total Capital ratio	23.7%	22.5%	21.2%
Leverage ratio	6.2%	6.0%	5.1%
Stage 3 ratio	1.8%	1.9%	1.9%
NPL coverage ratio	41%	41%	41%
Cost of Risk (CoR)	28bps	229bps	21bps
LCR	157%	166%	152%
RoE	0.8%	-12.4%	9.4%

Source: Company data, Credit Suisse

Evolution of RWAs in NatWest Markets



Source: Company data, Credit Suisse

European Banks: Lloyds Banking Group Plc

Tier 2: **BUY LLOYDS £ 2.707% 2035-2030**

- We recommend a **BUY on LLOYDS £ 2.707% 2035-2030 Tier 2,** on the back of Lloyds Banking Group Plc strong credit profile given the bank's: **1) Solid capital position** with a CET1 ratio amounting to 15.2% as at Q3 20, while the group's total capital amounted to 22.6% **2) Strong liquidity profile**, with an LCR amounting to 138% and a loans-to-deposits ratio of 98% as at Q3 20; **3) Robust asset quality** with an NPL ratio amounting to 1.8% as at Q3 20 unchanged vs. FYE19, with a relatively low-risk loan book oriented towards UK prime residential mortgages, and **4) An encouraging trend in payment holidays** with high proportion of matured payment holidays repaying.
- **Strong capital metrics:** the CET1 ratio amounted to 15.2% (Q2 20: 14.6%), and to 14.0% when not including transitional measures (Q2 20: 13.4%), above the group's target of c.12.5% plus a management buffer of around 1%. Lloyd's UK leverage ratio amounted to 5.6%. We note that the PRA reduced the Group's Pillar 2A to 4.2% from 4.6% in 2020.
- **With regard to Lloyd's strong liquidity profile**, the Liquidity Coverage Ratio (LCR) remained strong at 138% with an improved Loans-to-Deposits ratio of 98%, down from 107% as at FYE19. The High Quality Liquidity Pool amounted to £139bn as at Q3 20.
- **Payment holidays:** The total payment holidays granted amounted to £69bn, o/w £15bn remained outstanding (including extended payment holidays and matured missing first payment). From the original total amount, 96% of the payment holidays have matured, o/w 82% of mortgage customers have resumed payments, 80% of credit cards, 82% of personal loans and 84% of motor finance.

Lloyds Banking group main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	15.2%	14.6%	13.8%
Total Capital ratio	22.6%	22.3%	21.5%
Leverage ratio	5.6%	5.4%	5.2%
NPL ratio	1.8%	1.9%	1.8%
Cost of Risk (CoR)	28bps	219bps	29bps
Loans to Deposit	98%	100%	107%
LCR	138%	140%	137%
RoTE	7.4%	-4.8%	7.8%

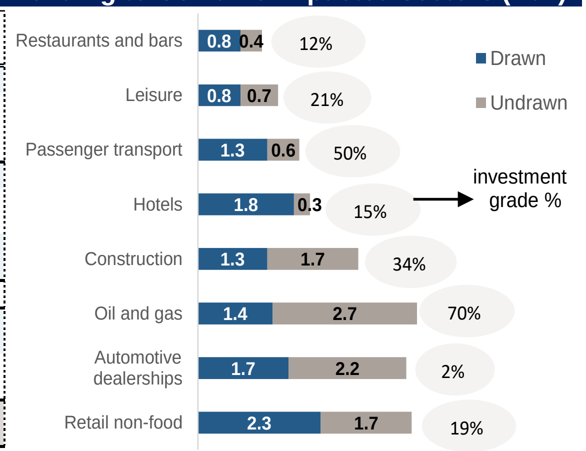
Source: Company data, Credit Suisse

Mortgage book breakdown and LTVs

	9M 20				FY19	FY10
	Mainstream	Buy to Let	Specialist	Total	Total	Total
Avg LTVs	42%	50%	42%	**44%**	45%	56%
New Business LTVs	65%	57%	n/a	**64%**	64%	61%
≤ 80% LTV	89%	99%	94%	**91%**	88%	57%
> 80-90% LTV	10%	1%	3%	**8%**	10%	16%
> 90-100% LTV	0.6%	0.2%	1.0%	**0.5%**	2%	14%
> 100% LTV	0.2%	0.3%	2.5%	**0.3%**	0.4%	13%
Value > 80% LTV	£24.3bn	£0.7bn	£0.7bn	**£25.7bn**	£36.2bn	£146.2bn
Value > 100% LTV	£0.5bn	£0.1bn	£0.3bn	**£0.9bn**	£1.2bn	£44.bn
Total Gross lending	£229bn	£49bn	£11bn	**£289bn**	£290bn	£341bn

Source: Company data, Credit Suisse

Lending to Covid-19 impacted sectors (£bn)



FYE20 guidance & MREL

The group provided the following guidance for FYE20:

1. NIM expected to remain broadly stable at c.240bps in Q4 20, resulting in FY20 NIM of c.250bps.

2. Operating costs to be below £7.6bn.

3. Impairment charges to be at the lower end of the range of £4.5-5.5bn.

4. RWAs are now expected to be broadly stable at Q3 20 levels.

Well positioned to comply with MREL requirements. The Group's January 2022 MREL requirements are expected to amount to c.22.7%. With a current transitional MREL ratio amounting to 36.5% the bank is set to meet comfortably its MREL needs.

European Banks: Yorkshire Building Society

Tier 2: **SELL YBS £ 3.375% 2028-2027**

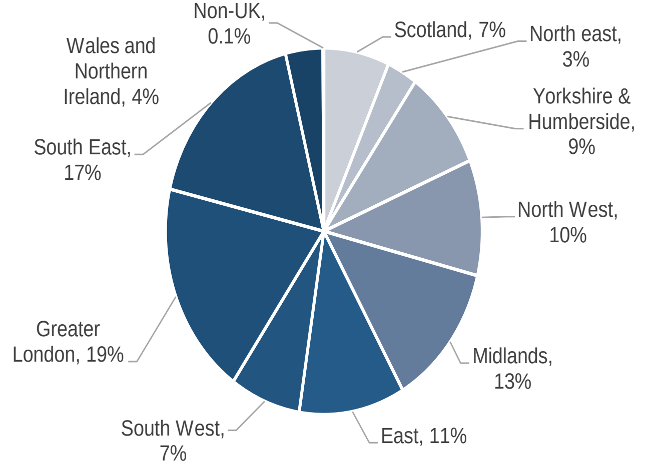
- We reiterate our **SELL recommendation on YBS £ 3.375% 2028-2027 Tier 2 , even though this security has already marginally underperformed the broader Credit Suisse £ Tier 2 index.** Indeed, in our view, this security still trades relatively tight versus the Credit Suisse £ Tier 2 Bank Capital Index. However, we stress that our recommendation is based on a relative value basis, since from a fundamental viewpoint we do think that Yorkshire Building Society's (YBS) has an adequate credit profile given its: **1) Conservative business model** and prudent underwriting standards, focused on low-risk residential mortgages with only c.11% of Buy to Let mortgages, and a loan book average LTV of c.50.9% as at end-June 2020; **2) Solid capital metrics**, with a CET1 ratio of 16.6% while he UK leverage ratio amounted to 5.8%, and **3) Adequate liquidity profile**, however with weaker than peers loan-to-deposit ratio which amounted to 122% as at end-June 2020. The Liquidity Coverage Ratio amounted to c.143%. This is **partially offset by a relatively weaker asset quality than peers** when purchased or originated credit-impaired (POCI) loans from the merger with Norwich & Peterborough and Chelsea Building Society are included. The IFRS9 Stage 3 loans represented c.2.3% of gross loans or 0.9% excl. POCI, broadly in-line with peers.
- **YBS is the third largest building society with total assets of £45bn** and the 7th largest mortgage lender in the UK with gross lending market share of 2.5%.
- **Conservative loan book, with over 85% exposure on residential prime mortgages.** Total loans as of H1 20 amounted to £37,982m split as **i)** Residential Prime 85.3%, **ii)** Residential Buy to Let (BTL) 10.7%; **iii)** Residential sub-prime or self-certification 0.9%; **iv)** Social Housing 0.8%; **v)** Commercial lending (ex. Social Housing): 2.3%. With regard to the average LTV, it amounted to 50.9% as at H1 20 (FYE19: 50.0%).
- **Cost of Risk remained at a very low level**, amounting to 10bps in H1 20, which compares with 0bp as at FYE19.
- **The total loans under moratorium** amounted to c. £5,764m, representing c.15% of YBS total loan book as at H1 20. The average LTV on these exposures amounted to 59.7%.
- **Solid capital metrics**, with a CET1 ratio amounting to 16.6% as at H1 20, unchanged from FYE19, and a UK leverage ratio amounting to 5.8%, also unchanged HoH. YBS is using the standardised approach in its RWA calculations. However, YBS has applied to be eligible to use Internal Ratings Based (IRB) approach
- **With regard to MREL requirements**, the final leverage MREL requirement (as % of RWA) amounted to 18.6%, while the final capital requirement amounts to 16.0%. With a current MREL ratio of 20.7% as at H1 20, YBS is already compliant with its MREL requirements.

YBS main ratios

	H1 20	H1 19	FYE 19
CET1 ratio	16.6%	16.1%	16.6%
Tier 1 ratio	16.6%	16.1%	16.6%
Total Capital ratio	18.9%	18.6%	18.8%
Leverage ratio	5.8%	5.6%	5.8%
NPL ratio	0.9%	0.8%	0.9%
NPL coverage ratio	3%	3%	3%
Cost of Risk (CoR)	10bps	0bps	0bps
LCR	143%	> 100%	> 100%

Source: Company data, Credit Suisse

Loan Book split by Geography



Source: Company data, Credit Suisse

European Banks: Erste Group Bank AG

Senior Non Preferred: **SELL ERSTBK € 0.875% 2026**

- We do not have concerns from a fundamental viewpoint with regard to Erste Group Bank AG, however, in terms of credit valuations, in our opinion Erste Senior Non-Preferred trades relatively tight. Therefore we recommend a **SELL on ERSTBK € 0.875% 2026 SNP**. In our view Erste Group AG: **1) Maintains a relatively strong capital position** with a CET1 ratio amounting to 14.2% leading to a capital buffer 70bps above its 13.5% internal target; and **2) Has adequate asset quality metrics** with an NPL ratio amounting to 2.4% as at Q3 20, down from 2.5% in FYE19. However, this is partially offset by a significant exposure **to** Central Eastern European countries, with Austria making up c.51% of its net loan book. Nonetheless, in our view **ERSTBK € 0.875% 2026 SNP trades relatively expensive** vs. the Credit Suisse € Senior Non Preferred sub-index peers given the bank's business mix.
- **Q3 20 performance was ahead of market expectations**, in line with most European banks, with a net profit amounting to €343.3m (Bloomberg consensus estimate of €327.3m); up 4.8x quarter-on-quarter (QoQ) (Q2 20: €58.5m). The return on equity amounted to 9.6% vs 0.2% in Q2 20.
- The cost of risk (CoR) amounted to 46bps in Q3 20, vs 148bps in Q2 20. **The group's reiterated its 2020 guidance for CoR at 65-80bps.** Lastly, the NPL ratio amounted to 2.4%; stable QoQ. NPL coverage ratio amounted to 95.5% (Q2 20: 91.1%). Regarding funding, the loans to deposit ratio amounted to 89.0% vs 89.6% in Q2 20.

Erste group main ratios

	Q3 20	Q2 20	FYE 19
CET1 ratio	14.2%	14.3%	13.8%
Tier 1 ratio	15.9%	15.9%	15.0%
Total Capital ratio	19.3%	19.1%	18.6%
Leverage ratio	6.4%	6.4%	6.5%
NPL ratio	2.4%	2.4%	2.5%
NPL coverage ratio	89%	90%	92%
Cost of Risk (CoR)	46bps	148bps	20bps
LCR	179%	162%	148%
RoE	9.6%	0.2%	10.0%

Source: Company data, Credit Suisse

Outlook 2020/ 2021

Profitability

- **Net results**: 2020e to be meaningfully lower than 2019

Credit Risk

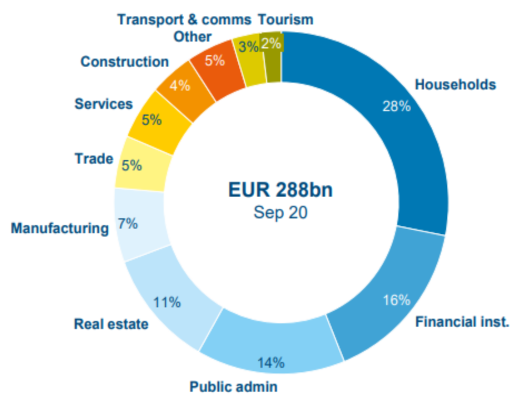
- **CoR**: 2020e confirmed between 65-80bps and 2021e to be below 2020 levels

Operating environment

- **Real GDP**: to decline between 4-9% (Q4 restrictions not yet incorporated)
- Non-Linear recovery in 2021
- **CEE-wide** concerted fiscal mitigation measures

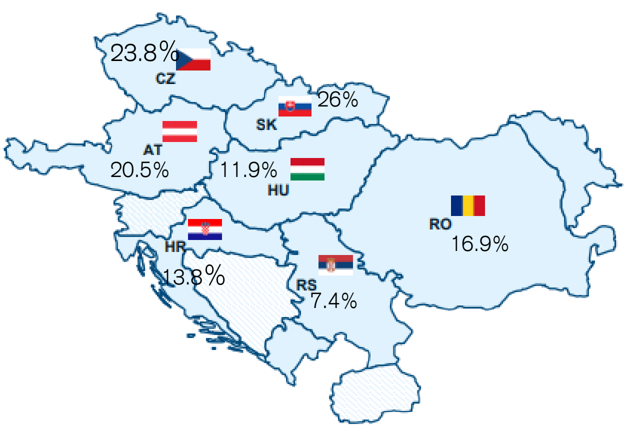
Source: Company data, Credit Suisse

Erste Group Bank AG Loan Book breakdown



Source: Company data, Credit Suisse

Erste Group Bank geographic footprint (Loans)



Source: Company data, Credit Suisse

Appendix: Other regulatory topics

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Topic	Overview	Impact
MREL Requirements	▪ MREL Subordination – 8% of Total Liabilities and Own Funds subordination requirement, applies to G-SII banks, top tier banks (>100bn) and other systemically risky institutions, with a 'soft-cap' of 27% RWA. Text provides for the resolution authority's ability to require (for up to 30% of the institutions that are G-SIIs, top tier or systemic, that the resolution authority supervises) the greater of 8% of TLOF and 2x(P1+P2R) + CBR. ▪ MREL Buffers - buffers to sit on top of the MREL requirement. ▪ Article 45 (m) BRRD provides for an intermediate date of 1 January 2022, and final MREL deadline of 1 January 2024. Intermediate 2022 target ensures a linear build-up towards fulfilling the requirement. ▪ Article 45a BRRD provides for mortgage credit institutions (really applies to Danish) to be exempt from MREL	▪ Positive for high-RW density banks, that move to 8% TLOF ▪ Soft cap may provide some relief to those with Risk Weights at the lower end ▪ Selection criteria for up to 30% on RWA approach unclear
Callability	▪ Article 72c CRR makes clear that calls with no incentive to redeem are permitted, and would not be considered the maturity date. ▪ EBA guidance on what constitutes an incentive to redeem is specified as needing to be aligned with the existing guidance for own funds ▪ EBA is given 6 months from publication of the CRR text in the Official Journal to produce the RTS.	▪ EBA guidance by Q4 2020
AT1 / Tier 2 Instruments	▪ Article 52 (1) CRR – AT1 instruments are to be directly issued by the institution ▪ Article 52 (p) – AT1 requirement for PONV to be effective and enforceable, including under third country law ▪ Article 63 CRR – Tier 2 instruments are to be directly issued by the institution, to be ranked junior to eligible liabilities ▪ Article 63 (c) (n) CRR – Tier 2 requirement for PONV to be effective and enforceable, including under third country law. Article 63 (d) (o) (p) CRR – provides for MPE, facilitated by including third country instruments that can be written down locally (where issued by a non-EU resolution entity)	▪ In line with expectations ▪ Unclear if instruments without waiver of set-off, when set-off is not possible will be disqualified ▪ Generous grandfathering provision
Contractual bail-In	▪ Article 72b (n) CRR provides for contractual bail-in recognition requirement for MREL. Article 72b (point 7) also provides for EBA to develop an RTS on the applicable forms and nature of indirect funding of eligible liabilities instruments	▪ Notable that contractual recognition not limited to third country law

Appendix: Other regulatory topics

Topic	Overview	Impact
Permission for redemptions	▪ Article 78 CRR provides for a general forward looking redemption permission, but is limited to 10% of an issue i.e. facilitates opportunistic LM rather than outright calls. ▪ General one year forward looking permission to call eligible liabilities may be granted. ▪ EBA to develop RTS on criteria for approval and limitations to redemptions	▪ No general permission for AT1/T2 calls as had been hoped ▪ General forward looking permission may help opportunistic LM ▪ EC call provision helpful
Contractual recognition of bail-In	▪ Article 55 BRRD provides for a contractual term recognizing that the liability may be subject to write-down and conversion powers and agreeing to be bound by any reduction of the principal or outstanding amount due, conversion or cancellation that is effected by the exercise of those powers by a resolution authority, provided that that liability complies with certain conditions.	▪ May have a Brexit impact for English law contracts
AT1 Write down or conversion	▪ Article 54 (1) CRR – for third country AT1 (MPE relevant) a 5.125% trigger is required, however, is subject to local third country provisions, provided the EBA deems them equivalent.	▪ Helps facilitate MPE
SPV AT1 / Tier 2 Issuance	▪ Article 83 (1) CRR - AT1 and Tier 2 issued by an SPV will be grandfathered in full until 31 December 2021	▪ Limited relevant instruments
Grandfathering	▪ Article 494b CRR – provides for 6 year grandfathering period (from publication in the Official Journal e.g. expected May 2019) for AT1 and Tier 2, that do not have PONV recognition for third country law or has applicable set off (text is unclear whether this actually disqualifies instruments without contractual waiver of set off if it is otherwise inapplicable)	▪ Generous provision that provides for most instruments
Pillar 2 / Macro	▪ Article 104a CRD specifies that Pillar 2 charges shall be applied based on the risk profile of the individual institution, however, the text is not fully clear, implies macroprudential measures are excluded from Pillar 2 ('macro' phrasing is removed, however, no explicit prohibition on national authorities in circumventing it). ▪ Article 133 of the CRD provides for the G/O-SII buffer to be additive with systemic risk buffer subject to 5% cap. ▪ EBA mandated to produce guidelines by 30 June 2020 to design and calibrate O-SII buffer rates (Article 131/ Article 133 8a)	▪ Buffers being additive may push up combined buffer in some cases. ▪ Removing macro from P2 will more likely result in a reallocation of capital requirements than an outright reduction.

Appendix: Other regulatory topics

Topic	Overview	Impact
Leverage Ratio	▪ Status quo on capital composition (Tier 1 in line with Basel) - 3% leverage ratio requirement. Surcharge for G-SIIs: the Basel add-on to maintain a LR buffer requirement equal to 50% of the G-SII buffer ▪ No exemption for CSD banks and financial market infrastructure credit institutions (exemption for CCPs with a banking license is preserved). ▪ Allows for an Institutional Protection Scheme exemption from LR-exposure measure (i.e. equal treatment of IPS and groups) subject to approval (Article 113 CRR), central bank exemption also allowed.	▪ Remaining in line with Basel positive for low RWA density banks
'Danish Compromise' for insurance holdings	▪ Extension included until 31 Dec 2024	▪ Useful extra transition for those that use the approach
Software non-deduction from CET1 mount	▪ Provision for software assets that are prudently valued and where the value is not negatively affected in resolution, insolvency or liquidation to not be deducted from CET1. To be covered by EBA RTS (Article 36 (ai) CRR).	▪ May drive further bank investment into FinTech
Massive disposals of defaulted exposures	▪ Provision to allow institutions to offset the LGD effect of "massive disposals" (>20% of stock) of defaulted exposures during the first 3 years that the new regulation is in force. ▪ Observed defaults at the time of notification serves as the basis for calculating the 20% threshold. ▪ The adjustment cannot exceed the difference between realised losses due to massive disposals and loss estimates for non-disposed exposures in default.	▪ Reduces capital impact of defaulted loan disposals, encouraging these transactions

Appendix: Other regulatory topics

Topic	Overview	Impact
SREP and ESG	▪ Article 449a of the CRR imposes requirement for banks to disclose ESG related risks, physical and transition risks (to start 3 years after publication of the text in the Official Journal). ▪ Disclosure to be annually in the first year of implementation and biannually second year and thereafter. ▪ EBA mandated to publish report on potential inclusion of ESG risks in the SREP, report due two years post publication of text in the Official Journal e.g. 2021 (Article 98 (7a) CRD)	▪ Increased focus on sustainability in lending, investment, etc.
Supporting factors	▪ Extension of supporting factor for SME loan RWs and infrastructure projects: – SME (Article 501 CRR): 23.81% RWA reduction for exposures to SMEs up to EUR 2.5m, then a new 15% RWA reduction for any exceeding amount. – Infrastructure (Article 501a CRR): own funds requirements for qualifying infrastructure exposures will be multiplied by a factor of 0.75. At least 2/3 of the financial obligations needs to be repaid by the income generated by the assets being financed, or by subsidies, grants, or funding provided by public or international organisations.	▪ Extension of supporting factor for SME loan RWs and infrastructure projects ▪ Shows willingness to use capital rules to incentivize lending to specific sectors
FRTB	▪ Maintain approach of a reporting requirement in the first phase, no actual capital requirements until entry into force of the CRR3 package (after revised Basel calibrations are available and a legislative proposal on adequate own funds for market risk has been created with EBA input).	▪ In line with current expectations
NSFR	▪ Article 429 CRR: More lenient treatment for covered bonds (lower RSF) and reversed repo, with calibration at 0% and 5%. Introduction of simplified NSFR (s-NSFR), ▪ No preferential treatment for NSFR purposes of intra-group exposures if both the institution and the counterparty are located in different Member States ("MS"), even within the Banking Union.	▪ Largely in line with expectations with covered bonds' preferred status maintained

Appendix: Other regulatory topics

Topic	Overview	Impact
IPUs	■ Article 21b of the CRD provides for the intermediate parent undertaking requirements, with a threshold to be set at €40bn balance sheet in the EU and two or more subsidiary institutions.	■ Some softening of initial position will be helpful to ex-EU G-SIBs
Moratorium	■ Article 69 BRRD provides a moratorium power limited to a max of 2 days.	
Retail investors	■ (Article 44a BRRD): Member states given discretion to safeguard retail investors – two options: : – Retail investors with an investment capacity below EUR 500k may only invest less than 10% of their portfolio with a minimum initial investment (across one or more bonds) of €10k – Member States can opt for a minimum denomination of EUR 50k – Both options first require a suitability test.	■ More limited restriction than some national laws, may have a marginal impact in countries with high levels of retail placed issues such as Germany
Home-Host	■ (Article 45 BRRD): – Internal MREL (Article 92 CRR): The pre-positioning requirement is set at 90% to allow for highest end of 75-90% band as per the TLAC term sheet – No cross-border waivers for I-MREL – Preservation of current 'joint decision modalities' – Safe-Harbour clause permitting a 2% RWA increase in I-MREL requirements by host member states (Article 45f, 45h BRRD)	■ Unlikely to be helpful to cross border consolidation, however broadly expected

Appendix: Other regulatory topics

	TLAC	MREL
Scope	■ G-SIBs	■ EU banks and investment firms
Level of application	■ Resolution entities (external TLAC) ■ Material sub-groups (internal TLAC)	■ Solo and consolidated requirements
Minimum level	■ 16% RWA; 6% Leverage ratio until 31 December 2021 ■ 18% RWA; 6.75% Leverage ratio from 1 January 2022	■ Pillar 2 approach (but EBA criteria)
Denominator	■ RWAs and leverage ratio denominator	■ Own funds + Total liabilities
Eligible liabilities	■ Narrow category. Senior preferred waiver 2.5% until December 2021; 3.5% from January 2022	■ Subordination requirements still under discussion
Subordination	■ Mandatory (limited exclusions)	■ Not mandatory (but may be required)
Minimum debt	■ Yes (33% expectation)	■ No
Implementation	■ Phase in from 1 Jan 2019 to 1 January 2022 (or 2025-2028 for emerging market G-SIBs)	■ 1 Jan 2016[(1)]
Disclosures	■ Specified	■ Not covered
Treatment of investments	■ Deduction regime under consultation	■ Not covered

(1) EBA draft assessment criteria allow resolution authority to set lower MREL to enable an appropriate transitional period (up to 4 years).

Appendix: Other regulatory topics

TLAC requirements for G-SIIs

- **Requirement**:
  - **From June 2019 until 31 December 2021:** TLAC requirement of a risk-based ratio of 16% of RWA/ a non-risk based ratio of 6% of Leverage Ratio Exposure Measure, calculated on a consolidated basis at resolution group level
  - **From 1 January 2022:** 18% of Total Risk Exposure Amount (TREA)/6.75% of Leverage Ratio Exposure Measure

  Material subsidiaries of G-SIIs headquartered outside the EU, which are not resolution entities are subject to an internal TLAC requirement at a sub-consolidated level, scaled at 90% of their external TLAC requirement.
- **Capacity**: Only liabilities subordinated to excluded liabilities are eligible for meeting the TLAC requirement. Instruments issued prior to 27 June 2019 are grandfathered in relation to some conditions introduced by the new framework.
- **SRB allowance for senior instruments**:
  - Of up to 2.5% of RWA until 31 December 2021 (3.5% of RWA from 1 January 2022)
  - Where excluded liabilities ranking pari-passu or lower do not exceed 5% of the amount of the own funds and eligible liabilities of the institution

  (In both cases, the allowances will only be possible if not giving rise to material risk of successful legal challenge or valid compensation claims in relation to the no creditor worse off ("NCWO") principle)
- **Disclosure**:
  - CRR requires institutions to disclose their TLAC capacity on a quarterly basis, as part of their key metrics.
  - Further details on the composition of own funds and eligible liabilities, their maturity and main features of TLAC, the amount of issuances included in the senior allowance, the amount of excluded liabilities, and the ranking of eligible liabilities shall be disclosed semi-annually

Obligation to request SRB approval for early repayment of eligible liability instruments

- **Request for approval**: all institutions are required to seek approval from the SRB to call, redeem, repay or repurchase eligible liabilities, including those with residual maturity of less than one year. The CRR introduces two types of permissions for this purpose:
  - **(i) an instrument-by-instrument permissions regime;**
  - **(ii) a general prior permissions regime**, where the institution can perform early repayments for a predetermined amount set by the SRB and for a specified period not exceeding one year
- **Obligation to seek approval**:
  - The obligation applies to G-SIIs and other institutions with MREL decisions higher than the loss absorption amount.
  - For institutions with MREL shortfalls, approvals can be granted only in case of replacement of eligible liabilities instruments by other eligible liabilities instruments or own funds.
- **Permission**: In order to be granted permission to call, redeem, repay or repurchase eligible liabilities instruments, institutions must send an application to the SRB, specifying which type of permission they seek.

Appendix: Other regulatory topics

- The role of ECB Banking Supervision in the consolidation of banks depends on the type of transaction the banks choose. The ECB has a formal role if the transaction between banks implies an acquisition of a qualifying holding or the creation of a new bank, or if the merger involves significant banks and the law in their country gives the power to approve mergers to the supervisor
- In any case, the transaction will be reviewed as part of the ongoing supervision of the institutions involved. This means that the supervisors assess the viability and sustainability of the deal made by the banks to ensure that the resulting banking group will be able to continuously comply with all prudential requirements in the foreseeable future. To this end, **supervisors examine the business model of the bank that will result from the transaction. In particular, they check if the bank has adequate levels of capital and liquidity and if it will be able to maintain them over time.** They also assess if the bank has strong governance with proper steering and is able to generate profits. To sum up: the ECB looks at the business plan, the projections in that plan and their credibility (including execution risk and comparison with peers) and assesses whether the resulting entity can ensure continued compliance with all requirements and buffers
- On 5 April 2019, the ECB stated "Bank consolidation can play an important role in removing excess capacity, enhancing cost efficiency and promoting more focused and credible business models. Cross-border consolidation could also support greater risk diversification and contribute to financial market integration, an important objective within the banking union. Still, it is not the ECB's role to actively promote (or avoid) any form of bank consolidation. As a supervisory authority the ECB has to maintain a neutral stance and assess each project put forward by banks purely on technical grounds."
- **ECB involvement:** The ECB's involvement in a merger depends on the law of the country or countries where the merging banks are headquartered. That's because mergers are not regulated by European law, but by national law. If the law of the country in question grants powers to the national supervisor in this regard, the ECB exercises those powers when it comes to mergers of significant banks supervised directly by the ECB. In Germany, Luxembourg and some other jurisdictions the national supervisor does not have the power to approve mergers. On the other hand, in Italy, Greece, Slovenia and Belgium for example, the national supervisor has the power to approve mergers or is involved in the approval process
- **Too-big-to-fail:** The ECB has no bias against size and does not discourage banks from becoming bigger on principle. Regarding too-big-to-fail, there are internationally agreed standards in place that require large and systemic banks to maintain additional capital buffers and/or loss-absorbing capacities. More specifically, the Financial Stability Board classifies banks according to a specific metric and, as a result, supervisors may request capital add-ons and loss-absorbing capital. The same rules apply to all banks at the global level. Moreover, all banks, regardless of their size, have to be resolvable at all times. To ensure their resolvability, they need simple legal structures and good resolution plans. The Single Resolution Board is responsible for the resolvability assessment and for determining the minimum requirement for own funds and eligible liabilities (MREL) banks need to hold.

Appendix: Other regulatory topics

- On the 31st of October 2018, the EBA published its final Guidelines on management of non-performing and forborne exposures. The Guidelines aim to ensure that banks have adequate prudential tools and frameworks to manage effectively their NPEs. The Guidelines require institutions to establish NPE reduction strategies and introduce governance and operational requirements to support them.
- **The Guidelines introduce a threshold of 5% of gross NPL ratio** as a trigger for developing NPE strategies and applying associated governance and operational arrangements. The EBA stated "This threshold does not indicate an optimal level for NPLs and should not be considered as an automatic target to be used in credit institutions' NPE strategies but sets a prudential framework for stricter supervisory monitoring to guard against rising levels of NPEs." **The EBA added that NPE strategies should target a time-bound reduction of NPEs over a realistic but sufficiently ambitious time horizon.** The level of a 5% gross NPL ratio aims to ensure a minimum level of transparency, and to ensure that credit institutions are prepared to prevent NPEs building up and to take action at an early stage to tackle the issue. The rationale behind applying an NPL threshold is that the majority of exposures on credit institutions' balance sheets that have become non-performing are loans; therefore, a calculation that is based on the share of NPLs better depicts the evolution of asset quality overall and is more risk based
- The EBA commented "**The evidence from wide-ranging asset quality reviews conducted by competent authorities in recent years highlights gaps in credit institutions' credit risk assessment and management practices.** Therefore, these guidelines respond to a legitimate supervisory need to equip credit institutions with a comprehensive set of requirements that should be considered when devising their NPE management framework." The objective of the guidelines is to **increase the convergence of NPE and FBE management practices** across EU Member States, by clarifying how credit institutions should effectively manage and ultimately reduce their non-performing and forborne exposures through the establishment and operationalisation of an NPL strategy that is embedded in the credit institution's overall strategy. Credit institutions are **expected to apply these guidelines as of 30 June 2019** on the basis of the gross NPL ratios calculated at 31 December 2018
- The stock of non-performing loans (NPLs) in the EU banking sector amounted to €989bn at FYE16, €815bn at FYE17 and €779bn in Q1 18, i.e. 5.4%, 4.1% and 3.9% respectively of the total loan portfolio. The EU average NPE ratio was 3.4% in Q1 18The dispersion of the stock of NPEs is uneven across Member States. There are currently 12 Member States experiencing above average NPE ratios, and the scale and the cross-border implications make this an EU-wide problem

Our view: The dispersion of asset quality of European banks by region is still a key residual area to address in the multi year restructuring process of the sector. This aspect is currently receiving considerable regulatory attention and the relevant banks are making strong progress in recuding NPEs. This proposal appear to be a sensible step to avoid a future build up of NPE's

Appendix: Other regulatory topics

- **IFRS 9:** International Financial Reporting Standard 9 (IFRS 9) replaces International Accounting Standard 39 (IAS 39), and will materially influence banks' financial statements, with impairment calculations the most affected. IFRS 9 will cover financial institutions across Europe, Middle East, Asia, Africa, and Oceania
- **IFRS 9 requires banks to switch to recognising and providing for expected credit losses (ECL) on loans, rather than the current practice under IAS 39 of providing only when losses are incurred.** It comes into effect in January 2018 and, as well as introducing ECL provisions, will change the way banks account for a wide range of financial assets
- **3 Stage model:** The three-stage model for impairment based on changes in credit quality since initial recognition **Stage 1:** Includes financial instruments that have not had a significant increase in credit risk since initial recognition or that have low credit risk at the reporting date. For these assets, 12-month ECL are recognised and interest revenue is calculated on the gross carrying amount of the asset. As per Fitch, loans in stage 1 will trigger a capital hit when IFRS 9 is first applied because the standard requires 12-month ECL to be deducted for all loans. **Stage 2:** If the credit risk increases significantly and the resulting credit quality is not considered to be low credit risk, full lifetime ECL are recognised. Lifetime ECL are only recognised if the credit risk increases significantly from when the entity originates or purchases the financial instruments but that do not have objective evidence of a credit loss event. For a financial asset, interest revenue is still calculated on the gross carrying amount of the asset. As per Fitch, the assessment at this stage could likely result in substantial additional impairment charges and high volatility at some banks. **Stage 3:** This stage includes financial assets that have objective evidence of impairment at the reporting date. For these assets, lifetime ECLs are recognised and interest revenue is calculated on the net carrying amount. According to Fitch, the third stage captures loans considered to be credit-impaired, which banks are already reserving so there would not be any notable impact from the transition to IFRS 9 from these loans.
- On 31 May 2017, the EU council published a proposal for an amendment to EU Regulation (No 575/2013) to facilitate the implementation of a transitional period for mitigating the impact of the introduction of IFRS 9 on own funds and the large exposures treatment of certain public sector exposures denominated in non-domestic currencies of Member States. The EU council stated the following in the proposal: "Each institution that uses IFRS to prepare its financial statements will be required to apply IFRS 9 as of the starting date of the institution's first financial year beginning on or after 1 January 2018.
- The application of IFRS 9 may lead to a sudden significant increase in expected credit loss (ECL) provisions and consequently a sudden decrease in institutions' Common Equity Tier 1 (CET1) capital. While discussions are on-going on the longer-term regulatory treatment of provisions, transitional arrangements allowing institutions to mitigate the potential significant negative impact on CET1 capital arising from ECL accounting should be adopted in Regulation (EU) No 575/2013." Hence, the EU council suggested the implementation of a transitional period, which should have a duration of five years, starting from 2018
- Specifically, where an institution's newly incurred ECL provisions exceed a certain threshold, which should be defined as a percentage of the sum of Stage 1 and Stage 2 IFRS 9 provisions on the day of initial application of IFRS 9, the institution should be allowed to include in the amount that it can add in its CET1 capital the part of the newly incurred provisions exceeding that threshold
- The proposed transitional phase in will be non-linear and as follows: **1)** -0,95 in the period from 1 January 2018 to 31 December 2018; **2)** -0,85 in the period from 1 January 2019 to 31 December 2019; **3)** -0,7 in the period from 1 January 2020 to 31 December 2020; **4)** -0,5 in the period from 1 January 2021 to 31 December 2021; **5)** -0,25 in the period from 1 January 2022 to 31 December 2022.

Appendix: Other regulatory topics

The release of the latest draft of text of the CRR2/CRD5/BRRD2 on 15 February package provided clarity on some of the residual uncertainties since the initial draft in November 2016. For European bank bond investors, the most important aspects to note are the following in our view:

- **Governing law: AT1, Tier 2 and MREL product will need to be issued under EU law or if under third partly law requires contractual recognition of EU bail-in powers. AT1 and Tier 2 have grandfathering for 6 years from implementation whereas MREL (issued up to two years post eligibility) is grandfathered to maturity.** Grandfathering for MREL is thus more lenient that for regulatory capital instruments in this context.

Implication: As expected, regulatory capital instruments will need to be **issued under EU law or have contractual recognition of EU bail-in powers. Also, the securities will require set off waivers.** The new news is that grandfathering of 6 years will be applied, confirming general expectations for plausible grandfathering. A few trades in this regard is our long trade on a basket of AT1 Cocos priced partly to perpetuity (please see page 30 of the presentation on the following link This new requirement will make these securities no longer complaint post the grandfathering period and incentive to extend into perpetuity is eliminated.

- **Right of Set off: AT1 and Tier 2 instruments will require set off waivers and grandfathering will be 6 years for implementation. MREL instruments will require the same feature but instruments issued prior to implementation will be grandfathered to maturity. Similar to the governing law aspect, MREL grandfathering is more generous than regulatory capital instruments. Please note the difference in cut off for MREL grandfathering between governing law (issued up to two years post implementation) and waiver of set off (issued pre implementation)**

- **SPV structures:** AT1 and Tier 2 issued by an SPV will be grandfathered in full until 31 December 2021 and will be ineligible thereafter.

Implication: As expected, SPV structured securities will not be ineligible for regulatory capital post 31 December 2021. An example on a trade on this theme is our BUY on the CMZB 8.151% 2031 as per page 36 of our latest presentation.

- **MREL calibration:**

- MREL Subordination – 8% of Total Liabilities and Own Funds subordination requirement, applies to G-SII banks, top tier banks (>100bn) and other systemically risky institutions, with a 'soft-cap' of 27% RWA. Text provides for the resolution authority's ability to require (for up to 30% of the institutions that are G-SIIs, top tier or systemic, that the resolution authority supervises) the greater of 8% of TLOF and 2x(P1+P2R) + CBR.
- MREL Buffers - buffers to sit on top of the MREL requirement and hence MDA apply at the MREL level, in addition to CET1, Tier 1 and Total Capital ratio levels.
- Article 45 (m) BRRD provides for an intermediate date of 1 January 2022, and final MREL deadline of 1 January 2024. Intermediate 2022 target ensures a linear build-up towards fulfilling the requirement.
- Article 45a BRRD provides for mortgage credit institutions (really applies to Danish) to be exempt from MREL
- Contractual recognition of EU bail-in powers in non EU governed law (i.e. third country) securities required
- Implication: The requirement of subordinated MREL will widen the scope of banks that will need to issue Non Preferred senior debt. Up until now, it has really been only the G=Sib banks that have had a mandatory requirement to issue MREL in subordinated form and based on the new rules, all banks with balance sheets above €100bn will need to issue subordinated product (Senior non preferred or Hold Co senior) and will not rely on preferred senior for MREL purposes. At the same time, a two year extension from MREL compliance has been implemented as largely expected.

Appendix: Other regulatory topics

Estimation | Implementation dates assume publication of the legislative package in the Official Journal of the EU in Q2 2019

TLAC transitional regime (2019-2022)
Phase 1: *16% RWA + 6% LRE*
1 January 2019: application

CRD5/CRR2
Q2: *package published in OJ and entered into force*

CRD5 and BRRD application
Q2: transposition deadline by one year after the Directives' entry into force

NSFR
Q2 2021: start date of application

Leverage ratio
3% with 50% G-SII buffer
Q2 2021: start date of application

SA-CCR
Q2 2021: start date of application

Exposure to CCPs
Q2 2021: start date of application

TLAC
Final calibration: *18% RWA + 6.75% LRE*
1 January 2022: application

NSFR
Required Stable Funding for reverse repos
2022: increase in RSF for reverse repos from 0 and 5% to 10 and 15%

EU Holding Company / IPU
Q2 2023: start date of application

NSFR
2024: EC to report on treatment of repos and submit legislative amendments

2019 — 2020 — 2021 — 2022 — 2023 — 2024 — 2025+

Market risk & FRTB
Reporting requirements
By end December 2019: Commission to adopt Delegated Act on reporting requirements

Market risk & FRTB
Reporting under SA
End 2020/start 2021: application of reporting requirements under the standardised approach

Market risk & FRTB
Capital requirement
H2 2020: Commission to adopt legislative proposal

Market risk & FRTB
Reporting under IMA
End 2022/start 2023: application of reporting requirements under the internal models approach

Market risk & FRTB
Capital requirement
2024/2025: start date of application

CRD6/CRR3

Legislative proposal
Implementing the Dec 2017 Basel III package (revised SA for credit risk, revised operational risk and new aggregate capital floor) and the FRTB – expected by end H1 2020

→ Agreement by 2022 at the earliest

→ **New rules estimated to go live in 2024 /2025**

IFRS9
5 year phase-in

Appendix: Other regulatory topics

EU Political Process

March 2019
- EU election campaign begins

15 April 2019
- Deadline for finalisation of negotiated regulatory texts (e.g. RRM package)

23–26 May 2019
- EU Parliament elections

20–21 June 2019
- EU Council to appoint EC President

2–4 July 2019
- New Parliament takes seats

August 2019
- New Commissioners unveiled

November 2019
- New Commission takes office

November 2019
- New ECB President's term starts

Q2/Q3 2020
- Commission expected to publish draft CRD6/CRR3 package

Prudential & Resolution Package (RRM)

April 2019
- Approval vote on the RRM package (CRR2, CRD5, BRRD, SRMR)

May 2019
- Publication in the OJ of RRM package (CRR2, CRD5, BRRD, SRMR)

May 2020
- CRD5 entry into force

Q3 2020
- BRRD2 entry into force

May 2021
- CRR2 entry into force

1 January 2022
- Earliest P2 MREL transitional deadline for 'top tier' banks
- Final P1 MREL requirement deadline

1 January 2024
- P2 MREL disclosures apply
- Final P2 MREL transitional deadlines

EBA/ECB/SRB

May/June 2019
- ECB liquidity stress test exercise begins(2)(3)

Q1/Q3 2019
- EBA Half-year CRD IV/CRR Basel III monitoring reports

Q2 2019
- EBA report to Commission on CRR3 QIS (ex CVA & FRTB)

Q2 2019
- EC BRRD Report

Q3 2019
- EBA report to Commission on CRR3 QIS (CVA & FRTB)

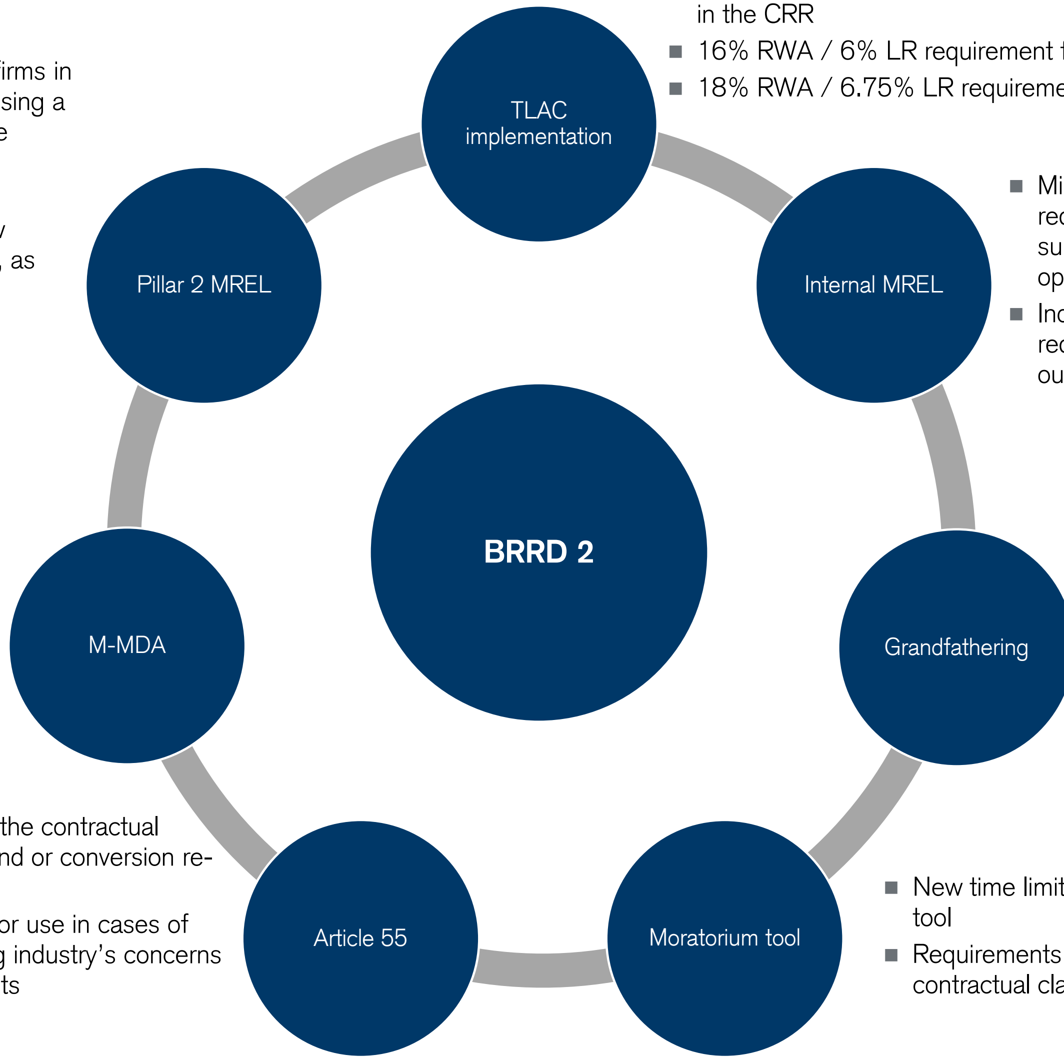
Q3 2019
- ECB SREP bilaterals with banks (on liquidity exercise)

Q4 2019
- Publication of aggregate stress test results (liquidity exercise)

Q4 2020
- EBA BRRD2 Report

(1) Timelines subject to change.
(2) No EBA stress test in 2019, ECB liquidity exercise will be used to calibrate P2G levels.
(3) 2019 SREP dates to be confirmed.

Appendix: Other regulatory topics



- Minimum requirements for TLAC implemented at 'Pillar 1 MREL' in the CRR
- 16% RWA / 6% LR requirement from 1 Jan 2019
- 18% RWA / 6.75% LR requirement from 1 Jan 2022

- Minimum scaled (90%) requirements for material subgroups of non-EU GSIIs operating in the EU
- Individual level MREL requirements for EU banks as set out in the BRRD

- Perpetual grandfathering of existing MREL instruments

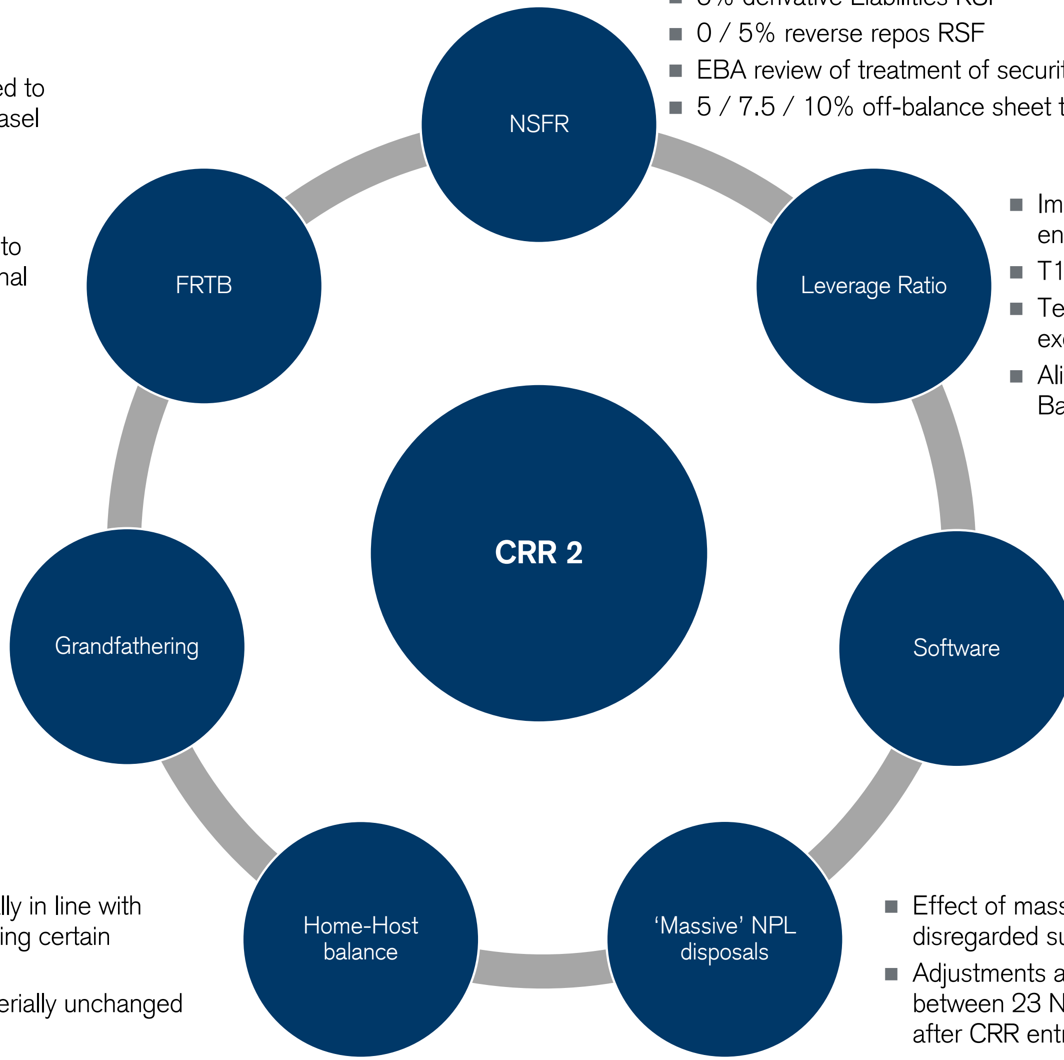
- New time limited (max 2-day) pre-resolution tool
- Requirements also to recognize stays in contractual clauses under Article 71a BRRD

- Article 55 requirements for the contractual recognition of write-down and or conversion re-written
- Now includes clear waiver for use in cases of nonpracticability, addressing industry's concerns with the original requirements

- New approach to maximum distribution amount restrictions in the case it breaches MREL (particularly in cases of wider market disruption)

- MREL requirements for all firms in scope of the BRRD, comprising a loss-absorbing and separate recapitalization elements
- Requirement for Pillar 1 subordinated MREL for new category of 'top-tier' banks, as well as ability for resolution authorities to require subordination to certain thresholds.

Appendix: Other regulatory topics



NSFR

- 5% derivative Liabilities RSF
- 0 / 5% reverse repos RSF
- EBA review of treatment of securities hedging
- 5 / 7.5 / 10% off-balance sheet trade finance RSFs

Leverage Ratio

- Implementation 2 years after CRR entry into force
- T1 capital composition
- Temporary central bank exposure exemption
- Alignment of G-SII buffer with Basel calibration

Software

- Non-deduction from capital of prudently value software
- EBA RTS to specify application of nondeduction

'Massive' NPL disposals

- Effect of massive disposals can be disregarded subject to certain requirements
- Adjustments are eligible for disposals between 23 November 2016 and 3 years after CRR entry into force

Home-Host balance

- Waivers maintained materially in line with current CRR, whilst exempting certain investment firms
- Intragroup treatment is materially unchanged

Grandfathering

- 6 year grandfathering of CET1
- Perpetual grandfathering of MREL

FRTB

- Legal instruments introduced to allow alignment with final Basel text
- Requirements to apply as reporting requirement, with binding capital requirement to follow as soon as international standard finalised

Appendix: Other regulatory topics

CRD 5

Intermediate Parent Undertaking (IPU)

- Allow 2 IPUs, considering mandatory separation requirements and efficiency of resolvability
- Apply where EU footprint is greater than €40bn
- 3-year implementation period (after date of application)

Pillar 2 Guidance

- Final agreement removes earlier proposals of P2G floor and removes earlier proposals that potentially prohibited P2G offset with combined buffers

G-SII Methodology

- Introduction of a new alternate methodology that excludes intra-SSM assets and liabilities from cross-border activity indicator
- Use of alternate methodology to apply lower capital charge at discretion of competent or designated authority
- Capital charge floored at 1%

Appendix: Other regulatory topics

- On the 7th of December 2017, the Basel Committee endorsed the outstanding Basel III post-crisis regulatory reforms. **The revised standards will take effect from 1 January 2022 and will be phased in over five years.** The reforms endorsed by the Basel Committee includes the following elements: **1)** A revised standardised approach for credit risk, which will improve the robustness and risk sensitivity of the existing approach; **2)** Revisions to the internal ratings-based approach for credit risk, where the use of the most advanced internally modelled approaches for low-default portfolios will be limited; **3)** Revisions to the credit valuation adjustment (CVA) framework, including the removal of the internally modelled approach and the introduction of a revised standardised approach; **4)** A revised standardised approach for operational risk, which will replace the existing standardised approaches and the advanced measurement approaches; **5)** Revisions to the measurement of the leverage ratio and a leverage ratio buffer for global systemically important banks (G-SIBs), which will take the form of a Tier 1 capital buffer set at 50% of a G-SIB's risk-weighted capital buffer; and **6)** An aggregate output floor, which will ensure that banks' risk-weighted assets (RWAs) generated by internal models are no lower than 72.5% of RWAs as calculated by the Basel III framework's standardised approaches. Banks will also be required to disclose their RWAs based on these standardised approaches
- With respect to the **revised standardised approach for credit risk**, for residential real estate exposures, more risk-sensitive approaches have been developed, whereby risk weights vary based on the LTV ratio of the mortgage (instead of the existing single risk weight) and in ways that better reflect differences in market structures

Residential real estate exposures

LTV bands	Below 50%	50% to 60%	60% to 70%	70% to 80%	80% to 90%	90% to 100%	above 100%	Criteria not met
General RRE								
Whole loan approach RW	20%	25%	30%		40%	50%	70%	RW of counterparty
Loan-splitting approach[2] RW	20%		RW of counterparty					RW of counterparty
Income-producing residential real estate (IPRRE)								
Whole loan approach RW	30%	35%	45%		60%	75%	105%	150%

Source: Bank For International Settlements

[2] Under the loan-splitting approach, a supervisory specified risk weight is applied to the portion of the exposure that is below 55% of the property value and the risk weight of the counterparty is applied to the remainder of the exposure. In cases where the criteria are not met, the risk weight of the counterparty is applied to the entire exposure

Appendix: Other regulatory topics

- With respect to the **leverage ratio**, the leverage ratio G-SIB buffer must be met with Tier 1 capital and is set at 50% of a G-SIB's risk-weighted higher-loss absorbency requirements. For example, a G-SIB subject to a 2% risk-weighted higher-loss absorbency requirement would be subject to a 1% leverage ratio buffer requirement
- The leverage ratio buffer takes the form of a capital buffer akin to the capital buffers in the risk-weighted framework. As such, the leverage ratio buffer will be divided into five ranges. **As is the case with the risk-weighted framework, capital distribution constraints will be imposed on a G-SIB that does not meet its leverage ratio buffer requirement**
- A G-SIB that does not meet one of these requirements (CET1 risk-weighted ratio and Tier 1 leverage ratio) will be subject to the associated minimum capital conservation requirement (expressed as a percentage of earnings). A G-SIB that does not meet both requirements will be subject to the higher of the two associated conservation requirements
- As an example, the table below shows the minimum capital conservation standards for the CET1 risk-weighted requirements and Tier 1 leverage ratio requirements of a G-SIB in the first bucket of the higher loss-absorbency requirements (i.e. where a 1% risk-weighted G-SIB capital buffer applies)

Capital conservation ratios for a G-SIB subject to a 1% risk-weighted buffer and 0.5% leverage ratio buffer — Table 4

CET1 risk-weighted ratio	Tier 1 leverage ratio	Minimum capital conservation ratios (expressed as a percentage of earnings)
4.5–5.375%	3–3.125%	100%
> 5.375–6.25%	> 3.125–3.25%	80%
> 6.25–7.125%	> 3.25–3.375%	60%
> 7.125–8%	> 3.375–3.50%	40%
> 8.0%	>3.50%	0%

Source: Bank For International Settlements

- **The BCBS also agreed that jurisdictions may exercise national discretion in periods of exceptional macroeconomic circumstances to exempt central bank reserves from the leverage ratio exposure measure on a temporary basis.** Jurisdictions that exercise this discretion would be required to recalibrate the minimum leverage ratio requirement commensurately to offset the impact of excluding central bank reserves, and require their banks to disclose the impact of this exemption on their leverage ratios

Appendix: Other regulatory topics

- With respect to **output floor**, under the revised output floor, banks' risk-weighted assets must be calculated as the higher of: **i)** total risk-weighted assets calculated using the approaches that the bank has supervisory approval to use in accordance with the Basel capital framework (including both standardised and internal model-based approaches); and **ii)** 72.5% of the total risk-weighted assets calculated using only the standardised approaches
- Banks will also be required to disclose their risk-weighted assets based on the revised standardised approaches. Details about these disclosure requirements will be set forth in a forthcoming consultation paper
- Regarding to the **transitional arrangements**, the table below summarises the implementation dates and transitional arrangements related to the standards described above

Implementation dates of Basel III post-crisis reforms and transitional arrangement for phasing in the aggregate output floor — Table 5

Revision	Implementation date
Revised standardised approach for credit risk	• 1 January 2022
Revised IRB framework	• 1 January 2022
Revised CVA framework	• 1 January 2022
Revised operational risk framework	• 1 January 2022
Revised market risk framework	• 1 January 2022[6]
Leverage ratio	• Existing exposure definition:[7] 1 January 2018 • Revised exposure definition: 1 January 2022 • G-SIB buffer: 1 January 2022
Output floor	• 1 January 2022: 50% • 1 January 2023: 55% • 1 January 2024: 60% • 1 January 2025: 65% • 1 January 2026: 70% • 1 January 2027: 72.5%

Source: Bank For International Settlements

Manageable impact: The EBA's Cumulative Impact Study indicated an aggregate impact on the CET1 ratio, calculated according to the revised standards, for a sample of 88 banks of 0.6 percentage points lower

:[6] This will constitute both the implementation and regulatory reporting date for the revised market risk framework published in January 2016

[7] Based on the January 2014 definition of the leverage ratio exposure measure. Jurisdictions are free to apply the revised definition of the exposure measure before 1 January 2022

Appendix: Other regulatory topics

– The European Banking Authority published a report assessing the impact of the final Basel III reforms on Thursday 4 October 2018. The report assesses the impact on EU banks of the final revisions of credit risk, operational risk, and leverage ratio frameworks, as well as of the introduction of the aggregate output floor. It also quantifies the impact of the new standards for the market risk (fundamental review of the trading book, FRTB), as set out in January 2016, and credit valuation adjustment (CVA). The impact is assessed on the assumption of the full implementation of the Basel reforms. In addition, in conjunction with the BCBS Basel III regular monitoring exercise, this report gives an update on the progress of the European banks in converging towards stricter capital requirements.

Impact of Final Basel III Review-December 2017:

– The weighted average change in total T1 minimum required capital (MRC) is 16.7% across all 101 banks. The impact of the risk-based reforms across all banks (21.8%) is partially offset by the fact that some banks are constrained by the leverage ratio in the current framework.

Table 1: Change in total T1 MRC as percentage of the overall base MRC due to the full implementation of Basel III (2027) (%)

	Credit risk	Market risk	CVA	Operational risk	Output floor	Total risk-based	Revised LR	TOTAL
All banks	4.5	2.0	3.3	5.7	6.3	21.8	-5.1	16.7
Group 1	4.1	2.3	3.8	6.4	6.5	23.0	-4.3	18.7
Of which: G-SIIs	4.7	3.4	5.4	7.5	5.4	26.4	-1.0	25.4
Group 2	6.7	0.6	0.4	1.4	5.3	14.4	-10.6	3.8

Source: EBA Quantitative Impact Study (QIS) data (December 2017)

Capital shortfalls:

– The total shortfall due to the implementation of the final Basel III minimum common equity tier 1 (CET1) required capital is € 6.0bn (€5.0bn of which for GSIIs). Since the actual capital held by banks also covers Pillar 2 requirements, OSIIs surcharges, counter- cyclical capital buffer and systemic risk buffer, the figures below may underestimate the actual shortfall.

Table 2: Shortfall of current available capital, due to the full implementation of CRR/CRD IV and Basel III (2027) (billion EUR)

	Capital shortfalls – CRR/CRD IV (fully phased-in)			Capital shortfalls – Basel III framework (2027)		
	CET1	Tier1	Additional LR Tier 1	CET1	Tier 1	Additional LR Tier 1
All banks	0.0	0.0	1.1	6.0	14.6	0.3
Group 1	0.0	0.0	0.0	5.0	13.2	0.0
Of which: G-SIIs	0.0	0.0	0.0	5.0	12.0	0.0
Group 2	0.0	0.0	1.1	1.0	1.4	0.3

Source: EBA QIS data (December 2017)

Source: European Banking Authority

Appendix: Other regulatory topics

Impact on Capital Ratios:

– When considering the entire sample, the risk based capital ratios, namely the CET1, T1 and total capital ratios, fall by 280, 330 and 400 basis points respectively (as per table below). The leverage ratio of the entire sample increases by 30 basis points (from 5.1% to 5.4%). The drop is greater for Group 1 banks than for Group 2 banks.

Table 3: Capital ratios: fully phased-in CRR/CRD IV and final Basel III framework (2027) (%)

	Capital ratios – CRR/CRD IV (fully phased-in)				Capital ratios – Basel III framework (2027)			
	CET1	Tier 1	Total capital	LR	CET1	Tier 1	Total capital	LR
All banks	14.1	15.6	18. 5	5.1	11.3	12.3	14.5	5.4
Group 1	13.8	15.4	18.3	5.1	11.1	12.1	14.3	5.4
Of which: G-SIIs	12.7	14.6	17.3	4.8	10.1	11.3	13.3	5.2
Group 2	16.1	16.7	19.5	5.4	13.1	13.7	15.9	5.5

Source: EBA QIS data (December 2017)

NSFR status:

– Banks in the sample need additional stable funding of €27.8bn to fulfill the minimum requirement of 100% , equivalent to 4.2% of total weighted available stable funding (ASF) (€666bn) and 2.7% of total assets (€1tn) of all non compliant banks participating in the NSFR-related part of this exercise.

– The overall positive trend is also reflected in the reduction in the shortfall in stable funding needed to meet the 100% ratio requirement, which, compared with June 2011, decreased by 99% (from €1,279bn to €3bn) for Group 1 banks and by 98% (from €158bn to €2bn) for Group 2 banks.

Source: European Banking Authority

Appendix: Other regulatory topics

- **Background:** It is generally expected that English law bonds will not be eligible for MREL nor regulatory capital at some point post Brexit unless such securities include contractual recognition of EU bail-in powers. Under the proposed CRDV/CRR2/BRRD2 reform, EU Own Funds (i.e. regulatory capital) and EU MREL eligibility requires whether EU governing law or if governed under the law of a third country (i.e. non EU), a contractual recognition of the EU bail-in powers is required. They key is whether any transitional arrangement will be put in place in this regard or not. The SRB states that they are willing to extend MREL transitional arrangements for banks with MREL shortfalls due to English law resultant ineligibility.
- **Potential Implications:** While it is at this stage thus unclear from exactly when English law bonds will become regulatory capital and MREL ineligible, it is a matter of time. In terms of valuation impact, this loss of regulatory or MREL eligibility can be a positive or a negative factor. From high cash price regulatory capital instruments, it could be a negative due to potential risk of a regulatory par call. For some perpetuals with extension risk, like the discount perpetual segment for instance, this could be a positive due to loss of Tier 2 treatment into perpetuity and potential for liability management (.e.g. tender offer, consent solicitation, exchange offer)
- **SRB Position:** The SRB (Single Resolution Board) stated in its position paper titled Single Resolution Board expectations to ensure resolvability of banks in the context of Brexit that as a result of the UK leaving the EU, some UK or third country banking groups have decided to relocate activities currently UK-based to the EU27 or to increase the extent or scope of existing activities therein. Also, some banks under the SRB's remit may have significantly increased business or operational activities in third countries. The SRB and the Supervisory Board of the ECB are cooperating closely to ensure the requests of both authorities are aligned and conveyed to banking groups in a coherent and effective manner. The elements presented hereafter are consistent with the EBA's Opinions on Brexit (EBA/Op/2018/05 and EBA/Op/2017/12) and in line with international standards on resolvability. In the particular context of Brexit, the SRB reiterates its core requirements in the interest of transparency. They do not preclude future SRB policy development. The expectations set out in this Position Paper are aligned with the working priorities communicated on an individual basis to banks which are already under the SRB's remit. They will be relevant for banks with the above characteristics which will fall under the SRB's remit in the future. On the context of New MREL issuances, it was stated that banks are expected to

    a. **Include contractual clauses in issuances governed by the laws of the UK or third countries by which holders recognize that the liability may be subject to the write-down and conversion powers and other relevant powers of EU resolution authorities** and be prepared to demonstrate that any decision of an EU27 resolution authority would be effective.

    b. **Consider issuing instruments**, which are intended to be eligible to meet the MREL target, **under the governing law of one of the EU27 Member States,** to achieve legal certainty with regards to their loss-absorbing capacity.

Appendix: Other regulatory topics

SRB Position (Continued): With regard to the stock of issuances governed by English or third country laws, it was stated that:

In the case that banks have an MREL shortfall as a consequence of issuances governed by the laws of the UK being considered ineligible, or where a significant stock of such liabilities could affect resolvability (e.g. if such liabilities could not be exposed to losses but rank pari passu with MREL eligible liabilities negatively impacting the no creditor worse-off risk), **the SRB will consider each situation on a case-by-case basis, while ensuring consistency across all banks under its remit. This may entail an extension of transitional periods for banks having MREL shortfalls as a consequence of ineligibility of the issuances governed by the law of the UK for MREL purposes**. Banks are expected to engage in a dialogue with the SRB on their MREL issuance planning to address possible shortfalls in line with the SRB MREL policy and/or on the potential impact on resolvability related to their stock of instruments intended to be eligible to meet the MREL target. **Our view:**

- **Legacy Perpetual securities:** We do not think this alters significantly the redemption related dynamics because the bulk of securities are to be phased-out in 2022 in any case because these legacy securities do not meet CRD IV/CRR requirements. For the small portion of Non Step Securities that may qualify as Tier 2 into perpetuity that are issued under English law and Discount Perpetuals, such securities of EU banks will likely lose regulatory capital treatment on the back of English governing law ineligibility at the end of any transitional arrangement
- **CRD IV compliant Tier 2 securities:** With regard to very long duration securities, the lack of regulatory capital and MREL treatment could result in regulatory calls (if applicable) or liability management (if not applicable) upon loss of regulatory capital treatment on the back of English governing law ineligibility
- **CRD IV compliant AT1 securities:** The lack of regulatory capital treatment could result in regulatory calls (if applicable) or reduce extension risk, depending on coupon and reset levels. The timing of the expiry of any transitional arrangement will also have an impact on whether if this is a potential negative (regulatory par call risk) or a positive (reduced extension risk). Most of the more recent issued AT1s with low back end coupons priced with some extension are not having this governing law flaw as issuers have been aware of this issue for some time and such more recent issuance has been either under domestic (EU) law or when English law has been used, included contractual recognition of EU bail-in powers to ensure longer term eligibility.
- **Preferred Senior:** Generally not an issue except potentially for a small portion of more recently securities that have calls on loss of MREL treatment
- **Non Preferred Senior:** Typically do not have calls for loss of MREL (other than some newer securities) and could be subject to liability management if MREL eligibility is lost

Appendix: Other regulatory topics

- **Historical situation:** Historically, there have been very limited options for governments to deal with distressed banks. If no private sector support was forthcoming, the relevant government had one of two options: Support the bank as a going concern (through capital injection and/or liquidity support) or liquidate the bank through an insolvency process. The latter was typically deemed unattractive for several reasons, not least the fact that wholesale senior unsecured creditors rank pari passu (or equal) to all deposits and losses on insured deposits would be a burden for the relevant state through the Deposit Guarantee Scheme related obligation. Additionally, contagion to other banks in such a country and beyond will occur due to the resultant forced selling of assets with negative implications for capital positions and funding access. The rigid legislative frameworks often resulted in governments with no other option than to support distressed banks as going concerns without any material creditor burden sharing.
- **Imposing losses on bank creditors outside a liquidation gathered support:** The concept of imposing losses on creditors, while the bank's operations continue with minimal disruption gained considerable support during the banking crises as the burden on governments to support banks increased. The FSB led the initiative and produced a framework for countries to consider in the implementation of Resolution Regime that provide such powers.
- **EU Resolution Regime Framework:** An agreement was reached on 12 December 2013 between the European Parliament, EU Member States and the Commission on the Bank Recovery and Resolution Directive (RRD) and on 15 April the EU Parliament approved the RRD. The RRD was applied by member states from 1 January 2015 with the Bail-in tool applying from 1 January 2016 to all outstanding and newly issued debt

Appendix: Other regulatory topics

- **Scope:** The Directive covers EU credit institutions and investment firms, financial holding companies and parent financial holding companies established in the EU and branches of institutions that are established outside the EU.
- **Objectives:** Resolution objectives are: **1)** to ensure the continuity of critical functions; **2)** to avoid significant adverse effects on financial stability, in particular by preventing contagion, including to market infrastructures, and by maintaining market discipline; **3)** to protect public funds by minimising reliance on extraordinary public financial support; and **4)** to protect depositors covered by Directive 94/19/EC and investors covered by Directive 97/9/EC; **5)** to protect client funds and client assets.
- **Trigger:** Resolution action shall take place if all of the following conditions are met: **1)**The institution is failing or likely to fail shall be made by the competent authority, after consulting with the resolution authority; **2)** having regard to timing and other relevant circumstances, there is no reasonable prospect that any alternative private sector measures, including measures by IPS, or supervisory action, including early intervention measures or the write down or conversion of capital instruments in accordance with Article 59(2) taken in respect of the institution, would prevent the failure of the institution within a reasonable timeframe; **3)** a resolution action is necessary in the public interest. **Please note that Article 59 provides the power to write down or convert relevant capital instruments independently of resolution action.**
- **Deemed to be failing or likely to fail:** An institution shall be deemed to be failing or likely to fail in one or more of the following circumstances: **1)** the institution is in breach or will be in breach, in the near future, of the requirements for continuing authorisation; **2)** the assets of the institution are or will be, in the near future, less than its liabilities; **3)** the institution is or will be, in the near future, unable to pay its debts or other liabilities as they fall due; **4)** extraordinary public financial support is required with certain exceptions

Appendix: Other regulatory topics

- **Resolution Tools:**
  - **Transfer Tools: Sale of business tool**, **Bridge institution tool** or **Asset separation tool**
  - **Bail-In Tool:** Write-down and convert liabilities
- **Safeguard to Creditors:** The only safeguard to bank creditors is that their outcome in a resolution should be **no worse off than in a liquidation**. The outcome in a liquidation will of course be hypothetical and the assessment of the outcome for each class of creditor will be very sensitive to assumptions on asset recovery in such a hypothetical liquidation.
- **Effective date:**
  - Member States apply those provisions from **1 January 2015**
  - Member States apply the **Bail-in tool provisions from 1 January 2016**
- **Depositor preference:** Member States shall ensure that in national law governing normal insolvency proceedings: **1)** Eligible deposits from natural persons and micro, small and medium-sized enterprises shall have a higher priority ranking than the claims of ordinary unsecured, non-preferred creditors; **2)** Covered deposits shall have a higher priority ranking than that part of eligible deposits from natural persons and micro, small and medium-sized enterprises which exceed the coverage level; and **3)** The ranking of the deposit guarantee scheme subrogating to the rights and obligations of covered depositors in insolvency shall correspond to the ranking of covered deposits.

  EU member states needed to change national insolvency laws to implement depositor preference because depositors were still treated pari passu to all other unsecured senior creditors in the insolvency laws of most EU countries. Given the principle that no creditor should be worse off than in a liquidation, the ranking of creditors under the Resolution Regime directive cannot be inconsistent with domestic insolvency law ranking of the EU Member countries.

Link to the report: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fNONSGML%2bCOMPARL%2bPE-497.897%2b01%2bDOC%2bPDF%2bV0%2f%2fEN

Appendix: Other regulatory topics

- **Exclusions from bail-in:** The following creditors will be excluded from Bail-in, amongst others:
  - Covered (or insured) depositors
  - Covered bonds and other secured liabilities (to the extent that secured assets cover the liability)
  - Short term debt with original maturities of less than seven days
  - Other, including liabilities to employees relating to compensation, trade creditors relating to critical functions and tax liabilities
- **Minimum loss absorption before other creditors can be excluded:**
  - A resolution authority can decide to exclude or partially exclude an eligible liability or class of eligible liabilities; but Resolution Fund(s) can only be used in such a scenario if a contribution to loss absorption and recapitalisation equal to an amount not **less than 8% of the total liabilities and capital** collectively has been made by shareholders, capital instrument holders and creditors. The contribution of the relevant Resolution fund in such a scenario **may also not exceed 5% of the total liabilities and capital collectively**
  - **This is important as it limits the extent to which creditor loss absorption can be avoided by using State funding or Resolution Funds and effectively introduce mandatory creditor burden sharing before any other non private sector aid can be provided to a bank**
- **Minimum requirement for bail-inable capital:** Member States shall ensure that institutions meet, at all times, a minimum requirement for own funds and eligible liabilities (MREL). The minimum requirement shall be calculated as the amount of own funds and eligible liabilities expressed as a percentage of the total liabilities and own funds of the institution. The EC shall, if appropriate, submit by 31 December 2016 to the European Parliament and the Council a legislative proposal on the harmonised application of the minimum requirement for own funds and eligible liabilities

Link to the RRD: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bTA%2b20140415%2bTOC%2bDOC%2bXML%2bV0%2f%2fEN

Appendix: Other regulatory topics

- **Will state-aid to a bank still be possible?** The EU Resolution Regime Reform is clearly designed to avoid state aid to distressed banks and rather shift the burden to shareholders and creditors.
- **From optional toolkit to mandatory toolkit:** The EU RRD has shifted the emphasis to a mandatory use of such resolution tools and resultant losses on creditors rather than to use such tools on an optional basis. In our view, the ability to provide government support without creditor burden sharing will be limited and fall within the exceptional circumstances below: **Resolution will not be triggered on the grounds of public support if**, in order to remedy a serious disturbance in the economy of a Member State and preserve financial stability, **the extraordinary public financial support takes any of the following forms:**

  (i) a **State guarantee to back liquidity facilities provided by central banks according to the central banks' conditions** or (ii) a **State guarantee of newly issued liabilities or**

  (iii) an **injection of own funds or purchase of capital instruments at prices and on terms that do not confer an advantage upon the institution**, where neither the circumstances set out in points (a), (b) or (c) of paragraph 2 of this Article nor the circumstances set out in Article 51(1) are present at the time the public support is granted.

  In each of the cases mentioned in points (i), (ii) and (iii) the guarantee or equivalent measures referred to therein **shall be confined to solvent institutions and shall be conditional on final approval under State aid rules**. These measures shall be of a **precautionary and temporary nature** and shall be proportionate to remedy the consequences of the serious disturbance and shall not be used to offset losses that the institution has incurred or is likely to incur in the near future. Support measures under point (iii) shall be limited to injections necessary to address capital shortfall established in the national / Union / SSM wide stress tests, asset quality reviews or equivalent exercises conducted by ECB / EBA / national authorities, where applicable, confirmed by the competent authority.

Appendix: Other regulatory topics

- **Effective date:** From 1 August 2013 new state aid rules apply to banks
- **Background:** The EC stated "[…] differences in the approach to burden-sharing between Member States have led to divergent funding costs between banks depending on the perceived likelihood of a bail-in as a function of a Member State's fiscal strength. They pose a threat to the integrity of the single market and risk undermining the level playing field which state aid control aims to protect"
- **Mandatory junior debt principal loss absorption required going forward before state aid can be provided:**
  - In the case of **capital shortfalls**, junior creditors (and shareholders) will be required to contribute as a first resort, before banks can ask for public funding
  - In this context, **"capital shortfall"** refers to a capital shortfall established in a capital exercise, stress test, asset quality review or an equivalent exercise at Union, euro area or national level, where applicable confirmed by the competent supervisory authority. Such public support is normally of a permanent nature and cannot be easily undone
  - A capital raising plan, in conjunction with a thorough asset quality review of the bank and a forward looking capital adequacy assessment, should enable the Member State, jointly with the Commission and the competent supervisory authority, to determine precisely the (residual) capital shortfall of a bank that needs to be covered with state aid. Any such residual capital shortfall which needs to be covered by State aid requires the submission of a restructuring plan
  - In the capital raising plan endorsed by the competent supervisory authority, the beneficiary should identify and to the extent possible, without endangering viability, carry out all capital raising measures that can be implemented. Such measures should include, amongst a rights issue and other measures: **voluntary conversion of subordinated debt instruments into equity on the basis of a risk-related incentive; liability management exercises which should in principle be 100% capital generating if the capital shortfall cannot be overcome in full and therefore state aid is required**

Link to the press release and legislation: http://europa.eu/rapid/press-release_IP-13-672_en.htm and http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0730(01)&from=EN

Appendix: Other regulatory topics

- **Burden-sharing by the shareholders and the subordinated creditors**: The EC states that adequate burden-sharing will normally entail, after losses are first absorbed by equity, contributions by hybrid capital holders and subordinated debt holders. **Hybrid capital and subordinated debt holders must contribute to reducing the capital shortfall to the maximum extent. Such contributions can take the form of either a conversion into Common Equity Tier 1 or a write-down of the principal of the instruments. In any case, cash outflows from the beneficiary to the holders of such securities must be prevented to the extent legally possible. The EC will not require contribution from senior debt holders (in particular from insured deposits, uninsured deposits, bonds and all other senior debt) as a mandatory component of burden-sharing under State aid rules whether by conversion into capital or by write-down of the instruments.** If the capital raising measures cannot be implemented within six months from the submission of that plan, the EC will consult the competent supervisory authority to assess whether it should take those proposed measures into account as capital raising measures
- **Principle of "No Creditor worse off than in a liquidation" applies:** In the context of implementing burden sharing, the "no creditor worse off principle" should be adhered to. Thus, subordinated creditors should not receive less in economic terms than what their instrument would have recovered in a liquidation without any state aid
- **Exceptional instances:** An exception to the requirements mentioned above can be made where implementing such measures would endanger financial stability or lead to disproportionate results

Our view:

- **Previously, mandatory creditor burden sharing required by the EC as a condition of approving state aid was limited to cancellation of discretionary coupons for a few years and hence not very onerous. Since this new Communication, effective from 1 August 2013, mandatory principal loss absorption of junior debt is required before state aid will be approved as we have seen in Banco Espirito Santo SA. This is a very material change although in line with expectations of a shift in the political landscape in Europe towards mandatory burden sharing of bank creditors before state aid can be used**

Link to the report: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:216:0001:0015:EN:PDF

Appendix: Other regulatory topics

- Under article 32 4. (d) extraordinary public financial support can be granted in order to remedy a serious disturbance in the economy of a Member State and preserve financial stability, in the form for instance of an injection of own funds or purchase of capital instruments at prices and on terms that do not confer an advantage upon the institution
- This should be confined to solvent institutions and shall be conditional on final approval under the Union State aid framework (2013/C 216/01). Those measures shall be of precautionary and temporary nature and shall be proportionate to remedy the consequences of the serious disturbance and shall not be used to offset losses that the institution has incurred or is likely to incur in the near future
- **Bank Deemed Solvent**

  (i) Market Solution/Full private sector solution

  (ii) Article 32 4. (d) BRRD precautionary recapitalisation to preserve financial stability subject to State aid ruling (2013/C 216/01) requiring subordinated debt burden sharing (debt for equity swap or write down with NCWOL principle applying)

  (iii) Article 32 4. (d) BRRD precautionary recapitalisation to preserve financial stability with State aid ruling (2013/C 216/01) requiring no subordinated debt burden sharing under article 45 of the State aid communication 2013/C 216/01 if this would endanger financial stability or lead to disproportionate results
- **Bank Deemed Insolvent**

  (i) PONV-prompted write down or debt for equity conversion of subordinated debt

  (ii) Resolution with creditor losses (bail-in or transfer tool) to required capitalisation and no State aid or Resolution funds until 8% of the capital structure absorbs losses

  (iii) Liquidation process under local insolvency law which could include state aid (as per Veneto banks case) under 2013 State Aid rules to preserve financial stability and to remedy a serious disturbance in the economy of a Member State

Our view:

- **The implementation of a mandatory bail-in regime before the banks have fully implemented a bail-inable debt stack that is reliably loss absorbent and of sufficient size was always flawed and hence no surprise that the flexibility in the laws are used to achieve a sensible outcome. The desired mandatory bail–in regime in Europe should have been synchronised from the outset with compliant minimum bail-inable debt stacks and until that is in place, the flexibility within the rules will be used to ensure a pragmatic outcome. It is reasonable to expect that the use of flexibility will wane as the banks have MREL stacks that can be bailed in without restrictions and until then, the use of flexibility will likely prevail.**

Appendix: Other regulatory topics

- The Single Resolution Board (SRB) said in a statement on 20 June 2018 that it welcomes clarifications and guidance provided by the SRB Appeal Panel in its new decisions regarding Banco Popular Espanol. The SRB is currently analysing these decisions and assessing the steps that need to be taken to implement them
- It added that the **SRB Appeal Panel, after balancing the interests involved, has upheld the stance of the SRB with respect to most of the requested documents, confirming that the SRB assessment was "done in compliance with the applicable procedural rules, that the duty to state reasons has been complied with and there has not been a manifest error of assessment or misuse of power".** However, for certain documents, such as the Valuation Reports, the 2016 Resolution Plan and the 2017 Critical Functions Report, the SRB Appeal Panel has remitted the decisions to the Board to ensure compliance with the findings provided in its decisions regarding the respective documents.
- Bloomberg reported in an article relating to the bondholder litigation relating to the 2015 bail-in of certain bondholders in Novo Banco that that the Bank of Portugal says that EU rules allow it to treat the affected bondholders differently to other foreign, albeit European, creditors. Reportedly, the central bank said in its filing that there was "no direct or indirect discrimination on the grounds of nationality" because it didn't know the identities of the bond holders and Portuguese investors were also affected by the decision. But it argued that even if there had been discrimination, it would be "abundantly justified" in order to safeguard the financial system. The Portuguese central bank's lawyers said in a Lisbon Administrative Court filing in January seen by Bloomberg that "when analysing an alleged discrimination against a "foreigner" vis-a-vis a "national", it naturally involves a foreigner that is a citizen of another EU member state," European courts do not refer to foreign investors "as if it is intended to include investors from North Korea, from the USA or the Cayman Islands."

Our view:

- **The resolution decisions of Banco Popular Espanol (2017) and Novo Banco (2015) continue to linger on and are closely followed by the bank credit investor community. We have deemed Banco Popular to have a capital shortfall not being able to be met with private capital and hence the bail in of the junior debt of the bank was inevitable in our view. However, some procedural aspects could have been improved but the SRB is unlikely to be deemed to have taken an inappropriate action that has resulted in a material different outcome for the junior bondholders. With regard to Novo Banco, although our trade idea at the time of the bail in resulted in a positive outcome due to a sell recommendation on some of the transferred bonds (against a long in long duration bonds left in the good bank), the unequal treatment of bondholders in a resolution should generally be avoided in our view, even though the BRRD allows it. The practice of compensating retail bondholders outside the estate of the relevant bank and to treat all bondholders of the same class the same within the estate is more appropriate in our view. In Novo Banco, the bailed-in bondholders will at least recover the calculated No Creditor Worse off amount and possibly higher. In a more broader context, it is very clear to us that the appetite for higher yielding bank securities in Europe is lower as a result of the above events. The importance of differentiating between insolvent banks with acute capital shortfalls and those that are solvent will have to improve in order to restore efficiency in European bank credit. In addition, clearer visibility on resolution and equal treatment of bondholders will be another prerequisite. Until then, the risk-averse approach to these situations and reduced interest has created attractive opportunities.**

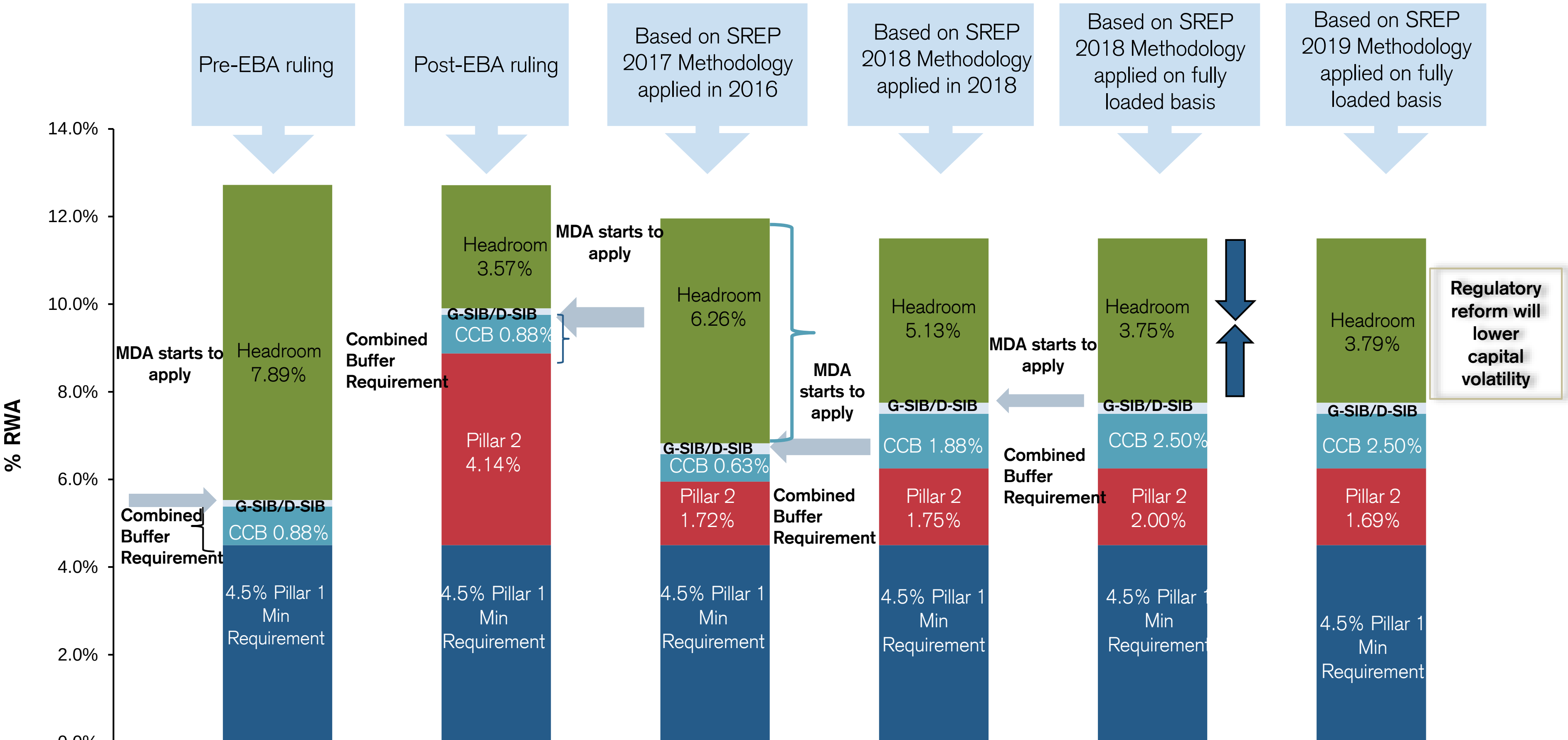
Appendix: Other regulatory topics

- On the 30th of May 2018, the European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA) published a joint statement encouraging institutions, market and resolution authorities to properly consider retail holders of debt financial instruments subject to the Bank Recovery and Resolution Directive (BRRD) when carrying out their respective tasks
- The EBA commented “ [ ] even in cases of resolution, **particular care should be taken in the implementation of bail-in in the presence of retail customers, as holders of debt liabilities subject to loss sharing [emphasis added]**. At the same time, it has emerged that in too many cases the initial sale of banks’ debt liabilities to retail investors and disclosure practices has not been applied in line with consumer protection requirements, resulting in the emergence of a substantial number of mis-selling cases. ”The EBA added “**At the same time, it must be highlighted that, in cases of bail-in, the BRRD does not provide for a different treatment of eligible liabilities based on the nature of the holder [emphasis added].** Resolution authorities are required to apply the bail-in tool according to the waterfall of liabilities established in the framework regardless of the nature of the holders of the debt. Therefore, debt held by retail investors is subject to loss in resolution together with that owned by holders of other pari passu liabilities.”
- The EBA also commented “**It is important to clarify from the outset that the presence of a large stock of retail holders does not in itself constitute an impediment to resolvability and does not per se justify an exemption under Article 44(3) of the BRRD** or Article 18(3) of the Single Resolution Mechanism Regulation (SRMR). [emphasis added]” Article 44(3) of the Bank Recovery and Resolution Directive (BRRD) lists, in exceptional circumstances, where the bail-in tool is applied, the exclusion or partial exclusion of certain liabilities from the application of the write-down or conversion powers The EBA stated regarding **potential impediments to resolution** “Concretely, when preparing a resolution plan for an institution, the resolution authority must assess the resolvability of the bank and must identify whether or not there are situations that present an impediment to resolvability. In this context, the presence of retail holders may play a role. In particular, the resolution authority should assess – among other issues – whether or not bail-in can be credibly and feasibly applied in resolution. If the resolution authority assesses that this could not be the case because of the presence of a large stock of retail held liabilities, **it could consider if there are the conditions for an exemption based on Article 44(3) of the BRRD or Article 18(3) of the SRMR, what would be the impact of the exemption on the loss absorption capacity and if such an exemption would reduce the amount of loss-absorbing liabilities to an extent that would render a resolution strategy not credible.** Where the resolution authority concludes that there is such a risk, the EBA would encourage the resolution authority, in close cooperation with the institution and the supervisor, to address this impediment.

Our view:

- **We expect that retail ownership of securities is unlikely to change the outcome of any resolution event for institutional investors significantly. Any compensation to retail will be done outside the resolution process, if any. In any event, given the selling restrictions on capital securities this is more an issue for legacy instruments and will increasingly become less relevant as retail ownership in regulatory capital and MREL eligible debt reduces**

Appendix: Other regulatory topics



Percentages based on medians/averages for European banks with AT1 CoCos that provided SREP ratios to date

○ CCB – Capital Conservation Buffer

Source: Credit Suisse, Company reports, Data as available on 17 Aug 2018

Our View: The combined impact of the positioning of Pillar 2 below CBR and the relatively large average Pillar 2 requirements of the ECB resulted in the headroom to CBR/MDA to shrink from 7.89% to 3.57% on average. To put that in context, coupon cancellation on that basis occur post a negative RoC events of -27% on average compared to a negative RoC events of -59% on average before this ruling. The subsequent announced changes to SREP methodology (Pillar 2 split and phased CCB) increases the headroom very to -36% currently .

Appendix: Credit Suisse Indices

Appendix: Credit Suisse Bank Capital Indices (BCI)

- The **Credit Suisse European BCI indices** aim to capture the liquid universe of fixed rate bank debt and capital securities denominated in €, £, and $ issued by European banks. Credit Suisse launched its European BCI indices family on the 15th February 15 2007, with the creation of the BCI EUR and BCI GBP. On the 20th of October 2010, Credit Suisse rounded out the BCI family with the launch of BCI USD. With data available as far back as 2001 for the BCI EUR and GBP and 2005 for the BCI USD, the Credit Suisse Bank Capital Indices provide a comprehensive picture of European bank capital debt performance in varied market environments
- Contingent Capital instruments, principally Additional Tier 1 instruments, are included in the **Credit Suisse CoCo indices**; CoCo Euro and CoCo Sterling launched in December 2009, while CoCo Dollar launched in January 2010. For more information in this regard please see the following link
- On the 13th of July 2017, **Credit Suisse launched the OpCo Non Preferred Senior and Holdco Senior indices**, which form sub-indices of the Credit Suisse BCI family of indices. These two indices are the result of evolving rules requiring Global Systemically Important Banks (GSIBs) in Europe to meet their total loss absorbing capacity (TLAC) requirements with debt that is subordinated to operating creditors. The TLAC requirements will be incorporated in the EU's minimum requirement for own funds & eligible liabilities (MREL) framework. Banks in France and Spain have already started to issue Non Preferred Senior debt and we expect strong growth in this asset class over the next four years. Please see pages 20 to 38 of our latest presentation on European Banks for more information in this regard, including supply outlook for Non Preferred Senior and HoldCo senior respectively. There were €49.45bn (10.29%), $14.68bn (3.82%) and £0.75bn (1.46%) outstanding in the OpCo Non Preferred Senior in the BCI €, BCI $ and BCI £ sub-indices, respectively as at the 13th of July 2017. Excluding Germany where legacy senior debt have been subordinated on a statutory basis to corporate depositors and derivatives, the OpCo Non Preferred Senior in the BCI € and BCI $ indices amounts to €9.5bn, and $5.0bn respectively. At the same date, they were €31.65bn (6.59%), $103.11bn (26.86%) and £6.20bn (12.11%) outstanding in the Holdco Senior in the BCI €, BCI $ and BCI £ Holdco Senior indices
- The Credit Suisse indices are accessible from CS Plus, from which it is possible to access the LEI Workbench

Appendix: BCI € Index Senior OpCo Bonds (1/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
AARB	0.250	11/23/2027	100	64	94	94	0.2
AARB	0.375	04-Oct-2024	101	59	85	85	0.1
AARB	0.500	04-Jul-2027	102	55	86	86	0.1
ABNANV	0.500	04/15/2026	103	32	61	61	- 0.1
ABNANV	0.500	07/17/2023	102	26	50	50	- 0.3
ABNANV	0.625	05/31/2022	101	16	33	33	- 0.4
ABNANV	0.875	01/15/2024	103	31	58	58	- 0.2
ABNANV	0.875	04/22/2025	104	32	59	59	- 0.2
ABNANV	1.000	04/16/2025	105	32	59	59	- 0.2
ABNANV	2.500	11/29/2023	108	28	55	55	- 0.2
ABNANV	4.125	03/28/2022	106	14	34	34	- 0.4
ACHMEA	1.500	05/26/2027	108	67	100	100	0.3
ARGSPA	1.000	02-Jun-2024	104	33	59	59	- 0.2
BACR	0.010	12/17/2025	100	45	73	73	- 0.0
BACR	2.250	06-Oct-2024	108	34	61	61	- 0.2
BACR	2.800	06/20/2024	108	95	121	121	0.4
BACRED	0.625	09/27/2022	101	38	57	57	- 0.2
BACRED	0.750	07/15/2027	101	105	138	138	0.6
BACRED	0.875	01/15/2026	103	83	111	111	0.4
BACRED	1.000	09-Aug-2027	104	87	117	117	0.5
BACRED	1.125	07/15/2025	104	78	106	106	0.3
BACRED	1.625	01-Jul-2025	106	73	100	100	0.2
BACRED	1.750	01/25/2024	105	95	122	122	0.4
BAMIIM	1.750	01/28/2025	103	149	176	176	1.0
BAMIIM	1.750	04/24/2023	103	111	134	134	0.6
BAMIIM	2.000	03-Aug-2022	102	86	104	104	0.3

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
BAMIIM	2.500	06/21/2024	105	140	166	166	0.9
BBVASM	0.375	11/15/2026	102	47	77	77	0.0
BBVASM	0.625	01/17/2022	101	14	39	39	- 0.4
BBVASM	0.750	06-Apr-2025	104	36	63	63	- 0.1
BFCM	0.100	10-Aug-2027	101	40	69	69	
BFCM	0.125	02-May-2024	101	28	53	53	- 0.2
BFCM	0.375	01/13/2022	101	11	35	35	- 0.4
BFCM	0.500	11/16/2022	102	22	41	41	- 0.3
BFCM	0.750	06-Aug-2026	104	39	68	68	- 0.1
BFCM	0.750	06/15/2023	103	24	47	47	- 0.3
BFCM	0.750	07/17/2025	104	36	64	64	- 0.1
BFCM	1.250	01/14/2025	106	34	61	61	- 0.2
BFCM	1.250	05/26/2027	108	39	72	72	- 0.0
BFCM	1.375	04-Feb-2030	111	51	81	81	0.2
BFCM	1.375	07/16/2028	110	38	73	73	0.0
BFCM	1.430	04-May-2029	111	44	75	75	0.1
BFCM	1.625	01/19/2026	109	37	65	65	- 0.1
BFCM	2.625	03/18/2024	109	30	57	57	- 0.2
BFCM	3.000	11/28/2023	109	26	53	53	- 0.3
BFCM	3.250	08/23/2022	106	16	39	39	- 0.4
BHH	0.375	08/28/2023	102	9	34	34	- 0.4
BHH	0.500	11-May-2029	105	26	61	61	- 0.1
BHH	1.000	02-May-2026	107	12	41	41	- 0.3
BKIASM	0.750	07-Sep-2026	103	66	95	95	0.2
BKIASM	0.875	03/25/2024	103	50	77	77	
BKIR	0.750	24-23	102	80	106	106	0.3

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (2/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
BKTSM	0.875	03-May-2024	103	41	66	66	- 0.1
BNP	0.500	06-Jan-2022	101	12	29	29	- 0.4
BNP	0.750	11-Nov-2022	102	21	38	38	- 0.3
BNP	1.125	01/15/2023	103	25	44	44	- 0.3
BNP	1.500	05/25/2028	111	43	77	77	0.1
BNP	1.625	02/23/2026	109	34	63	63	- 0.1
BNP	2.375	05/20/2024	109	30	57	57	- 0.2
BNP	2.875	09/26/2023	109	27	52	52	- 0.2
BNP	2.875	10/24/2022	106	16	34	34	- 0.4
BNP	2.875	12/20/2024	110	88	115	115	0.4
BNP	4.125	01/14/2022	105	11	36	36	- 0.4
BNP	4.500	03/21/2023	111	25	48	48	- 0.3
BPCEGP	0.125	12-Apr-2024	101	34	61	61	- 0.2
BPCEGP	0.250	01/15/2026	101	42	70	70	- 0.0
BPCEGP	0.375	10-May-2023	102	27	52	52	- 0.3
BPCEGP	0.625	01/15/2030	104	48	83	83	0.2
BPCEGP	0.625	04/28/2025	103	39	66	66	- 0.1
BPCEGP	0.625	09/26/2023	102	26	51	51	- 0.3
BPCEGP	1.000	07/15/2024	104	32	59	59	- 0.2
BPCEGP	1.000	10-May-2028	107	42	73	73	0.1
BPCEGP	1.125	12/14/2022	103	22	41	41	- 0.3
BPCEGP	2.875	01/16/2024	109	28	55	55	- 0.2
BPCEGP	3.000	07/19/2024	111	34	60	60	- 0.2
BPCEGP	4.250	02-Jun-2023	109	25	48	48	- 0.3
BPCEGP	4.500	02-Oct-2022	105	13	30	30	- 0.4
BPEIM	1.875	07-Jul-2025	103	169	196	196	1.2

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
BPSOIM	2.375	04-Mar-2024	104	175	201	201	1.2
CABKSM	0.375	02-Mar-2025	101	57	84	84	0.1
CABKSM	0.375	11/18/2026	100	77	107	107	0.3
CABKSM	0.750	04/18/2023	102	40	64	64	- 0.1
CABKSM	1.125	03/27/2026	105	61	89	89	0.2
CABKSM	1.125	05/17/2024	104	47	73	73	- 0.0
CABKSM	0.750	26-25	103	71	100	100	0.3
CCBGBB	0.010	10/15/2025	100	43	70	70	- 0.0
CCBGBB	0.625	08/30/2023	102	34	59	59	- 0.2
CMARK	0.010	01/28/2026	100	44	72	72	- 0.0
CMARK	0.375	10-Mar-2028	102	47	78	78	0.1
CMARK	0.875	05-Jul-2027	105	44	77	77	0.0
CMARK	0.875	10-May-2023	103	33	58	58	- 0.2
CMARK	1.000	01/26/2023	103	26	49	49	- 0.3
CMARK	1.125	05/23/2029	108	46	75	75	0.1
CMARK	1.375	01/17/2025	106	38	64	64	- 0.1
CMZB	0.375	09-Jan-2027	101	67	98	98	0.3
CMZB	0.500	08/28/2023	102	35	59	59	- 0.2
CMZB	0.500	12-Apr-2026	102	58	87	87	0.1
CMZB	0.625	08/28/2024	103	40	66	66	- 0.1
CMZB	1.000	03-Apr-2026	105	56	85	85	0.1
CMZB	1.500	08/28/2028	110	62	92	92	0.2
CS	0.450	05/19/2025	102	38	65	65	- 0.1
CS	1.000	06-Jul-2023	103	26	49	49	- 0.3
CS	1.375	01/31/2022	102	10	34	34	- 0.4
CS	1.500	04-Oct-2026	108	44	73	73	- 0.0

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (3/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
CVALIM	2.000	11/27/2022	103	115	133	133	0.6
DANBNK	0.250	11/28/2022	101	33	52	52	-0.2
DANBNK	0.625	05/26/2025	103	50	78	78	0.0
DANBNK	0.750	06-Feb-2023	102	32	55	55	-0.2
DB	0.250	08/19/2023	101	38	63	63	-0.1
DB	1.125	08/30/2023	103	39	64	64	-0.1
DB	1.375	26-25	106	78	106	106	0.3
DEKA	0.300	11/20/2026	103	29	59	59	-0.1
DEVOBA	0.010	09/16/2024	101	33	60	60	-0.2
DEVOBA	0.750	06/25/2023	102	40	63	63	-0.1
DNBNO	0.050	11/14/2023	101	29	54	54	-0.2
DNBNO	0.250	04-Sep-2024	101	31	57	57	-0.2
DNBNO	0.600	09/25/2023	102	26	51	51	-0.3
DNBNO	1.125	03-Jan-2023	103	23	46	46	-0.3
DNBNO	4.250	01/18/2022	105	11	36	36	-0.4
DZBK	0.010	06/28/2023	100	37	60	60	-0.2
DZBK	0.010	09/27/2023	101	34	59	59	-0.2
DZBK	0.080	07-Oct-2024	101	42	69	69	-0.1
DZBK	0.090	06/28/2024	101	41	67	67	-0.1
DZBK	0.170	06/28/2023	101	41	64	64	-0.1
DZBK	0.205	10/23/2028	101	48	79	79	0.1
DZBK	0.220	09/27/2023	100	58	83	83	0.1
DZBK	0.220	10/17/2029	101	40	71	71	0.1
DZBK	0.230	10/29/2027	101	50	79	79	0.1
DZBK	0.248	07/29/2024	101	36	63	63	-0.1
DZBK	0.295	07/29/2025	102	41	68	68	-0.1

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
DZBK	0.320	06/28/2024	101	44	70	70	-0.1
DZBK	0.320	11-Jun-2028	102	48	80	80	0.1
DZBK	0.340	11-Dec-2029	101	51	85	85	0.2
DZBK	0.460	03/24/2027	103	47	78	78	0.1
DZBK	0.500	06/19/2025	102	50	78	78	0.0
DZBK	0.500	10-Feb-2023	102	34	59	59	-0.2
DZBK	0.510	06/30/2026	103	44	73	73	-0.0
DZBK	0.550	05/15/2028	103	47	82	82	0.1
DZBK	0.550	08/14/2024	102	46	73	73	-0.0
DZBK	1.000	12/17/2025	105	45	73	73	-0.0
DZBK	1.060	10-Feb-2028	107	51	83	83	0.2
DZBK	1.180	11/29/2029	109	47	82	82	0.2
ERSTBK	0.050	09/16/2025	101	41	68	68	-0.1
ERSTBK	0.375	04/16/2024	102	34	61	61	-0.2
ERSTBK	0.875	05/13/2027	105	45	77	77	0.0
ERSTBK	0.100	28-27	100	55	85	85	0.2
FRLBP	0.250	07-Dec-2026	101	44	74	74	
HESLAN	0.010	08/18/2025	101	30	58	58	-0.2
HESLAN	0.125	11/19/2024	101	25	51	51	-0.2
HESLAN	0.350	04/17/2024	102	25	52	52	-0.3
HESLAN	0.375	05-Dec-2025	102	31	58	58	-0.2
HSBC	0.100	09-Mar-2027	100	44	75	75	0.0
HSBC	0.250	05/17/2024	101	34	61	61	-0.2
HSBC	0.600	03/20/2023	102	28	51	51	-0.2
HSBC	0.631	03/15/2022	101	55	72	72	0.0
HSBC	1.375	09-Apr-2028	110	39	70	70	0.0

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (4/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
HCOB	0.260	08/19/2024	100	83	110	110	0.3
HCOB	0.350	01-Aug-2024	100	76	103	103	0.3
HCOB	0.500	05/23/2022	101	63	80	80	0.1
HCOB	0.750	11/23/2023	101	100	125	125	0.5
HVB	0.050	06/13/2022	100	48	66	66	- 0.0
HYNOE	0.375	06/25/2024	102	37	63	63	- 0.1
HYNOE	0.875	10/16/2023	102	59	83	83	0.1
INTNED	4.500	02/21/2022	106	7	24	24	- 0.5
INTNED	1.000	30-25	101	129	162	162	1.0
ISLBAN	0.500	11/20/2023	100	98	123	123	0.5
ISPIM	0.577	02/20/2025	99	126	153	153	0.8
ISPIM	0.625	12/22/2022	100	96	115	115	0.4
ISPIM	0.750	12-Apr-2024	103	60	86	86	0.1
ISPIM	0.828	09/24/2025	102	82	109	109	0.4
ISPIM	0.875	06/27/2022	102	39	58	58	- 0.1
ISPIM	1.000	07-Apr-2024	103	60	86	86	0.1
ISPIM	1.000	11/19/2026	104	79	108	108	0.4
ISPIM	1.125	03-Apr-2022	101	37	55	55	- 0.2
ISPIM	1.375	01/18/2024	104	57	84	84	0.1
ISPIM	1.700	03/13/2024	104	99	125	125	0.5
ISPIM	1.750	03/20/2028	108	94	125	125	0.6
ISPIM	1.750	07-Apr-2029	109	97	126	126	0.6
ISPIM	1.800	03-Nov-2029	108	166	196	196	1.3
ISPIM	2.000	06/24/2029	98	157	188	188	1.3
ISPIM	2.050	01/31/2030	98	118	149	149	0.9
ISPIM	2.125	05/26/2025	108	72	99	99	0.2
ISPIM	2.125	08/30/2023	106	53	78	78	0.0

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
ISPIM	2.697	08/25/2025	109	130	157	157	0.8
ISPIM	3.500	01/17/2022	104	29	53	53	- 0.2
ISPIM	4.000	10/30/2023	111	51	76	76	
KBC	0.530	05-May-2023	102	22	45	45	- 0.3
KNFP	3.020	04/27/2027	118	62	94	94	0.2
LANSBK	0.125	02/19/2025	100	52	79	79	0.0
LANSBK	0.500	09/19/2022	101	45	63	63	- 0.1
LANSBK	0.875	09/25/2023	103	45	70	70	- 0.1
LBBW	0.058	01/31/2022	101	6	30	30	- 0.5
LLOYDS	0.250	10-Apr-2022	101	42	59	59	- 0.1
LLOYDS	0.375	01/28/2025	101	53	80	80	0.1
LLOYDS	1.250	01/13/2025	106	31	58	58	- 0.2
LLOYDS	1.375	09-Aug-2022	103	17	40	40	- 0.4
LLOYDS	2.375	04-Sep-2026	112	58	86	86	0.1
LLOYDS	0.500	25-24	101	72	100	100	0.3
LPTY	0.750	10-Mar-2022	101	52	69	69	- 0.0
LPTY	1.000	02/25/2022	101	35	53	53	- 0.2
LPTY	1.000	05-Feb-2023	102	53	75	75	0.0
LPTY	1.375	03-Jul-2024	104	57	82	82	0.1
LPTY	3.500	04-Sep-2025	114	72	99	99	0.2
MINGNO	0.125	09-Nov-2026	101	44	74	74	
MINGNO	0.500	03-Sep-2022	101	21	38	38	- 0.3
MINGNO	0.750	07-Mar-2023	102	31	56	56	- 0.2
MONTE	2.625	04/28/2025	103	243	269	269	1.9
MONTE	3.625	09/24/2024	106	254	279	279	2.0
MONTE	4.000	07-Oct-2022	104	195	213	213	1.4
NDASS	0.3	06/30/2022	101	18	37	37	- 0.4

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (5/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
NDASS	0.375	05/28/2026	103	31	60	60	- 0.1
NDASS	0.500	05/14/2027	103	38	71	71	- 0.0
NDASS	1.000	02/22/2023	103	24	47	47	- 0.3
NDASS	1.125	02-Dec-2025	106	26	53	53	- 0.2
NDASS	1.125	09/27/2027	108	33	64	64	- 0.1
NDASS	3.250	07-May-2022	105	23	42	42	- 0.3
NIBCAP	0.875	07-Aug-2025	102	80	107	107	0.3
NIBCAP	1.125	04/19/2023	103	53	76	76	
NIBCAP	1.500	01/31/2022	102	36	60	60	- 0.2
NWG	0.625	03-Feb-2022	101	42	60	60	- 0.1
NWG	0.750	11/15/2025	102	78	106	106	0.3
NWG	1.000	05/28/2024	103	50	77	77	
NWG	1.125	06/14/2023	103	44	67	67	- 0.1
NWG	2.750	04-Feb-2025	111	60	87	87	0.1
NWIDE	0.250	07/22/2025	101	50	78	78	0.0
NWIDE	0.625	04/19/2023	102	38	61	61	- 0.1
NWIDE	1.125	06-Mar-2022	102	30	48	48	- 0.2
NWIDE	1.250	03-Mar-2025	106	40	67	67	- 0.1
NYKRE	0.500	07-Oct-2025	102	43	71	71	- 0.1
OPBANK	0.100	11/16/2027	100	46	76	76	0.1
OPBANK	0.125	07-Jan-2024	101	34	61	61	- 0.2
OPBANK	0.375	02/26/2024	102	25	50	50	- 0.3
OPBANK	0.375	08/29/2023	102	24	49	49	- 0.3
OPBANK	0.375	10-Nov-2022	101	21	39	39	- 0.3
OPBANK	0.500	08-Dec-2025	103	42	70	70	- 0.1
OPBANK	0.750	03-Mar-2022	101	18	36	36	- 0.3

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
OPBANK	1.000	05/22/2025	105	31	58	58	- 0.2
PBBGR	0.125	09-May-2024	101	46	73	73	- 0.0
PBBGR	0.750	02-Jul-2023	102	43	66	66	- 0.1
RABOBK	0.500	12-Jun-2022	102	18	37	37	- 0.3
RABOBK	1.250	03/23/2026	107	37	65	65	- 0.1
RABOBK	1.375	02-Mar-2027	109	39	69	69	- 0.0
RABOBK	2.375	05/22/2023	106	21	43	43	- 0.3
RABOBK	4.000	01-Nov-2022	105	7	31	31	- 0.5
RABOBK	4.125	07/14/2025	119	31	59	59	- 0.2
RABOBK	4.750	06-Jun-2022	107	16	33	33	- 0.4
RBIAV	0.010	10-Jun-2023	100	49	74	74	- 0.0
RBIAV	0.250	01/22/2025	101	46	73	73	- 0.0
RBIAV	0.375	09/25/2026	102	46	75	75	0.0
RBIAV	0.450	03-Jan-2022	101	49	67	67	- 0.0
RBIAV	0.587	05/24/2024	102	50	76	76	
RBIAV	0.791	01/26/2023	102	47	70	70	- 0.1
RBIAV	0.920	01/24/2024	102	68	95	95	0.2
RBIAV	1.000	12-Apr-2023	103	41	68	68	- 0.1
RFLBNI	0.250	04/16/2024	101	54	80	80	0.0
RFLBOB	0.750	05/22/2023	102	55	78	78	0.0
SABSM	0.625	25-24	101	92	120	120	0.5
SABSM	0.700	03/28/2022	102	- 10	9	9	- 0.6
SABSM	0.875	03-May-2023	102	58	81	81	0.1
SABSM	0.875	07/22/2025	102	87	115	115	0.4
SABSM	1.125	27-26	103	99	129	129	0.6
SABSM	1.625	03-Jul-2024	104	76	102	102	0.3

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (6/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
SABSM	1.750	23-22	103	122	144	144	0.7
SANSCF	0.375	01/17/2025	101	51	78	78	0.0
SANSCF	0.375	06/27/2024	101	47	74	74	- 0.0
SANSCF	0.500	11/14/2026	102	54	84	84	0.1
SANSCF	0.875	01/24/2022	101	24	48	48	- 0.3
SANSCF	0.875	05/30/2023	103	28	51	51	- 0.2
SANSCF	1.000	02/27/2024	103	44	69	69	- 0.1
SANSCF	1.125	10-Sep-2023	104	36	60	60	- 0.2
SANTAN	0.250	06/19/2024	101	37	63	63	- 0.1
SANTAN	0.300	10-Apr-2026	102	41	71	71	- 0.0
SANTAN	1.375	12/14/2022	103	25	44	44	- 0.3
SANTAN	4.875	06-Jan-2023	112	32	54	54	- 0.2
SANUK	1.125	01/14/2022	102	13	37	37	- 0.4
SANUK	1.125	03-Oct-2025	105	42	69	69	- 0.1
SBAB	0.250	09-Jul-2022	101	29	52	52	- 0.2
SBAB	0.500	05/13/2025	103	36	63	63	- 0.1
SBAB	0.750	06/14/2023	102	30	53	53	- 0.2
SCBGER	0.250	10/15/2024	101	59	85	85	0.1
SCBNOR	0.125	02/25/2025	100	55	82	82	0.1
SCBNOR	0.125	09-Nov-2024	101	46	73	73	- 0.0
SCBNOR	0.750	03-Jan-2023	102	32	55	55	- 0.2
SCBNOR	0.875	01/21/2022	101	28	52	52	- 0.3
SEB	0.050	07-Jan-2024	101	31	58	58	- 0.2
SEB	0.250	05/19/2023	101	25	48	48	- 0.3
SEB	0.300	02/17/2022	101	15	33	33	- 0.4
SEB	0.500	03/13/2023	102	25	48	48	- 0.3

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
SHBASS	0.125	06/18/2024	101	27	53	53	- 0.2
SHBASS	0.250	02/28/2022	101	7	25	25	- 0.5
SHBASS	0.375	07-Mar-2023	102	20	45	45	- 0.3
SHBASS	0.500	03/21/2023	102	18	41	41	- 0.3
SHBASS	1.000	04/15/2025	105	34	61	61	- 0.2
SHBASS	1.125	12/14/2022	103	13	32	32	- 0.4
SHBASS	2.625	08/23/2022	105	15	38	38	- 0.4
SOCGEN	0.125	02/24/2026	101	42	71	71	- 0.0
SOCGEN	0.250	01/18/2022	101	14	38	38	- 0.4
SOCGEN	0.750	05/26/2023	102	26	49	49	- 0.3
SOCGEN	4.250	07/13/2022	107	25	44	44	- 0.3
SPOLNO	0.250	09/30/2024	101	43	69	69	- 0.1
SPOLNO	0.875	03/13/2023	102	39	62	62	- 0.1
SRBANK	0.375	02-Oct-2022	101	32	50	50	- 0.2
SRBANK	0.625	03/25/2024	102	48	75	75	- 0.0
SWEDA	0.250	11-Jul-2022	101	31	49	49	- 0.2
SWEDA	0.300	09-Jun-2022	101	29	52	52	- 0.2
SWEDA	0.400	08/29/2023	102	32	57	57	- 0.2
SWEDA	0.750	05-May-2025	104	41	68	68	- 0.1
SWEDA	1.000	06-Jan-2022	102	22	39	39	- 0.3
UBIIM	0.750	10/17/2022	102	40	58	58	- 0.1
UBIIM	0.800	11-Apr-2024	103	62	88	88	0.1
UBIIM	1.000	07/22/2022	102	44	63	63	- 0.1
UBIIM	1.250	07/31/2022	102	56	75	75	0.0
UBIIM	1.500	04-Oct-2024	105	53	80	80	0.0
UBIIM	1.800	01/31/2022	102	74	98	98	0.2

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior OpCo Bonds (7/7)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
UBS	0.250	22-21	101	16	40	40	- 0.4
UBS	0.625	23-22	102	30	53	53	- 0.2
UBS	0.750	23-23	102	30	53	53	- 0.2
UCGIM	0.172	08/31/2024	100	81	109	109	0.3
UCGIM	0.500	04-Sep-2025	101	68	95	95	0.2
UCGIM	0.502	10/18/2022	100	76	93	93	0.2
UCGIM	1.250	26-25	104	100	129	129	0.6
UCGIM	1.250	06/25/2025	103	97	125	125	0.5
UCGIM	1.373	27-26	105	103	136	136	0.6
UCGIM	2.000	03-Apr-2023	105	38	61	61	- 0.1
UCGIM	2.125	10/24/2026	111	72	102	102	0.3
VORHYP	0.625	09/19/2022	101	67	86	86	0.1
YBS	0.625	09/21/2025	103	56	83	83	0.1
YBS	0.875	03/20/2023	102	41	65	65	- 0.1
YBS	1.250	03/17/2022	102	36	53	53	- 0.2
U. Avg			**103**	**49**	**74**	**48**	**0.0**
Median			**102**	**41**	**68**	**40**	**- 0.1**

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior Holdco Bonds (1/2)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
AIB	1.250	05/28/2024	104	64	90	90	0.1
AIB	1.500	03/29/2023	103	55	78	78	0.0
AIB	2.250	07-Mar-2025	109	71	99	99	0.2
BACR	0.625	23-22	101	73	98	98	0.2
BACR	0.750	25-24	102	79	106	106	0.3
BACR	1.375	26-25	105	86	114	114	0.4
BACR	1.500	04-Jan-2022	102	37	56	56	- 0.2
BACR	1.500	09-Mar-2023	104	41	66	66	- 0.1
BACR	1.875	12-Aug-2023	105	55	82	82	0.0
BKIR	1.375	08/29/2023	104	56	81	81	0.1
CAIXAB	0.875	10/28/2027	102	92	121	121	0.5
CAIXAB	1.375	04-Oct-2024	104	59	85	85	0.1
CAIXAB	1.500	05-Oct-2023	103	55	77	77	0.0
CAIXAB	1.625	04/21/2022	102	37	56	56	- 0.2
CS	0.650	09-Oct-2029	103	64	94	94	0.3
CS	1.000	27-26	104	78	111	111	0.4
CS	1.250	25-24	104	62	90	90	0.2
CS	1.250	04/14/2022	102	34	53	53	- 0.2
CS	3.250	04-Feb-2026	113	113	142	142	0.7
HSBC	0.309	26-25	101	56	86	86	0.1
HSBC	0.770	31-30	104	71	108	108	0.5
HSBC	0.875	09-Jun-2024	104	39	66	66	- 0.1
HSBC	1.500	03/15/2022	102	14	31	31	- 0.4
HSBC	2.500	03/15/2027	115	45	76	76	0.0
INTNED	0.100	09-Mar-2025	100	51	80	80	0.0
INTNED	0.250	02/18/2029	100	66	97	97	0.3

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
INTNED	0.750	03-Sep-2022	101	29	47	47	- 0.2
INTNED	1.125	02/14/2025	105	48	75	75	- 0.0
INTNED	1.375	01-Nov-2028	109	47	81	81	0.1
INTNED	2.125	01-Oct-2026	111	49	77	77	0.0
INTNED	2.500	11/15/2030	124	38	70	70	0.1
IPFLN	9.750	11-Dec-2025	97	1,111	1,133	1,133	10.6
ISPIM	0.770	10/15/2025	102	90	117	117	0.4
KBCBB	0.125	26-25	100	57	87	87	0.1
KBCBB	0.375	06/16/2027	102	52	85	85	0.1
KBCBB	0.625	04-Oct-2025	103	47	74	74	- 0.0
KBCBB	0.750	01/24/2030	105	51	87	87	0.2
KBCBB	0.750	03-Jan-2022	101	22	40	40	- 0.3
KBCBB	0.750	10/18/2023	103	35	60	60	- 0.2
KBCBB	1.125	01/25/2024	104	44	71	71	- 0.1
LLOYDS	1.000	11-Sep-23	103	44	69	69	- 0.1
LLOYDS	1.500	9-Dec-27	109	51	81	81	0.1
LLOYDS	0.625	24-23	101	76	103	103	0.3
LPTY	0.125	09/13/2023	100	53	78	78	0.0
NWG	1.750	26-25	106	81	110	110	0.4
NWG	2.000	23-22	102	115	139	139	0.6
NWG	2.000	25-24	106	94	121	121	0.5
NWG	2.500	03/22/2023	106	50	74	74	- 0.0
SANUK	0.391	25-24	101	68	96	96	0.2
SANUK	1.125	9-Aug-23	103	52	77	77	0.0
STANLN	0.900	7-Feb-27	105	59	92	92	0.2
STANLN	0.750	23-22	102	45	70	70	- 0.1

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior Holdco Bonds (2/2)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
STANLN	0.850	28-27	103	75	105	105	0.4
STANLN	1.625	27-26	109	62	91	91	0.2
UBS	0.250	28-27	100	62	93	93	0.3
UBS	0.250	01/29/2026	101	56	84	84	0.1
UBS	1.250	25-24	104	75	102	102	0.3
UBS	1.250	09-Jan-2026	106	54	84	84	0.1
UBS	1.500	24-23	105	82	108	108	0.3
UBS	1.750	11/16/2022	104	27	46	46	- 0.3
UBS	2.125	03-Apr-2024	107	40	65	65	- 0.1
VMUKLN	2.875	25-24	106	187	213	213	1.4
U. Avg			**104**	**77**	**104**	**76**	**0.3**
Median			**103**	**56**	**84**	**55**	**0.1**

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Senior Non Preferred Bonds(1/5)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
ABNANV	0.600	01/15/2027	103	55	85	85	0.1
ABNANV	1.250	05/28/2025	105	52	79	79	0.0
ARGSPA	1.000	01/29/2027	102	102	132	132	0.6
ARGSPA	1.000	26-25	102	107	136	136	0.6
BACRED	1.125	04/23/2025	102	107	134	134	0.6
BAMIIM	1.625	02/18/2025	99	234	260	260	1.9
BANQUE	1.500	09/28/2023	103	101	126	126	0.5
BAWAG	0.375	09-Mar-2027	99	92	122	122	0.5
BBVASM	0.375	10-Feb-2024	101	58	84	84	0.1
BBVASM	0.500	01/14/2027	102	57	87	87	0.1
BBVASM	0.750	09-Nov-2022	102	34	52	52	- 0.2
BBVASM	1.000	06/21/2026	105	49	78	78	0.1
BBVASM	1.125	02/28/2024	103	58	83	83	0.1
BBVASM	1.375	05/14/2025	106	44	72	72	- 0.0
BFCM	0.625	02/21/2031	102	71	106	106	0.5
BFCM	0.750	01/17/2030	104	64	99	99	0.3
BFCM	1.250	06-Mar-2030	108	67	94	94	0.4
BFCM	1.750	03/15/2029	112	56	87	87	0.2
BHH	0.500	09/26/2023	101	47	72	72	- 0.1
BHH	1.125	10/25/2027	107	55	84	84	0.2
BHH	1.250	01/22/2025	105	46	73	73	- 0.0
BHH	1.500	04/18/2028	109	63	95	95	0.3
BKIASM	1.000	06/25/2024	103	63	89	89	0.1
BKIASM	1.125	11-Dec-2026	104	81	112	112	0.4
BKIR	1.000	25-24	103	90	117	117	0.4
BKTSM	0.625	10-Jun-2027	102	75	104	104	0.3

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
BKTSM	0.875	07-Aug-2026	103	76	105	105	0.3
BNP	0.125	09-Apr-2026	100	65	95	95	0.2
BNP	0.375	27-26	101	64	93	93	0.2
BNP	0.500	25-24	102	60	88	88	0.1
BNP	0.500	28-27	101	79	110	110	0.4
BNP	0.500	02/19/2028	101	75	106	106	0.4
BNP	0.500	06-Apr-2026	102	60	89	89	0.2
BNP	1.000	04/17/2024	103	44	71	71	- 0.1
BNP	1.000	06/27/2024	103	49	76	76	
BNP	1.125	29-28	106	82	113	113	0.5
BNP	1.125	06-Nov-2026	105	67	96	96	0.2
BNP	1.125	08/28/2024	104	47	74	74	- 0.0
BNP	1.125	10-Oct-2023	104	37	62	62	- 0.1
BNP	1.125	11/22/2023	104	40	65	65	- 0.1
BNP	1.250	03/19/2025	105	53	80	80	0.0
BNP	1.375	05/28/2029	109	68	97	97	0.3
BNP	1.500	05/23/2028	109	60	95	95	0.2
BNP	1.500	11/17/2025	107	58	86	86	0.1
BNP	2.125	27-26	110	86	116	116	0.4
BPCEGP	0.500	02/24/2027	102	61	92	92	0.2
BPCEGP	0.625	09/26/2024	102	52	78	78	0.0
BPCEGP	0.875	01/31/2024	103	48	74	74	- 0.0
BPCEGP	1.000	04-Jan-2025	104	54	81	81	0.1
BPCEGP	1.125	01/18/2023	103	36	59	59	- 0.2
BPCEGP	1.375	03/23/2026	106	59	88	88	0.1
BPCEGP	1.625	01/31/2028	110	62	92	92	0.2

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Senior Non Preferred Bonds (2/5)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
BPCEGP	0.500	27-26	102	73	103	103	0.3
CABKSM	0.625	10-Jan-2024	102	65	91	91	0.2
CABKSM	1.125	01-Dec-2023	102	52	71	71	- 0.0
CABKSM	1.375	06/19/2026	105	83	112	112	0.4
CABKSM	1.750	10/24/2023	105	54	79	79	0.0
CABKSM	2.375	02-Jan-2024	107	59	85	85	0.1
CCBGBB	0.375	02/13/2026	101	64	93	93	0.2
CCBGBB	0.375	09-Feb-2025	101	63	91	91	0.2
CCBGBB	0.750	09-Dec-2022	102	37	55	55	- 0.2
CCBGBB	1.000	10/26/2024	104	50	76	76	0.0
CMARK	1.250	05/31/2024	104	60	86	86	0.1
CMARK	1.250	06-Nov-2029	106	85	114	114	0.5
CMARK	1.625	04/15/2026	108	64	93	93	0.2
CMZB	0.250	09/16/2024	100	77	104	104	0.3
CMZB	0.500	09/13/2023	102	39	64	64	- 0.1
CMZB	0.750	26-25	101	97	125	125	0.5
CMZB	0.875	01/22/2027	102	93	123	123	0.5
CMZB	1.125	05/24/2024	104	58	84	84	0.1
CMZB	1.125	06/22/2026	104	90	118	118	0.5
CMZB	1.125	09/19/2025	104	79	106	106	0.3
CMZB	1.250	10/23/2023	103	53	77	77	0.0
CMZB	1.500	09/21/2022	103	28	47	47	- 0.2
CMZB	1.875	02/28/2028	109	98	129	129	0.6
CXGD	1.250	11/25/2024	103	105	131	131	0.6
DANBNK	0.875	05/22/2023	102	56	79	79	0.0
DANBNK	1.375	05/24/2022	102	40	57	57	- 0.1

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
DANBNK	1.625	03/15/2024	105	59	86	86	0.1
DANBNK	0.500	25-24	101	82	110	110	0.4
DANBNK	1.375	23-22	102	89	111	111	0.4
DB	0.650	06-Jun-2022	101	64	82	82	0.1
DB	1.000	11/19/2025	102	118	145	145	0.7
DB	1.125	03/17/2025	103	80	107	107	0.3
DB	1.150	06-Jan-2023	102	74	97	97	0.2
DB	1.375	26-25	103	128	157	157	0.8
DB	1.500	01/20/2022	102	54	78	78	0.0
DB	1.625	01/20/2027	104	130	160	160	0.9
DB	1.750	01/17/2028	105	137	171	171	1.0
DB	1.750	11/19/2030	105	153	185	185	1.3
DB	1.875	02/14/2022	102	55	73	73	0.0
DB	2.375	01-Nov-2023	105	57	76	76	0.1
DB	2.625	02-Dec-2026	110	115	143	143	0.7
DVB	1.000	04/25/2022	101	67	86	86	0.1
DVB	1.250	06/16/2023	102	80	102	102	0.3
ERSTBK	0.875	05/22/2026	104	54	83	83	0.1
FRLBP	0.500	06/17/2026	102	66	95	95	0.2
FRLBP	1.000	10/16/2024	104	48	75	75	- 0.0
FRLBP	1.375	04/24/2029	109	58	89	89	0.2
FRLBP	2.000	07/13/2028	113	60	95	95	0.2
HESLAN	0.375	02-Jan-2022	100	51	75	75	- 0.0
HESLAN	0.500	10/31/2022	101	52	69	69	- 0.0
HESLAN	0.510	06-Jan-2022	101	50	67	67	- 0.0
HESLAN	0.530	07/26/2022	101	51	69	69	- 0.0

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Senior Non Preferred Bonds (3/5)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
HESLAN	0.600	02/14/2023	101	52	75	75	
HESLAN	0.750	04-Nov-2022	101	49	68	68	-0.0
HESLAN	0.750	07/22/2026	103	68	97	97	0.2
HESLAN	0.750	12/30/2022	101	53	72	72	0.0
HESLAN	0.875	03-Jul-2023	102	60	83	83	0.1
HESLAN	0.875	03/14/2024	103	44	71	71	-0.1
HESLAN	0.875	04-Sep-2025	103	61	88	88	0.1
HESLAN	0.875	10/28/2022	102	50	67	67	-0.0
HESLAN	0.875	11-Feb-2026	103	80	110	110	0.4
HESLAN	1.000	01/18/2023	102	52	74	74	-0.0
HESLAN	1.000	05-Dec-2025	103	68	95	95	0.2
HESLAN	1.000	10/14/2022	102	53	70	70	
HESLAN	1.076	04/13/2026	104	76	105	105	0.3
HESLAN	1.125	09-Jan-2022	102	50	73	73	-0.0
HESLAN	1.170	01/18/2027	105	80	110	110	0.4
HESLAN	1.250	02/15/2027	105	80	110	110	0.4
HESLAN	1.250	03/23/2026	105	76	104	104	0.3
HESLAN	1.250	11/30/2027	106	78	107	107	0.4
HESLAN	1.260	03/30/2027	105	80	110	110	0.4
HESLAN	1.261	12/21/2026	105	80	109	109	0.4
HESLAN	1.290	05-Dec-2027	106	80	113	113	0.4
HESLAN	1.300	06-Oct-2024	104	58	84	84	0.1
HESLAN	1.328	03/22/2027	106	80	110	110	0.4
HESLAN	1.415	06-Dec-2025	105	67	94	94	0.2
HESLAN	1.552	06/17/2025	106	67	95	95	0.2
HESLAN	1.560	01/26/2032	109	93	130	130	0.7

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
HESLAN	1.600	06-Jan-2027	108	80	112	112	0.4
HESLAN	1.625	08/23/2028	109	85	115	115	0.5
HESLAN	1.670	02/20/2032	110	92	130	130	0.7
HESLAN	1.690	03/21/2031	110	90	124	124	0.6
HESLAN	2.125	4-Nov-22	103	50	69	69	-0.0
HESLAN	3.125	12-Sep-22	106	52	71	71	-0.0
HESLAN	3.500	07/30/2027	120	76	106	106	0.3
HSBC	1.500	24-23	105	62	89	89	0.1
INTNED	1.000	09/20/2023	103	32	57	57	-0.2
INTNED	2.000	09/20/2028	114	53	84	84	0.2
JYBC	0.375	10/15/2025	101	72	99	99	0.3
JYBC	0.625	06/20/2024	102	69	95	95	0.2
KBCBB	0.875	06/27/2023	103	29	52	52	-0.2
KUTXAB	0.500	09/25/2024	102	51	77	77	0.0
LBBW	0.375	02/18/2027	102	47	78	78	0.1
LBBW	0.375	05/24/2024	102	26	53	53	-0.2
LBBW	0.375	07/29/2026	102	46	76	76	0.0
LBBW	0.375	09/30/2027	102	48	79	79	0.1
LBBW	0.500	06/07/2022	101	29	46	46	-0.2
LBBW	0.600	11/22/2023	103	2	27	27	-0.5
LBBW	1.000	05/22/2026	105	45	74	74	
MUNHYP	0.500	02/03/2028	99	98	129	129	0.6
MUNHYP	0.500	06/08/2026	101	81	110	110	0.4
MUNHYP	0.625	02/10/2022	101	70	88	88	0.2
MUNHYP	0.875	07/11/2024	102	67	93	93	0.2
MUNHYP	0.875	09/12/2025	103	63	92	92	0.2

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Senior Non Preferred Bonds (4/5)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
NDASS	0.875	06/26/2023	103	29	52	52	- 0.2
NIBCAP	2.000	4-Sep-24	105	107	133	133	0.6
NWIDE	1.500	26-25	106	63	92	92	0.2
NYKRE	0.125	7-Oct-24	100	58	85	85	0.1
NYKRE	0.250	01/13/2026	100	71	99	99	0.2
NYKRE	0.250	01/20/2023	101	49	72	72	- 0.0
NYKRE	0.500	01/19/2022	101	43	67	67	- 0.1
NYKRE	0.625	01/17/2025	102	65	91	91	0.2
NYKRE	0.750	01/20/2027	103	76	106	106	0.3
NYKRE	0.875	01/17/2024	103	52	80	80	0.0
OPBANK	0.375	06/19/2024	101	52	79	79	0.0
OPBANK	0.600	01/18/2027	102	63	93	93	0.2
OPBANK	0.625	11-Dec-29	103	63	97	97	0.3
PBBGR	0.625	02/23/2022	100	79	96	96	0.3
RABOBK	0.250	10/30/2026	102	35	65	65	- 0.1
RABOBK	0.625	02/27/2024	102	38	63	63	- 0.1
RABOBK	0.750	08/29/2023	102	33	58	58	- 0.2
RABOBK	1.125	05/07/2031	110	42	77	77	0.2
RABOBK	0.875	28-27	105	61	95	95	0.2
SABSM	1.125	03/27/2025	102	121	148	148	0.7
SABSM	1.750	05/10/2024	103	120	146	146	0.7
SANTAN	0.500	02/04/2027	102	66	96	96	0.2
SANTAN	1.125	01/17/2025	104	63	89	89	0.1
SANTAN	1.125	06/23/2027	106	60	93	93	0.2
SANTAN	1.375	01/05/2026	106	62	90	90	0.2
SANTAN	1.375	02/09/2022	102	25	43	43	- 0.3
SCBGER	0.750	10/17/2022	102	37	55	55	- 0.2

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
SEB	0.375	02/11/2027	102	53	83	83	0.1
SEB	0.625	11/12/2029	104	45	80	80	0.1
SHBASS	0.050	09/03/2026	101	40	69	69	- 0.1
SHBASS	0.500	02/18/2030	103	49	79	79	0.2
SOCGEN	0.500	01/13/2023	101	43	62	62	- 0.1
SOCGEN	0.750	01/25/2027	103	76	106	106	0.3
SOCGEN	0.875	07/01/2026	103	74	103	103	0.3
SOCGEN	0.875	09/24/2029	103	89	120	120	0.6
SOCGEN	1.000	04/01/2022	102	29	48	48	- 0.2
SOCGEN	1.125	01/23/2025	104	58	85	85	0.1
SOCGEN	1.125	04/21/2026	104	81	110	110	0.4
SOCGEN	1.250	02/15/2024	104	54	79	79	0.0
SOCGEN	1.250	06/12/2030	106	88	114	114	0.6
SOCGEN	1.375	01/13/2028	107	82	116	116	0.4
SOCGEN	1.750	03/22/2029	110	87	118	118	0.5
SOCGEN	2.125	09/27/2028	113	84	115	115	0.5
SOCGEN	0.875	28-27	103	86	117	117	0.5
SWEDA	0.250	10/09/2024	101	51	77	77	0.0
SYDBDC	1.250	02/04/2022	102	38	62	62	- 0.2
SYDBDC	1.375	09/18/2023	104	58	82	82	0.1
UBIIM	1.625	04/21/2025	104	121	147	147	0.7
UBIIM	1.750	04/12/2023	103	82	106	106	0.3
UBIIM	2.625	06/20/2024	107	111	137	137	0.6
UCGIM	1.000	01/18/2023	102	57	80	80	0.1
UCGIM	1.200	01/20/2026	102	130	158	158	0.8
UCGIM	1.625	25-24	103	129	156	156	0.8
UCGIM	1.8	01/20/2030	105	158	192	192	1.3

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Senior Non Preferred Bonds (5/5)

Ticker	Coupon	Maturity	Price	Z-Sprd To Maturity	BM Spread to Maturity	I-Sprd To Maturity	YtM (%)
UCGIM	2.200	27-26	106	165	198	198	1.2
U. Avg			**104**	**68**	**95**	**67**	**0.2**
Median			**103**	**63**	**91**	**62**	**0.2**

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Lower Tier 2 Bonds (1/5)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity
AARB	4.250	26-21	18-Mar-2021	100	2.7	4.7	2.7	541	342	524	313	534	310
ABNANV	7.125	07-Jun-2022	No call	111	0.0	0.0	0.0	76	76	57	57	57	57
ABNANV	2.875	28-23	18-Jan-2023	105	0.3	0.3	1.7	105	241	82	206	82	208
AIB	1.875	29-24	19-Nov-2024	102	1.5	1.5	1.8	221	250	194	214	195	216
AIB	2.875	05/30/2031	30-May-2026	107	1.6	1.6	2.4	233	301	204	264	205	268
ALPHA	4.250	02/13/2030	13-Feb-2025	94	5.3	6.0	5.3	673	585	645	554	648	551
ARGSPA	3.875	26-21	24-May-2021	101	0.1	0.1	3.4	86	411	69	381	67	384
BACR	2.000	28-23	07-Feb-2023	102	0.9	0.9	1.5	167	219	143	187	144	189
BACR	6.625	03/30/2022	No call	108	0.2	0.2	0.2	90	90	72	72	71	71
BACRED	2.300	11/23/2030	23-Nov-2025	101	2.1	2.1	2.5	283	308	255	273	257	276
BACRED	3.750	06/16/2026	No call	108	2.2	2.2	2.2	289	289	260	260	262	262
BACRED	5.750	04/18/2023	No call	111	0.9	0.9	0.9	165	165	141	141	141	141
BAMIIM	4.250	10-Jan-2029	01-Oct-2024	104	3.1	3.1	3.9	381	453	354	421	356	425
BAMIIM	4.375	27-22	21-Sep-2022	103	2.5	2.5	3.6	320	428	301	396	303	399
BAMIIM	5.000	30-25	14-Sep-2025	107	3.3	3.3	4.3	401	484	373	455	376	459
BBVASM	3.500	02-Oct-2027	No call	117	0.7	0.7	0.7	142	142	111	111	113	113
BBVASM	1.000	30-25	16-Jan-2025	100	1.0	1.0	1.2	180	184	152	148	153	149
BBVASM	2.575	29-24	22-Feb-2024	105	0.8	0.8	1.8	160	241	134	209	135	211
BCPPL	3.871	30-25	27-Mar-2025	96	4.6	4.9	4.6	569	521	542	489	545	487
BCPPL	4.500	27-22	07-Dec-2022	99	4.4	5.1	4.4	577	508	558	478	561	474
BFCM	1.625	11/15/2027	No call	107	0.5	0.5	0.5	124	124	93	93	95	95
BFCM	1.875	06/18/2029	No call	110	0.7	0.7	0.7	128	128	97	97	99	99
BFCM	1.875	11-Apr-2026	No call	108	0.4	0.4	0.4	118	118	87	87	88	88
BFCM	2.375	03/24/2026	No call	110	0.4	0.4	0.4	114	114	84	84	85	85
BFCM	2.500	05/25/2028	No call	114	0.6	0.6	0.6	127	127	92	92	93	93
BFCM	2.625	03/31/2027	No call	113	0.5	0.5	0.5	125	125	93	93	95	95
BFCM	3.000	05/21/2024	No call	110	0.2	0.2	0.2	92	92	65	65	66	66
BFCM	3.000	09-Nov-2025	No call	113	0.3	0.3	0.3	104	104	75	75	76	76
BGAV	2.375	29-24	26-Mar-2024	103	1.4	1.4	1.9	215	254	188	222	189	224

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Lower Tier 2 Bonds (2/5)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity
BKIASM	3.375	27-22	15-Mar-2022	103	0.9	0.9	2.7	161	338	145	307	144	309
BKIASM	3.750	29-24	15-Feb-2024	108	1.2	1.2	2.6	198	323	172	291	173	294
BKIR	2.375	10/14/2029	14-Oct-2024	102	1.7	1.7	2.3	249	294	222	262	223	265
BKIR	10.000	12/19/2022	No call	118	0.5	0.5	0.5	118	118	99	99	99	99
BKTSM	2.500	27-22	06-Apr-2022	102	0.8	0.8	1.9	147	260	129	228	128	230
BNP	1.125	32-27	15-Jan-2027	101	0.9	0.9	1.1	161	170	130	131	131	133
BNP	1.625	07-Feb-2031	No call	106	1.0	1.0	1.0	158	158	121	121	123	123
BNP	2.250	01-Nov-2027	No call	109	0.7	0.7	0.7	142	142	112	112	113	113
BNP	2.375	30-25	20-Nov-2025	108	0.7	0.7	1.3	145	191	117	156	118	159
BNP	2.375	02/17/2025	No call	108	0.5	0.5	0.5	125	125	98	98	98	98
BNP	2.625	27-22	14-Oct-2022	104	0.4	0.4	1.3	109	199	91	169	92	171
BNP	2.750	01/27/2026	No call	111	0.6	0.6	0.6	131	131	102	102	103	103
BNP	2.875	26-21	20-Mar-2021	101	0.0	0.0	1.3	74	203	58	173	56	175
BNP	2.875	10-Jan-2026	No call	113	0.6	0.6	0.6	134	134	103	103	104	104
BOCYCY	9.250	27-22	19-Jan-2022	99	9.2	10.0	9.2	1,076	988	1,054	957	1,057	949
BPCEGP	2.875	04/22/2026	No call	113	0.3	0.3	0.3	108	108	78	78	79	79
BPCEGP	2.875	09/30/2024	No call	108	0.8	0.8	0.8	157	157	131	131	132	132
BPCEGP	4.625	07/18/2023	No call	112	0.1	0.1	0.1	83	83	58	58	59	59
BPCEGP	2.750	26-21	08-Jul-2021	101	0.0	0.0	1.4	73	213	56	183	54	185
BPCEGP	2.750	27-22	30-Nov-2022	105	0.2	0.2	1.6	92	231	73	200	74	202
BPEIM	3.625	11/30/2030	30-Nov-2025	102	3.1	3.1	3.6	385	420	357	386	359	390
BPEIM	5.125	27-22	31-May-2022	104	2.2	2.2	4.1	293	483	277	449	277	452
BPSOIM	3.000	10/23/2022	No call	101	2.3	2.3	2.3	296	296	278	278	279	279
CABKSM	2.250	30-25	17-Apr-2025	104	1.2	1.2	1.5	192	206	164	174	165	176
CABKSM	2.750	28-23	14-Jul-2023	105	0.9	0.9	1.8	165	248	140	212	141	214
CABKSM	3.500	27-22	15-Feb-2022	103	0.7	0.7	2.6	140	336	124	305	123	307
CAZAR	2.750	07/23/2030	23-Jul-2025	97	3.2	3.5	3.2	421	377	393	348	395	347
CCBGBB	3.125	05-Nov-2026	No call	115	0.4	0.4	0.4	111	111	81	81	82	82
CCNORD	2.125	09-Dec-2026	No call	106	1.0	1.0	1.0	171	171	140	140	142	142

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Lower Tier 2 Bonds (3/5)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity
CMARK	1.875	29-24	25-Oct-2024	104	0.8	0.8	1.2	154	178	127	146	128	148
CMARK	3.250	06-Jan-2026	No call	115	0.5	0.5	0.5	122	122	92	92	93	93
CMARK	3.375	03-Nov-2031	No call	122	1.1	1.1	1.1	166	166	130	130	133	133
CMARK	3.500	02-Sep-2029	No call	121	0.8	0.8	0.8	147	147	116	116	118	118
CMZB	4.000	30-25	05-Sep-2025	109	1.9	1.9	3.1	266	371	237	336	239	340
CMZB	4.000	03/23/2026	No call	112	1.6	1.6	1.6	233	233	203	203	205	205
CMZB	4.000	03/30/2027	No call	113	1.8	1.8	1.8	250	250	219	219	221	221
CRLOG	1.350	29-24	28-Nov-2024	102	0.8	0.8	0.9	155	153	128	117	129	118
CXGD	5.750	28-23	28-Jun-2023	110	1.7	1.7	4.0	242	470	219	434	220	437
DANBNK	1.375	30-25	12-Feb-2025	101	1.0	1.0	1.4	177	200	149	169	150	171
DANBNK	1.500	30-25	02-Sep-2025	102	1.0	1.0	1.5	177	205	148	177	150	179
DANBNK	2.500	29-24	21-Jun-2024	106	0.8	0.8	1.7	152	235	125	205	125	207
DANBNK	2.750	26-21	19-May-2021	101	0.1	0.1	1.1	83	188	66	159	64	160
DB	2.750	02/17/2025	No call	104	1.7	1.7	1.7	248	248	220	220	221	221
DB	4.500	05/19/2026	No call	113	2.0	2.0	2.0	273	273	244	244	245	245
DB	5.625	31-26	19-Feb-2026	116	2.4	2.4	4.0	310	458	281	422	283	427
DEVOBA	1.750	10/22/2030	22-Oct-2025	106	0.6	0.6	1.4	131	192	103	162	104	164
DNBNO	1.125	28-23	20-Mar-2023	102	0.0	0.0	0.4	76	113	52	81	53	82
DNBNO	1.250	27-22	01-Mar-2022	101	0.7	0.7	0.7	146	147	129	115	115	115
DZBK	1.576	07/22/2030	No call	105	1.0	1.0	1.0	157	157	129	129	131	131
ERSTBK	7.125	10-Oct-2022	No call	113	0.0	0.0	0.0	67	67	49	49	50	50
ERSTBK	1.000	30-25	10-Jun-2025	101	0.8	0.8	1.1	159	167	131	139	132	141
ERSTBK	1.625	31-26	08-Jun-2026	104	0.8	0.8	1.5	158	209	128	171	129	173
FRLBP	0.875	31-25	26-Oct-2025	101	0.7	0.7	1.1	142	168	115	133	115	135
FRLBP	2.750	26-21	23-Apr-2021	101	0.1	0.1	1.2	78	189	62	159	60	161
FRLBP	2.750	27-22	19-Nov-2022	105	0.2	0.2	1.5	89	222	70	192	70	193
FRLBP	3.000	06-Sep-2028	No call	118	0.5	0.5	0.5	124	124	88	88	90	90
HESLAN	2.000	06/24/2025	No call	100	2.0	2.0	2.0	278	278	250	250	252	252

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Lower Tier 2 Bonds (4/5)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity
LLOYDS	4.500	30-25	18-Mar-2025	114	1.0	1.0	1.1	173	171	145	140	146	142
MONTE	5.375	28-23	18-Jan-2023	86	7.6	13.4	7.6	1,416	831	1,392	796	1,400	789
MONTE	8.000	30-25	22-Jan-2025	99	8.3	8.4	8.3	919	897	891	860	896	855
MONTE	8.500	30-25	10-Sep-2025	101	8.3	8.3	8.6	900	911	871	882	876	890
MONTE	10.500	07/23/2029	No call	123	6.8	6.8	6.8	744	744	713	713	719	719
NDASS	1.000	26-21	07-Sep-2021	101	0.2	0.2	0.9	94	162	77	132	75	133
NDASS	1.000	29-24	27-Jun-2024	101	0.6	0.6	1.0	137	162	110	132	111	133
NOVBNC	8.500	28-23	06-Jul-2023	92	9.9	12.6	9.9	1,334	1,062	1,309	1,026	1,316	1,017
NWIDE	2.000	29-24	25-Jul-2024	105	0.7	0.7	1.1	147	177	120	146	121	148
NYKRE	2.750	27-22	17-Nov-2022	104	0.4	0.4	1.6	114	226	95	196	96	197
OPBANK	1.625	06-Sep-2030	09-Jun-2025	104	0.8	0.8	1.4	151	198	123	170	124	172
OPBANK	5.750	02/28/2022	No call	107	0.0	0.0	0.0	69	69	53	53	51	51
PBBGR	2.875	27-22	28-Jun-2022	100	2.6	2.9	2.6	363	338	345	304	346	302
RABOBK	3.875	07/25/2023	No call	110	0.0	0.0	0.0	77	77	52	52	52	52
RABOBK	4.125	09/14/2022	No call	107	-0.1	-0.1	-0.1	63	63	44	44	44	44
RABOBK	2.500	26-21	26-May-2021	101	1.0	1.0	1.0	174	176	157	146	145	145
RBIAV	1.500	30-25	12-Mar-2025	100	1.5	1.5	1.9	230	246	202	215	203	217
RBIAV	2.875	32-27	18-Jun-2027	108	1.6	1.6	2.3	232	288	198	247	200	251
RBIAV	6.000	10/16/2023	No call	117	0.0	0.0	0.0	80	80	54	54	55	55
RFLBNI	5.875	11/27/2023	No call	110	2.3	2.3	2.3	306	306	278	278	280	280
SABSM	2.000	01/17/2030	17-Jan-2025	97	2.5	2.8	2.5	355	315	328	279	329	277
SABSM	5.375	28-23	12-Dec-2023	109	2.2	2.2	3.8	296	448	268	417	270	421
SABSM	5.625	05-Jun-2026	No call	117	2.3	2.3	2.3	300	300	270	270	272	272
SANTAN	1.625	10/22/2030	No call	105	1.1	1.1	1.1	169	169	139	139	141	141

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Lower Tier 2 Bonds (5/5)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity
SANTAN	2.125	02-Aug-2028	No call	109	0.8	0.8	0.8	150	150	119	119	120	120
SANTAN	2.500	03/18/2025	No call	108	0.5	0.5	0.5	123	123	96	96	97	97
SANTAN	3.125	01/19/2027	No call	114	0.7	0.7	0.7	144	144	113	113	115	115
SANTAN	3.250	04-Apr-2026	No call	114	0.6	0.6	0.6	134	134	105	105	106	106
SEB	1.375	28-23	31-Oct-2023	102	0.5	0.5	1.0	127	166	102	133	103	135
SEB	2.500	26-21	28-May-2021	101	1.1	1.1	1.1	178	180	161	150	149	149
SHBASS	1.250	28-23	02-Mar-2023	102	0.2	0.2	0.5	97	122	74	90	75	91
SOCGEN	2.625	02/27/2025	No call	109	0.5	0.5	0.5	129	129	101	101	102	102
SOCGEN	4.000	6-Jul-23	No call	109	0.2	0.2	0.2	99	99	75	75	76	76
SOCGEN	1.000	30-25	24-Nov-2025	100	1.0	1.0	1.3	169	189	141	155	142	157
SOCGEN	1.375	28-23	23-Feb-2023	102	0.6	0.6	0.7	133	140	110	108	111	109
SOCGEN	2.500	26-21	16-Sep-2021	102	0.3	0.3	1.4	100	213	83	183	81	184
STANLN	2.500	9-Sep-30	09-Sep-2025	107	0.9	0.9	1.9	168	243	139	214	140	217
STANLN	3.125	11/19/2024	No call	110	0.5	0.5	0.5	126	126	100	100	100	100
STANLN	3.625	11/23/2022	No call	106	0.3	0.3	0.3	98	98	79	79	79	79
SWEDA	1.000	27-22	22-Nov-2022	101	0.5	0.5	0.6	124	131	105	101	105	102
UBIIM	4.250	26-21	05-May-2021	101	0.6	0.6	3.7	133	439	116	409	115	412
UBIIM	4.375	29-24	12/07/2024	107	2.2	2.2	3.6	293	418	266	387	268	390
UBIIM	4.450	27-22		105	1.4	1.4	3.3	210	401	191	369	192	372
UBIIM	5.875	29-24		112	2.0	2.0	4.0	272	468	246	437	247	440
UCGIM	2.000	29-24		99	2.3	2.3	2.4	306	298	280	267	281	269
UCGIM	2.731	01/15/2032		101	2.5	2.5	2.7	327	332	296	293	298	297
UCGIM	4.375	27-22		104	0.8	0.8	3.5	151	418	130	387	128	390
UCGIM	4.875	29-24		109	1.9	1.9	3.5	266	413	240	382	242	385
UCGIM	6.950	10/31/2022		111	0.7	0.7	0.7	141	141	124	124	124	124
U. Average				**106**	**1.4**	**1.5**	**1.9**	**222**	**255**	**197**	**224**	**198**	**226**
Median				**105**	**0.8**	**0.8**	**1.4**	**158**	**205**	**130**	**174**	**131**	**176**

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Tier 1 Bonds

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	Yt2022 (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	ACSM	Equity Settlement	Voting Rights
LPTY	7.375	Perp-24	29-May-2024	109	4.5	4.5	6.9	(1.6)	526	708	499	739	508	717	No	No	No
U. Average				**109**	**4.5**	**4.5**	**6.9**	**(1.6)**	**526**	**708**	**499**	**739**	**508**	**717**			
Median				**109**	**4.5**	**4.5**	**6.9**	**(1.6)**	**526**	**708**	**499**	**739**	**508**	**717**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI € Index Tier 1 Non-Step Bonds

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	Yt2022 (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	ACSM	Equity Settlement	Voting Rights
BACR	0.167	Perp-21	15-Mar-2021	93	0.6	37.3	0.6	7.2	3,806	79	3,789	109	4,492	78	No	No	No
CRLOG	0.607	Perp-21	16-Mar-2021	90	1.2	61.1	1.2	n/a	6,177	132	6,161	162	7,908	130	No	No	No
DEPFA	6.500	Perp-21	30-Oct-2021	60				n/a							No	No	No
HESLAN	5.500	Perp-21	30-Jun-2021	102	0.8	0.8	5.4	n/a	150	554	133	585	131	550	No	No	No
HESLAN	5.750	Perp-21	30-Jun-2021	102	1.3	1.3	5.6	n/a	202	580	185	610	184	575	No	No	No
NDB	5.625	Perp-21	30-Jun-2021	54				n/a							No	No	No
U. Average				**84**	**1.0**	**25.1**	**3.2**	**7.2**	**2,584**	**336**	**2,567**	**367**	**3,179**	**333**			
Median				**91**	**1.0**	**19.3**	**3.3**	**7.2**	**2,004**	**343**	**1,987**	**374**	**2,338**	**340**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI $ Index Tier 1 Step Bonds

ISIN	Securities	Call Date	Price	YtW	YtN	YtM	Equity Settlement	Deferral Language	ACSM
XS0097772965	CMZB $ 8.151% 31-29	30-Jun-2029	149	1.9	1.9	2.8	No	Capital Adequacy	No
USG4637HAB45	HSBC $ 10.176% Perp-30	30-Jun-2030	171	2.0	2.0	4.6	No	Optional/Capital Adequacy/Regulator/ Veto/Distr. Reserves	No
US853254AC43	STANLN $ 7.014% Perp-37	30-Jul-2037	130	3.6	4.5	3.6	No	Optional/Distr. Reserves/Capital Adequacy	No
U. Avg			**122**	**3.7**	**3.8**	**7.2**			
Median			**117**	**4.2**	**4.2**	**5.6**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: BCI $ Index Tier 1 Non-Step Bonds

ISIN	Securities	Call Date	Price	YtW	YtN	YtM	Equity Settlement	Deferral Language	ACSM
US06738C8284	BACR $ 6.278% Perp-34	15-Dec-2034	125	3.3	3.9	3.3	No	Optional	No
USF1058YHX97	BNP $ 7.195% Perp-37	25-Jun-2037	111	4.6	6.1	4.6	No	Optional/Capital Adequacy	Yes
USG5533WAA56	LLOYDS $ 6.413% Perp-35	01-Oct-2035	123	3.5	4.3	3.5	No	Optional	No
US539439AE93	LLOYDS $ 6.657% Perp-37	21-May-2037	127	3.4	4.4	3.4	No	Optional	No
U. Avg			**122**	**3.7**	**3.8**	**7.2**			
Median			**117**	**4.2**	**4.2**	**5.6**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo € Index (1/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
AARB	6.849	Perp-21	30-Apr-2021	99	8.4	7.1	907	726	891	757	917	723	7% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
ABANCA	7.500	Perp-23	02-Oct-2023	103	6.1	7.1	687	729	662	759	681	745	CET1 5.125% B3 Phased-in	Temporary Write Down	Fully discretionary
ABNANV	4.375	Perp-25	22-Sep-2025	106	3.0	4.3	371	450	343	480	347	450	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
ABNANV	4.750	Perp-27	22-Sep-2027	107	3.6	3.8	428	395	396	426	402	395	7% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
ACAFP	4.000	Perp-27	23-Dec-2027	108	2.7	3.9	343	408	308	439	314	410	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
ACAFP	6.500	Perp-21	23-Jun-2021	102	1.5	5.0	224	515	207	545	207	519	CET 1 5.125% Phased in (Opco) & CET1 7% Phased (Group)	Write down/ Write up	Fully discretionary
AIB	5.250	Perp-24	09-Oct-2024	106	3.6	5.3	439	548	412	578	418	551	7% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
AIB	6.250	Perp-25	23-Jun-2025	111	3.7	5.9	443	609	415	640	421	614	7% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
BAMIIM	6.125	Perp-25	21-Jan-2025	100	6.1	6.3	689	648	661	679	674	654	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
BAMIIM	8.750	Perp-24	18-Jun-2024	108	6.1	8.2	681	839	654	870	667	854	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
BBVASM	5.875	Perp-22	24-May-2022	102	4.0	5.6	472	578	456	609	465	586	CET1 5.125% B3 Phased-in	Equity Conversion	Fully discretionary
BBVASM	5.875	Perp-23	24-Sep-2023	104	4.1	5.4	489	560	463	591	472	567	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BBVASM	6.000	Perp-24	29-Mar-2024	107	3.6	5.6	441	579	414	610	421	587	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BBVASM	6.000	Perp-26	15-Jan-2026	110	3.7	5.8	446	592	417	623	425	601	5.125% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BBVASM	8.875	Perp-21	14-Apr-2021	102	1.0	8.9	174	910	157	940	157	939	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BCPPL	9.250	Perp-24	31-Jan-2024	102	8.3	9.2	908	935	883	965	914	966	CET1 5.125% B3 Phased-in	Temporary Write Down	Fully discretionary
BGAV	5.000	Perp-25	14-May-2025	102	4.5	4.4	522	457	494	488	502	446	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
BKIASM	6.000	Perp-22	18-Jul-2022	103	3.8	5.6	454	579	435	610	443	587	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BKIASM	6.375	Perp-23	19-Sep-2023	107	3.6	5.8	434	599	409	630	416	608	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BKIR	6.000	Perp-26	01-Mar-2026	108	4.3	5.9	500	603	471	634	478	608	7% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
BKIR	7.500	Perp-25	19-May-2025	114	3.9	6.9	468	703	440	733	447	711	7% CET1 Ratio Fully-loaded	Temporary write down	Fully discretionary
BKTSM	6.250	Perp-26	17-Jan-2026	110	4.1	6.0	481	618	452	648	461	627	5.125% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BKTSM	8.625	Perp-21	10-May-2021	102	1.6	8.6	234	878	218	908	220	904	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
BNP	6.125	Perp-22	17-Jun-2022	106	1.9	5.0	261	512	245	542	246	514	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
CABKSM	5.250	Perp-26	23-Mar-2026	102	4.7	4.5	547	471	517	501	529	460	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo € Index (2/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
CABKSM	5.875	Perp-27	09-Oct-2027	110	4.1	5.6	483	571	453	601	464	578	5.125% CET1 Ratio Fully-loaded	Non Specified	Fully discretionary
CABKSM	6.750	Perp-24	13-Jun-2024	110	3.5	5.9	427	610	400	640	407	619	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
CAZAR	7.000	Perp-23	06-Apr-2023	104	5.3	6.6	610	677	586	707	601	690	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
CCBGBB	3.625	Perp-25	16-Apr-2025	98	4.3	3.0	500	321	472	351	480	313	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
CMZB	6.125	Perp-25	09-Oct-2025	107	4.5	5.9	526	608	498	638	501	604	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
CMZB	6.500	Perp-29	09-Oct-2029	113	4.6	5.9	527	604	495	634	500	599	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
CXGD	10.750	Perp-22	30-Mar-2022	110	2.6	9.9	331	1,008	313	1,038	316	1,046	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
DANBNK	5.875	Perp-22	06-Apr-2022	104	2.2	5.2	293	540	275	570	277	542	7% CET1 Ratio Phased-in	Write down/ Write up	fully discretionary
DB	6.000	Perp-22	30-Apr-2022	100	6.1	4.7	684	490	666	520	669	478	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary
ERSTBK	3.375	Perp-27	15-Apr-2027	95	4.4	3.6	512	375	480	405	488	366	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
ERSTBK	4.250	Perp-27	15-Oct-2027	103	3.7	4.4	436	453	406	484	412	454	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
ERSTBK	5.125	Perp-25	15-Oct-2025	107	3.5	4.6	425	473	398	504	403	474	5.125% CET1 Ratio Phased-in	Temporary Write Down	Fully discretionary
ERSTBK	6.500	Perp-24	15-Apr-2024	112	2.8	5.6	355	577	327	607	331	580	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
ERSTBK	8.875	Perp-21	15-Oct-2021	106	0.8	8.5	150	862	133	892	131	878	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
FINBAN	5.875	Perp-24	03-Dec-2024	106	4.2	5.7	490	591	463	621	470	595	CET1 5.125% Fully-loaded	Temporary write down	Fully discretionary
FRLBP	3.875	Perp-26	20-May-2026	102	3.4	3.9	418	404	388	434	394	403	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
HSBC	4.750	Perp-29	04-Jul-2029	111	3.2	3.6	383	379	352	409	358	378	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
HSBC	5.250	Perp-22	16-Sep-2022	104	2.7	4.2	337	438	318	468	321	438	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
HSBC	6.000	Perp-23	29-Sep-2023	110	2.4	4.9	314	509	288	540	292	511	7% CET1 Ratio Fully-loaded	Write down/ Write up	Fully discretionary
ISPIM	3.750	Perp-25	27-Feb-2025	95	5.0	4.2	574	438	546	468	555	428	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
ISPIM	4.125	Perp-30	27-Feb-2030	95	4.9	4.4	546	460	515	490	525	449	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
ISPIM	5.500	Perp-28	01-Mar-2028	106	4.5	5.4	516	557	484	587	493	560	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
ISPIM	5.875	Perp-31	01-Sep-2031	112	4.4	5.3	504.7	549.6	467	580	478	552	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
ISPIM	6.250	Perp-24	16-May-2024	109	3.4	5.4	418.0	559.6	391	590	397	563	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo € Index (3/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
ISPIM	7.000	Perp-21	19-Jan-2021	100	6.8	6.8	750.1	750.1	733	733	751	727	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
ISPIM	7.750	Perp-27	11-Jan-2027	120	4.0	6.2	475.9	633.5	445	664	453	639	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
KBCBB	4.250	Perp-25	24-Oct-2025	105	3.2	3.5	393.3	365.3	365	396	370	365	CET1 5.125% B3 Phased-in	Temporary write down	Fully discretionary
KBCBB	4.750	Perp-24	05-Mar-2024	106	2.6	4.4	340.0	455.3	314	486	318	456	CET1 5.125% B3 Phased-in	Permanent Write Down	Fully discretionary
LBBW	4.000	Perp-25	15-Apr-2025	99	4.1	4.2	488.3	433.3	461	464	463	423	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
LLOYDS	4.947	Perp-25	27-Jun-2025	107	3.2	4.9	395.1	502.8	367	533	373	507	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
NDASS	3.500	Perp-25	12-Mar-2025	104	2.6	2.9	335.6	305.6	308	336	310	302	8% CET1 Ratio Fully-loaded	Temporary write down	Fully discretionary
NIBCAP	6.000	Perp-24	15-Oct-2024	101	5.8	5.6	658.8	578.4	632	609	644	566	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
NYKRE	4.000	36-21	03-Jun-2021	101	0.6	2.8	126.7	321.2	110	285	108	290	CET1 7% B3 Phased-in	Permanent write down	Must Pay
NYKRE	4.125	Perp-26	15-Apr-2026	105	3.0	4.2	376.9	435.6	347	466	352	436	7% CET1 Ratio Fully-loaded	Permanent Write Down	Must Pay
PBBGR	5.750	Perp-23	28-Apr-2023	100	5.7	5.4	645.9	556.1	622	586	626	544	7% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
RABOBK	3.250	Perp-26	29-Dec-2026	101	3.1	3.5	381.9	370.8	351	401	356	370	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
RABOBK	4.375	Perp-27	29-Jun-2027	111	2.6	4.1	334.1	430.5	300	461	305	431	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
RABOBK	4.625	Perp-25	29-Dec-2025	109	2.7	3.8	341.2	397.3	313	428	316	397	5.125% CET1 Ratio Phased-in	Temporary Write Down	Fully discretionary
RABOBK	6.625	Perp-21	29-Jun-2021	103	1.0	6.5	166.9	663.8	150	694	149	670	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
RBIAV	4.500	Perp-25	15-Jun-2025	99	4.7	4.0	545.1	414.5	517	445	526	405	5.125% CET1 Ratio Phased-in	Permanent write down	Fully discretionary
RBIAV	6.000	Perp-26	15-Jun-2026	108	4.2	5.8	498.2	600.5	468	631	476	605	5.125% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
RBIAV	6.125	Perp-22	15-Dec-2022	104	4.0	5.7	470.0	589.0	451	620	457	593	5.125% CET1 Ratio Phased-in	Permanent write down	Fully discretionary
SABSM	6.125	Perp-22	23-Nov-2022	98	7.0	6.1	772.9	630.7	754	661	777	618	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
SABSM	6.500	Perp-22	18-May-2022	99	7.2	6.5	787.3	662.3	771	693	797	649	5.125% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo € Index (4/4)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	Yt2022 (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Z-Sprd To Maturity
SANTAN	4.375	Perp-26	14/01/2026	100	4.3	4.5	508.5	464.7	480	495	490	454	490	454	509
SANTAN	4.750	Perp-25	19/03/2025	100	4.8	4.2	550.1	434.3	523	465	534	424	534	424	550
SANTAN	5.250	Perp-23		104	3.6	4.8	434.5	496.5	409	527	417	501	417	501	435
SANTAN	6.250	Perp-21		102	2.8	5.5	355.4	565.5	339	596	340	573	340	573	355
SANTAN	6.750	Perp-22		106	2.4	6.4	311.4	658.4	293	689	296	670	296	670	311
SOCGEN	6.750	Perp-21		101	1.8	5.4	250.3	559.2	233	590	234	562	234	562	250
UBIIM	5.875	Perp-25		107	4.0	5.6	471.7	579.8	444	610	451	584	451	584	472
UBS	4.750	2-Dec-26		101	3.0	3.0	371.2	373.5	354	344	342	342	342	342	371
UBS	5.750	Perp-22		105	1.5	5.0	215.9	518.6	200	549	199	514	199	514	216
UCGIM	3.875	Perp-27		90	5.8	4.5	653.2	463.7	620	494	632	453	632	453	653
UCGIM	5.375	Perp-25		102	4.9	4.9	561.5	507.2	534	538	543	509	543	509	562
UCGIM	6.625	Perp-23		105	4.4	6.1	514.4	627.0	491	658	499	632	499	632	514
UCGIM	6.750	Perp-21		102	4.1	6.0	485.9	614.3	469	644	472	619	472	619	486
UCGIM	7.500	Perp-26		116	4.2	6.4	491.5	655.4	462	686	469	662	469	662	492
UCGIM	9.250	Perp-22		109	2.4	8.5	307.7	864.5	291	895	294	881	294	881	308
ZKB	2.625	27-22		103	0.5	1.4	120.7	211.6	104	178	104	179	104	179	121
U. Average				**105**	**3.8**	**5.4**	**455**	**555**	**430**	**583**	**437**	**556**			
Median				**104**	**3.8**	**5.4**	**454**	**559**	**435**	**590**	**443**	**562**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo $ Index (1/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
ACAFP	6.875	Perp-24	23-Sep-2024	111	3.6	5.4	344	373	330	461	334	418	5.125% CET1 Ratio Phased-in	Permanent Write Down	Fully discretionary
ACAFP	7.875	Perp-24	23-Jan-2024	114	3.1	5.8	296	417	288	505	292	468	CET 1 5.125% Phased in (Opco) & CET1 7% Phased (Group)	Write down/ Write up	Fully discretionary
ACAFP	8.125	Perp-25	23-Dec-2025	122	3.4	6.4	302	479	295	567	301	533	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
BACR	6.125	Perp-25	15-Dec-2025	108	4.4	6.5	398	486	391	575	400	540	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BACR	7.625	11/21/2022	No call	111	1.6	1.6	147	147	141	141	141	141	CET1 7% B3 Phased-in	Permanent write down	Must Pay
BACR	7.750	Perp-23	15-Sep-2023	107	4.9	6.1	470	444	464	533	473	497	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BACR	7.875	Perp-22	15-Mar-2022	105	3.7	7.8	352	614	347	703	351	678	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BACR	8.000	Perp-24	15-Jun-2024	112	4.3	6.6	418	493	407	582	414	549	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BAERVX	4.750	Perp-24	12-Sep-2024	103	3.9	4.2	377	256	364	345	368	300	7% CET1 Ratio Phased-in	Permanent write down	Fully-discretionary with dividend stopper
BAERVX	4.875	Perp-26	08-Oct-2026	104	4.1	5.5	370	390	354	478	359	435	7% CET1 Ratio Fully-loaded	Permanent Write Down	Fully-discretionary with dividend stopper
BBVASM	6.125	Perp-27	16-Nov-2027	105	5.2	5.3	427	365	454	453	466	402	CET1 5.125% B3 Phased-in	Equity Conversion	Fully discretionary
BBVASM	6.500	Perp-25	05-Mar-2025	107	4.7	6.2	434	459	435	548	444	512	CET1 5.125% Fully-loaded	Equity Conversion	Fully discretionary
BNP	4.500	Perp-30	25-Feb-2030	100	4.5	4.4	353	273	359	362	367	310	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
BNP	5.125	Perp-27	15-Nov-2027	104	4.5	4.3	356	267	383	355	390	304	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
BNP	6.625	Perp-24	25-Mar-2024	109	3.6	5.3	342	366	332	455	336	412	5.125% CET1 Ratio Phased-in	Temporary Write Down	Fully discretionary
BNP	6.750	Perp-22	14-Mar-2022	105	2.8	6.1	271	443	266	531	266	490	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
BNP	7.000	Perp-28	16-Aug-2028	119	4.1	5.0	321	336	340	425	348	382	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
BNP	7.375	Perp-25	19-Aug-2025	116	3.6	5.9	325	424	321	512	327	471	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
BNP	7.625	Perp-21	30-Mar-2021	101	2.1	7.6	199	593	194	682	194	647	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
CMZB	7.000	Perp-25	09-Apr-2025	107	5.2	6.4	480	471	480	560	481	510	CET1 5.125% Fully-loaded	Temporary write down	Fully discretionary
CS	5.100	Perp-30	24-Jan-2030	104	4.6	4.7	365	301	372	390	380	345	7% CET1 Ratio Fully-loaded	Permanent Write Down	Fully discretionary
CS	5.250	Perp-27	11-Feb-2027	106	4.1	5.7	322	405	357	493	363	450	7% CET1 Ratio Fully-loaded	Permanent Write Down	Fully discretionary
CS	6.250	Perp-24	18-Dec-2024	109	3.7	4.7	334	304	337	393	342	348	CET1 5.125% B3 Phased-in	Permanent write down	Fully-discretionary with dividend stopper
CS	6.375	Perp-26	21-Aug-2026	111	4.1	5.7	373	404	359	493	365	450	7% CET1 Ratio Fully-loaded	Permanent Write Down	Fully discretionary
CS	6.500	08-Aug-2023	No call	113	1.5	1.5	133	133	128	128	129	129	CET1 5% B3 Phased-in	Permanent write down	Must Pay

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo $ Index (2/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
CS	7.125	Perp-22	29-Jul-2022	106	3.4	6.2	332	460	326	548	328	507	7% CET1 Ratio Phased-in	Equity Conversion	Fully-discretionary with dividend stopper
CS	7.250	Perp-25	12-Sep-2025	113	4.3	5.5	389	380	385	469	391	426	7% CET1 Ratio Phased-in	Permanent Write Down	Fully-discretionary with dividend stopper
CS	7.500	Perp-23	11-Dec-2023	111	3.5	5.7	331	400	324	489	327	446	CET1 5.125% B3 Phased-in	Permanent write down	Fully-discretionary with dividend stopper
CS	7.500	Perp-23	17-Jul-2023	109	3.8	5.7	365	409	360	498	365	456	7% CET1 Ratio Phased-in	Permanent write down	Fully-discretionary with dividend stopper
DANBNK	6.125	Perp-24	28-Mar-2024	106	4.2	5.2	407	353	397	442	402	398	7% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
DANBNK	7.000	Perp-25	26-Jun-2025	111	4.3	5.3	391	366	389	455	395	412	7% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
DB	4.789	Perp-25	30-Apr-2025	95	6.4	6.0	608	433	608	522	608	465	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary
DB	6.000	Perp-25	30-Oct-2025	100	5.9	6.0	557	436	551	524	552	467	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
DB	7.500	Perp-25	30-Apr-2025	106	5.8	6.3	545	469	545	558	545	508	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
DNBNO	4.875	Perp-24	12-Nov-2024	104	3.9	4.5	368	280	353	369	354	319	CET1 5.125% Fully-loaded	Temporary Write Down	Fully discretionary
DNBNO	6.500	Perp-22	26-Mar-2022	105	2.6	6.2	247	454	242	543	240	492	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
HSBC	6.000	Perp-27	22-May-2027	109	4.4	5.0	350	334	383	423	390	379	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
HSBC	6.250	Perp-23	23-Mar-2023	105	4.1	4.8	388	313	384	402	388	357	CET1 7% B3 Fully-loaded	Equity Conversion	Fully discretionary
HSBC	6.375	Perp-24	17-Sep-2024	107	4.2	5.0	404	335	391	423	395	379	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
HSBC	6.375	Perp-25	30-Mar-2025	109	4.0	5.4	359	380	360	469	365	425	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
HSBC	6.500	Perp-28	23-Mar-2028	112	4.5	4.9	357	323	381	412	389	369	CET1 7% B3 Fully-loaded	Equity Conversion	Fully discretionary
HSBC	6.875	Perp-21	01-Jun-2021	102	2.8	6.8	267	513	262	602	262	563	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
INTNED	4.875	Perp-29	16-May-2029	102	4.5	4.8	362	315	374	404	382	359	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
INTNED	5.750	Perp-26	16-Nov-2026	109	4.1	5.3	369	369	351	458	357	414	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
INTNED	6.500	Perp-25	16-Apr-2025	110	3.9	5.5	358	385	358	474	363	431	Trigger at 7.0% Transitional basis	Equity Conversion	Fully discretionary
INTNED	6.750	Perp-24	16-Apr-2024	109	3.8	5.4	364	371	355	459	358	416	7% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
INTNED	6.875	Perp-22	16-Apr-2022	105	3.2	6.3	312	463	307	552	307	511	7% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo $ Index (3/4)

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
ISPIM	7.700	Perp-25	17-Sep-2025	113	4.6	6.3	419	468	415	557	421	517	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
LLOYDS	6.750	Perp-26	27-Jun-2026	112	4.3	5.7	388	409	375	498	384	460	CET1 7% B3 Fully-loaded	Equity Conversion	Fully discretionary
LLOYDS	7.500	Perp-24	27-Jun-2024	112	3.7	5.8	350	410	338	499	344	461	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
LLOYDS	7.500	Perp-25	27-Sep-2025	115	4.0	5.5	359	384	354	474	362	435	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
NDASS	5.250	Perp-21	13-Sep-2021	102	2.6	4.5	245	288	241	376	240	326	8% CET1 Ratio Fully-loaded	Write down/ Write up	Fully discretionary
NDASS	6.125	Perp-24	23-Sep-2024	109	3.4	4.6	325	294	311	383	315	339	CET 1 5.125% Fully-loaded (Opco) & CET1 8% Fully-loaded (Group)	Write down/ Write up	Fully discretionary
NDASS	6.625	Perp-26	26-Mar-2026	115	3.5	5.1	314	342	304	431	309	387	8% CET1 Ratio Fully-loaded	Temporary Write Down	Fully discretionary
NWG	6.000	Perp-25	29-Dec-2025	109	3.9	6.2	354	458	347	547	354	511	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
NWG	8.000	Perp-25	10-Aug-2025	117	4.0	6.4	362	473	358	562	366	527	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
NWG	8.625	Perp-21	15-Aug-2021	104	2.5	8.7	232	702	227	791	228	772	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SANTAN	7.500	Perp-24	08-Feb-2024	111	3.8	6.0	366	436	358	524	364	488	CET1 5.125% B3 Phased-in	Equity Conversion	Fully discretionary
SEB	5.125	Perp-25	13-May-2025	104	4.1	4.8	371	310	370	399	375	354	CET1 5.125% Fully-loaded	Equity Conversion	Fully discretionary
SEB	5.625	Perp-22	13-May-2022	103	3.4	4.8	327	314	322	402	324	357	5.125% CET1 Ratio Fully-loaded & 8% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SHBASS	4.375	Perp-27	01-Mar-2027	104	3.6	4.9	265	327	300	416	301	365	5.125% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SHBASS	4.750	Perp-31	01-Mar-2031	106	4.0	4.9	305	322	303	411	307	360	5.125% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SHBASS	5.250	Perp-21	01-Mar-2021	100	2.6	4.6	246	300	241	388	242	338	8% CET1 Ratio Phased-in	Write down/ Write up	fully discretionary
SHBASS	6.250	Perp-24	01-Mar-2024	109	3.1	4.8	298	318	289	407	289	357	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
SOCGEN	5.375	Perp-30	18-Nov-2030	106	4.6	5.4	370	375	370	464	380	419	5.125% CET1 Ratio Phased-in	Temporary Write Down	Fully discretionary
SOCGEN	6.750	Perp-28	06-Apr-2028	112	4.8	5.2	385	354	409	443	417	400	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary
SOCGEN	7.375	Perp-21	13-Sep-2021	103	3.5	7.4	336	577	331	666	330	630	5.125% CET1 Ratio Phased-in	Temporary write down	Fully discretionary
SOCGEN	7.375	Perp-23	04-Oct-2023	108	4.3	5.5	411	389	405	478	410	435	CET1 5.125% B3 Phased-in	Temporary Write Down	Fully discretionary
SOCGEN	7.875	Perp-23	18-Dec-2023	111	4.1	6.1	389	440	381	529	386	488	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI CoCo $ Index (4/4)

Ticker	Coupon	Maturity	Call Date	Price	YtW (%)	YtN (%)	YtM (%)	Yt2022 (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Z-Sprd To Maturity
SOCGEN	8.000	Perp-25	29-Sep-2025	117	3.9	6.4	356	478	352	567	357	527	5.125% CET1 Ratio Phased-in	Write down/ Write up	Fully discretionary
STANLN	6.000	Perp-25	26-Jul-2025	107	4.3	6.4	398	478	395	566	401	526	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
STANLN	7.500	Perp-22	02-Apr-2022	104	4.1	7.4	393	575	389	664	390	628	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
STANLN	7.750	Perp-23	02-Apr-2023	108	3.9	6.7	371	507	367	595	371	557	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SWEDA	5.625	Perp-24	17-Sep-2024	106	3.8	5.3	366	363	352	452	356	408	CET1 5.125% Fully-loaded	Equity Conversion	Fully discretionary
SWEDA	6.000	Perp-22	17-Mar-2022	103	3.5	5.4	337	373	333	461	333	418	8% CET1 Ratio Phased-in	Equity Conversion	Fully discretionary
UBS	5.000	Perp-23	31-Jan-2023	100	4.9	3.9	470	223	467	311	467	259	7% CET1 Ratio Phased-in	Permanent write down	Fully discretionary
UBS	5.125	Perp-26	29-Jul-2026	107	3.7	5.6	338	399	324	488	325	436	7% CET1 Ratio Fully-loaded	Permanent Write Down	Fully discretionary
UBS	5.125	05/15/2024	No call	110	1.9	1.9	175	175	165	165	165	165	CET1 5% B3 Phased-in	Permanent write down	Must Pay
UBS	6.875	Perp-21	22-Mar-2021	101	2.2	6.8	212	513	207	601	207	551	7% CET1 Ratio Phased-in	Permanent write down	Fully discretionary
UBS	6.875	Perp-25	07-Aug-2025	113	3.8	5.5	339	388	336	477	337	427	7% CET1 Ratio Phased-in	Permanent write down	with dividend stopper
UBS	7.000	Perp-24	31-Jan-2024	110	3.7	5.5	352	382	344	471	348	428	7% CET1 Ratio Phased-in	Permanent Write Down	Fully discretionary
UBS	7.000	Perp-25		114	3.4	5.7	300	405	302	493	303	443	5.125% CET1 Ratio Phased-in	Permanent write down	with dividend stopper
UBS	7.125	Perp-21		103	2.4	7.1	229	540	224	629	223	579	7% CET1 Ratio Phased-in	Permanent write down	Fully discretionary
UBS	7.625	08/17/2022		111	0.9	0.9	76	76	70	70	69	69	CET1 5% B3 Phased-in	Permanent write down	Must Pay
UCGIM	8.000	Perp-24		108	5.4	6.4	519	477	508	565	515	526	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary
U. Average				**108**	**3.8**	**5.5**	**348**	**391**	**345**	**475**	**349**	**434**			
Median				**108**	**3.9**	**5.5**	**356**	**388**	**354**	**477**	**358**	**435**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

Appendix: Credit Suisse BCI COCO £ Index

Ticker	Coupon	Maturity	Call Date	Price	YtN (%)	YtM (%)	BM Spread to Next	BM Spread to Maturity	I-Sprd To Next	I-Sprd To Maturity	Z-Sprd To Next	Z-Sprd To Maturity	Principal Capital ratio Trigger	Trigger terms	Coupon Type
ACAFP	7.500	Perp-26	23-Jun-2026	120	3.5	4.7	358	416	327	438	333	429	CET 1 5.125% Phased in (Opco) & CET1 7% Phased (Group)	Write down/ Write up	Fully discretionary
BACR	5.875	Perp-24	15-Sep-2024	103	5.0	5.4	506	485	480	507	489	499	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BACR	6.375	Perp-25	15-Dec-2025	108	4.6	6.1	458	552	433	574	441	568	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
BACR	7.125	Perp-25	15-Jun-2025	112	4.3	6.5	436	589	408	610	415	606	CET1 7% B3 Fully-loaded	Equity Conversion	Fully discretionary
BACR	7.250	Perp-23	15-Mar-2023	106	4.4	6.7	444	614	430	636	439	633	CET1 7% B3 Fully-loaded	Equity Conversion	Fully discretionary
BACR	7.875	Perp-22	15-Sep-2022	106	4.0	6.4	416	586	395	608	402	603	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
COVBS	6.875	Perp-24	18-Sep-2024	110	3.9	6.1	397	557	372	579	375	568	CET1 7% B3 Fully-loaded	CCDS Conversion	Fully discretionary
DB	7.125	Perp-26	30-Apr-2026	104	6.2	5.1	622	461	592	482	593	458	CET1 5.125% B3 Phased-in	Write down/ Write up	Fully discretionary
HSBC	5.875	Perp-26	28-Sep-2026	110	3.9	4.6	397	407	366	428	370	416	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
INVPLN	6.750	Perp-24	05-Dec-2024	100	6.8	6.5	691	591	664	613	681	588	7% CET1 Ratio Fully-loaded	Permanent write down	Fully discretionary
LLOYDS	5.125	Perp-24	27-Dec-2024	105	3.9	5.0	402	441	373	462	379	453	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
LLOYDS	7.625	Perp-23	27-Jun-2023	110	3.5	7.0	361	638	341	660	346	659	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
LLOYDS	7.875	Perp-29	27-Jun-2029	124	4.5	6.4	435	580	412	602	422	597	CET1 7% B3 Fully loaded	Equity Conversion	Fully discretionary
NWG	5.125	Perp-27	12-May-2027	105	4.3	5.2	430	465	403	486	411	478	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
NWIDE	5.750	Perp-27	20-Jun-2027	109	4.1	5.6	405	499	378	521	383	509	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
NWIDE	5.875	Perp-24	20-Dec-2024	108	3.8	5.6	393	500	365	521	369	510	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
SANUK	6.750	Perp-24	24/06/2024	109	4.1	6.0	418	540	392	561	399	555	7% CET1 Ratio Fully-loaded	Permanent write down	Fully discretionary
SANUK	7.375	Perp-22	24/06/2022	104	4.3	6.0	443	542	423	564	433	558	7% CET1 Ratio Fully-loaded	Permanent write down	Fully discretionary
VMUKLN	8.000	Perp-22	08/12/2022	102	7.2	6.9	722	634	710	655	723	629	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
VMUKLN	8.750	Perp-21		103	4.8	8.3	498	772	478	793	486	791	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
VMUKLN	9.250	Perp-24		109	6.1	8.3	625	769	600	790	610	788	7% CET1 Ratio Fully-loaded	Equity Conversion	Fully discretionary
U. Average				**108**	**4.6**	**6.1**	**469**	**554**	**445**	**576**	**452**	**566**			
Median				**108**	**4.3**	**6.1**	**435**	**552**	**408**	**574**	**415**	**568**			

Source: Credit Suisse. Valuation at 31 December 2020 (COB which is 4h15pm LDN for GBP and EUR indices, 4h00pm NY for USD).

European Sector Strategy: Financial Institutions

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