

# Interaction between regulatory minimum requirements and capital buffers

## 1 Introduction

At the end of 2016, the European Commission published amendments to the regulatory framework for the banking sector<sup>1</sup>, which had, in turn, implemented the amendments proposed by Basel III in the European regulatory framework in response to the financial crisis that erupted in 2007-2008. The new regulatory framework introduces new requirements and reviews some already implemented, with the aim of: (i) strengthening the resilience of credit institutions and investment firms (hereinafter "institutions") and the European Union (EU) banking system to any future shocks, and (ii) mitigating the interlinkage between institutions and sovereigns. The pieces of legislation that make up this new legislative package are CRD V<sup>2</sup>, CRR II<sup>3</sup>, BRRD II<sup>4</sup> and SRMR II<sup>5</sup>.

This legislative package sets, among others, three types of regulatory requirements, established with different objectives, to be met simultaneously, as soon as they enter into force, by the institutions covered: (i) risk-based own funds requirements (RW); (ii) leverage ratio requirements (LR); and (iii) minimum requirements for own funds and eligible liabilities (MREL)<sup>6</sup>, in the context of banking resolution.

The simultaneity of the three types of regulatory requirements adds some complexity to their interaction. The fact that the same amount of own funds can be used to the fulfilment of more than one regulatory requirement, may affect, in certain cases, the effectiveness of some instruments, namely those of a macroprudential nature (in the case of buffers) and microprudential (in the case of guidance on additional own funds), where the interaction between these regulatory requirements reduces the flexibility of the instruments by conditioning their usability in adverse scenarios. However, there are regulatory requirements with specific rules to avoid this double counting of own funds to meet more than one requirement, as will be discussed in the sections below (such as the case of MREL, where the amount of own funds earmarked for capital buffers cannot be used to meet risk-based MREL).

<sup>1</sup> A summary of the amendments made can be found in the Special issue "Amendment of the CRD IV-CRR: what is new?", *Financial Stability Report*, Banco de Portugal, December 2018, and in the Special issue "Review of the resolution framework: what is new?", *Financial Stability Report*, Banco de Portugal, June 2019.

<sup>2</sup> Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures (the Capital Requirements Directive).

<sup>3</sup> Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No. 648/2012 (the Capital Requirements Regulation).

<sup>4</sup> Directive (EU) 2019/879 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) 2014/59/EU as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms (the Bank Recovery and Resolution Directive).

<sup>5</sup> Regulation (EU) 2019/877 of the European Parliament and of the Council 20 May 2019 amending Regulation (EU) No 806/2014 as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms (the Single Resolution Mechanism Regulation).

<sup>6</sup> An instrument used in the context of resolution planning with the aim to ensure the resolution of credit institutions and investment firms, by ensuring that, in resolution, institutions have sufficient liabilities to absorb their losses and recapitalise themselves.

This Special issue will focus on the interaction between different regulatory requirements, as well as on the usability of buffers, i.e., the amount of capital buffers that can be used by institutions to absorb losses, without there being a breach of other minimum regulatory requirements, which act in parallel<sup>7</sup>. In particular, the intention is to describe the interaction between the three regulatory requirements (RW, LR and MREL), by using stylised examples, which expose how simultaneous compliance with regulatory minimum requirements may affect the usability of capital buffers, as well as of some microprudential requirements, according to the new legislative package.

Buffer usability has been of particular relevance in the current context of public health emergency caused by the COVID-19 pandemic, where several supervisory authorities, Banco de Portugal included, have made the use of capital requirements, both of a microprudential and macroprudential nature, more flexible. It is not expected, in the short term, that temporary flexibility measures in capital requirements for institutions be impacted by the compliance with other minimum regulatory requirements which, when implemented, will act in parallel, taking into account, *inter alia*, that (i) the minimum leverage ratio requirement will only come into force in June 2021, with draft legislative amendment from the European Commission to change the mechanism that allows institutions to exclude reserves in central banks from the total exposure measure on a temporary basis, making compliance with the LR<sup>8</sup> easier and (ii) the Single Resolution Board announced that it is available to provide institutions with the necessary flexibility to implement MREL expectations on a case-by-case basis, in addition to the MREL phase-in period being extended to 1 January 2024.

Table 1 pinpoints the dates on which the regulatory requirements enter into force, and, thus, from which point in time they become relevant for the interactions addressed in this Special Issue.

**Table 1 • Synopsis of the dates the regulatory requirements enter into force**

Regulatory requirement	Entry into force
Minimum leverage ratio requirement	June 2021
Leverage ratio buffer	January 2022 (legislative proposal to be deferred to January 2023)
MREL	January 2022 (intermediate objectives)
MREL	January 2024 (end of phase-in period)

Note: The list of regulatory requirements to be entered into force is not comprehensive.

This Special issue is arranged as follows: a brief description of the regulatory requirements will be given in Section 2 (minimum requirements, capital buffers, guidance on additional own funds, leverage ratios and MREL). Section 3 outlines the interaction between the regulatory requirements under review, by means of stylised examples, and Section 4 sets out the conclusions.

<sup>7</sup> The usability of buffers differs, thus, from the total or partial release of a capital buffer, which depends on the decision of the macroprudential authority.

<sup>8</sup> Moreover, in accordance with the decision of the BCBS GHOS (Group of Central Bank Governors and Heads of Supervision of the Basel Committee on Banking Supervision) the implementation date of the LR buffer for G-SII was postponed to 1 January 2023. This postponement was confirmed in the European Commission's draft legislative amendment, to the same effect.

## 2 Description of the regulatory requirements

The regulatory requirements for prudential purposes (CRD V / CRR II) applicable to institutions are primarily aimed at ensuring the resilience of each institution and of the EU banking system as a whole, while the requirements for resolution (BRRD II / SRMR II) have as their primary objective to ensure that institutions established in the EU have sufficient loss absorption and recapitalisation capacity to, in the case of resolution: (i) ensure the continuity of critical functions, (ii) avoid significant adverse effects on financial stability, (iii) protect public funds by minimising reliance on extraordinary public financial support and (iv) protect depositors<sup>9</sup>.

The prudential framework in force is structured in three pillars: Pillar 1 – Minimum Capital Requirements; Pillar 2 - Supervisory Review Process, covering risks that are not included in Pillar 1 requirements or that are only partially included, namely the concentration risk and the interest rate risk in the banking book; and Pillar 3 - Market Discipline, introducing requirements for public disclosure of information by institutions.

The risk-based capital requirements consist of the determination of a minimum amount of own funds that an institution must hold on an ongoing basis, as a percentage of total risk-weighted exposure amount<sup>10</sup>. The aim is to prevent institutions from taking on more risk to increase their profitability without holding an adequate capital level to cover that risk. On the other hand, leverage ratio requirements are expressed as a percentage of the total exposure measure<sup>11</sup>, which includes on-balance sheet assets and off-balance-sheet items that are not risk-weighted<sup>12</sup>. The requirements relating to the leverage ratio were introduced by the BCBS as, in the years before the financial crisis, there was a general increase in institutions' leverage, which was not always captured adequately by the regulatory requirements in force, a situation that weakened those institutions and also the financial system. The introduction of a regulatory minimum for the leverage ratio acts, thus, as a complementary measure to the risk-based capital requirements, by restricting the building up of excessive leverage in the expansionary phase of the cycle. In addition, the leverage ratio requirement mitigates risks stemming from underestimated capital requirements established through the use of internal methodologies (e.g., the Internal Ratings-based Approach (IRB)).

<sup>9</sup> Resolution objectives in accordance with Article 31 (2) BRRD.

<sup>10</sup> Total Risk Exposure Amount, commonly referred to as Risk Weighted Assets, and calculated in accordance with Article 92 (3) (4) CRR.

<sup>11</sup> Total Exposure Measure used as denominator of the leverage ratio and calculated in accordance with Article 429(4) CRR.

<sup>12</sup> In January 2014, the Basel Committee published the current definition of leverage ratio, according to which the leverage ratio is calculated as the ratio between Tier 1 capital to the total exposure measure. The total exposure measure comprises (i) on-balance sheet assets (excluding financial derivatives and securities financing transactions (SFTs)); (ii) off-balance sheet assets, the exposure of which is calculated in accordance with their probability of being converted into on-balance sheet assets; (iii) financial derivatives, including replacement cost and potential future exposure; and (iv) SFTs, which comprise on-balance sheet positions and counterparty credit risk. Offsetting between assets and liabilities is not permitted, and risk mitigation techniques (e.g. collateral) are not considered.

With regard to requirements for resolution purposes, the MREL, an instrument used in the context of resolution planning with the purpose of ensuring the resolvability of the institutions, aims at allowing institutions and entities to be able to absorb expected losses in case of resolution or when they are no longer viable, as applicable, and be recapitalised after implementation of the measures set in the resolution plan or after the resolution of the target group<sup>13,14</sup>. The MREL should be met<sup>15</sup> through own funds and eligible liabilities and be expressed in two ratios that should be met simultaneously: (i) as a percentage of total risk-weighted exposure amount (MREL-RW) and (ii) as a percentage of the total exposure measure (MREL-LR)<sup>16</sup>.

**Table 2 • Summary of regulatory requirements**

Regulatory requirement	Purpose	Requirement ratio denominator
Risk-based capital requirements (RW)	Prevent institutions from taking on more risk to increase their profitability, without having an adequate level of own funds to cover this risk	Total risk-weighted exposure amount
Leverage ratio requirements (LR)	Restrain the accumulation of excessive leverage in the expansionary phase of the cycle and mitigate the risks emerging from underestimated capital requirements determined through internal approaches	Total exposure measure
Requirements for own funds and eligible liabilities (MREL)	Allow institutions and entities to absorb expected losses in case of resolution or at the point of non-viability, as appropriate, and to be recapitalised after the implementation of the actions provided for in the resolution plan	Total risk-weighted exposure amount (MREL-RW) and total exposure measure (MREL-LR)

Each of the above mentioned three regulatory requirements is composed of Pillar 1 requirements applied to all institutions, or a subset of institutions, in the case of MREL, and Pillar 2 requirements (P2R) specific to the institution. Pillar 1 and P2R are minimum requirements which must be met on an ongoing basis<sup>17</sup>, including in adverse scenarios.

<sup>13</sup> For more details, see Box "Minimum Requirement for Own Funds and Eligible Liabilities under the new resolution framework", *Financial Stability Report*, Banco de Portugal, November 2015.

<sup>14</sup> For further details on the review of the resolution framework, see "Review of the resolution framework: what is new?", *Financial Stability Report*, Banco de Portugal, June 2019.

<sup>15</sup> The consequences of any failure to comply with MREL should be handled as provided for in Article 45k BRRD II.

<sup>16</sup> In accordance with Article 45(2) BRRD II.

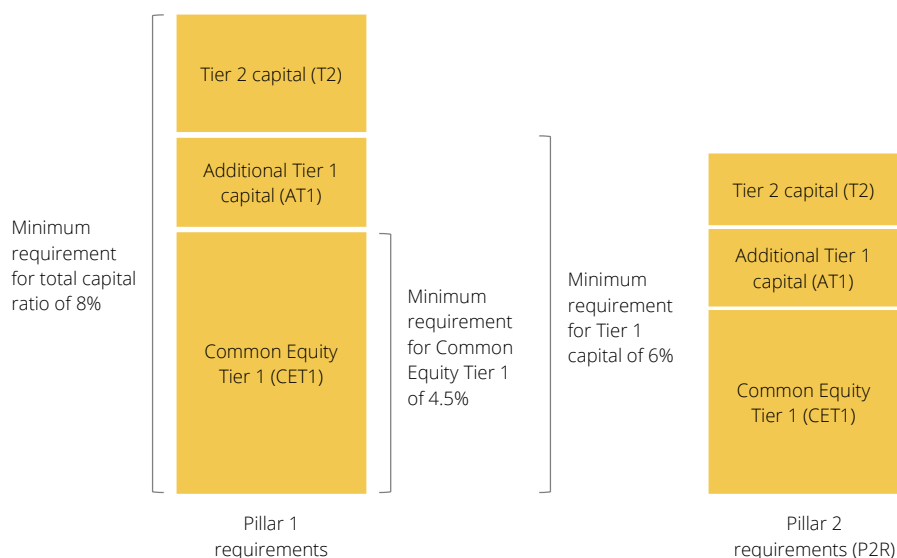
<sup>17</sup> If not complied with, microprudential authorities may consider their intervention, including by means of early intervention measures (Article 27 BRRD) and supervisory measures (Article 104 CRD V). Additionally, failure to meet minimum capital requirements may lead to the assessment of the institution as "to be failing or likely to fail" (according to Article 18(1) BRRD and Article 32(1) and (4)(a) BRRD) and, in the extreme case, to the withdrawal of the authorisation of the activity (according to Article 18(d) CRD V).

## Minimum risk-based requirements

With regard to Pillar 1 requirements, which aim to address credit risk<sup>18</sup> and counterparty, market<sup>19</sup> and operational risk<sup>20</sup>, institutions shall meet, on an ongoing basis, the following capital ratios as a percentage of total risk-weighted exposure amount: (i) common equity tier 1<sup>21</sup> (CET1) of 4.5%. These equity items correspond to the capital component with the highest loss absorption capacity; (ii) a Tier 1 capital (T1) ratio of 6%<sup>22</sup>, where Tier 1 is the sum of CET1 and Additional Tier 1 capital (AT1); and (iii) a total capital ratio of 8%<sup>23,24</sup>. Total own funds correspond to the sum of CET1, AT1 and Tier 2 capital (T2). For the determination of P2R, microprudential authorities shall assess the institution's specific risks and the corresponding control mechanisms implemented and, based on this assessment, may decide to impose specific measures on the institution, including additional capital requirements. With the implementation of CRD V, P2R should be met with at least 75% of T1, where it should be constituted with at least 75% of CET1, consistent with Pillar 1 requirements.

A schematic overview of the minimum capital requirements (Pillar 1 and P2R) with regard to risk-based capital requirements is shown in Figure 1.

**Figure 1 • Minimum risk-based capital requirements (Pillar 1 and P2R)**



Note: Not to scale.

<sup>18</sup> Risks relating to the future ability of debtors to meet loan engagements entered into with the institution.

<sup>19</sup> Risks relating to the occurrence of losses resulting from fluctuation in market values of positions held by institutions. It encompasses foreign exchange rate, interest rate, stock price and commodity risks.

<sup>20</sup> Risks related to losses resulting from inadequate or unsuccessful internal procedures, human or system errors or unfavourable external events.

<sup>21</sup> In accordance with Article 26 (1) CRR, Common Equity Tier 1 items are made of: (i) capital instruments, provided that the conditions set out in Article 28 or, if applicable, Article 29 are fulfilled, (ii) share premium accounts related to the instruments referred to in (i), (iii) retained earnings, (iv) accumulated other comprehensive income, (v) other reserves and (vi) funds for general banking risk.

<sup>22</sup> According to with Article 51 CRR, Additional Tier 1 items consist of the following: (i) capital instruments, should the conditions laid down in Article 52(1) be met, and (ii) share premium accounts related to the instruments referred to in point (i).

<sup>23</sup> According to Article 62 of the CRR, Tier 2 capital items consist of, inter alia, (i) capital instruments and subordinated loans, should the conditions laid down in Article 63 be met, and (ii) share premium accounts related to the instruments referred to in point (i).

<sup>24</sup> Article 92 (1) CRR.

## Capital buffers

Capital buffers are intended to increase the financial system's capacity to absorb losses, with the aim of preserving financial stability. For the fulfilment of this purpose, the buffers may be used to absorb losses in adverse periods<sup>25</sup>. There are five capital buffers foreseen, which all together form the Combined Buffer Requirement (CBR):

- The capital conservation buffer (CCoB) corresponds to an amount of own funds above the minimum requirements in the stacking order of own funds<sup>26</sup> of 2.5% of total risk-weighted exposure amount. This buffer is constant over time and aims to accommodate losses underlying a potentially adverse scenario, allowing institutions to maintain a steady flow of lending to the economy.
- Global Systematically Important Institutions (G-SII) and Other Systematically Important Institutions (O-SII) capital buffers are intended to mitigate the structural systemic risk stemming from the operation of these types of institutions, reducing externalities stemming from excessive risk taken by systematically important institutions and the associated moral hazard (usually referred to as "too big to fail"). For O-SIIs, macroprudential authorities may apply a capital buffer of up to 3% of total risk-weighted exposure amount<sup>27</sup>, with no upper limit for G-SIIs. At present, there are no institutions identified as G-SII in Portugal and, for those identified as O-SII, the buffer applied is currently between 0.188% and 0.75% of total risk-weighted exposure amount, depending on the systemic importance of the institution, and will increase to a buffer between 0.25% and 1% of total risk-weighted exposure amount as from 1 January 2022.
- The Countercyclical Capital Buffer (CCyB) aims to strengthen the resilience of the banking sector in periods when cyclical systemic risk increases due to excessive credit growth, and is defined based on the analysis of a set of macroeconomic and financial indicators, which provide information on cyclical systemic risk developments. Whenever risks materialise or decrease, this capital buffer ensures that the banking sector is better equipped to absorb losses and remain solvent, without disrupting lending to the economy. This percentage is in a range between 0% and 2.5% of total risk-weighted exposure amount and may, when duly justified, exceed 2.5%, in which case no mandatory recognition by other EU macroprudential authorities is required<sup>28</sup>. Currently, this buffer is 0% of total risk-weighted exposure amount, applicable to exposures to domestic counterparties.
- The Systemic Risk Buffer (SyRB) may be applied to prevent and reduce macroprudential or systemic risks not covered by other macroprudential instruments of the CRR and the CRD. The systemic risk buffer rate may apply to all exposures or a subset of exposures, thus allowing SyRB to be applied, on a sectoral basis, to all institutions or one or more subsets of those institutions. The macroprudential authority may set the buffer in steps of adjustment of 0.5 percentage points or multiples thereof. To date, this buffer has not been applied in Portugal.

<sup>25</sup> In adverse periods, such as when institutions increase their own funds or eligible liabilities, they may choose to meet minimum regulatory requirements by reducing their lending to the economy, increasing the procyclicality of the adverse scenario.

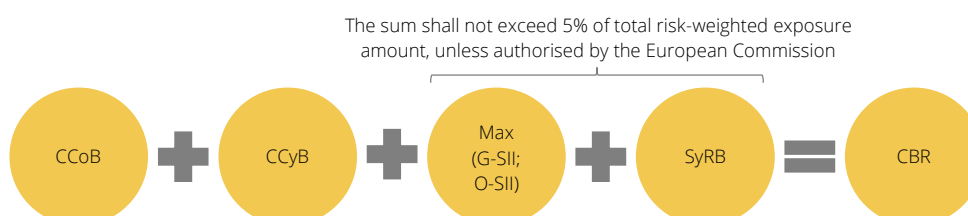
<sup>26</sup> The stacking order reflects the hierarchy of capital requirements and P2G and should not be mistaken for the order in which the capital components absorb losses.

<sup>27</sup> An O-SII buffer in excess of 3% of total exposures may be required upon European Commission's authorisation.

<sup>28</sup> For further details on the countercyclical capital buffer see box "Countercyclical Capital Buffer", *Financial Stability Report*, Banco de Portugal, November 2016.

The five buffers forming the combined buffer requirement shall be met with CET1, on a cumulative basis, as it is clearly stated in CRD V that the buffers should be used to absorb losses resulting from disjoint risks (except for O-SII and G-SII capital buffers, in which case the higher buffer shall apply)<sup>29</sup>. However, a cap is established on the aggregate value of G-SII/O-SII and SyRB buffers of 5% of total risk-weighted exposure amount, which can only be exceeded upon authorisation of the European Commission.

**Figure 2 • Illustration of the combined buffer requirement**



Institutions that fail to meet the combined buffer requirement (CBR) are subject to automatic restrictions on distributions<sup>30,31</sup>, until compliance is restored in accordance with a capital conservation plan<sup>32</sup> duly authorised by the microprudential supervisory authority. Automatic restrictions on distributions are calculated on the basis of the maximum distributable amount (MDA)<sup>33</sup>, as a percentage of the profits, according to the CBR quartile to which corresponds the CET1 maintained by the institution, available for compliance with this requirement, as represented in Table 3<sup>34</sup>.

**Table 3 • MDA calculation**

CET1	1 <sup>st</sup> quartile	2 <sup>nd</sup> quartile	3 <sup>rd</sup> quartile	4 <sup>th</sup> quartile
MDA (%)	0	20	40	60

An important feature of the various capital buffers available is the difference between those that can be (fully or partially) released and those that cannot be released, although, in both cases, the buffers can be used by institutions to absorb losses, as mentioned above. A capital buffer that can be released means that macroprudential authorities can formally reduce or remove this requirement, thus allowing institutions to free up their own funds. This possibility is given in the case of countercyclical capital buffer and systemic risk buffer, should the risks that led to the implementation of the latter no longer exist<sup>35</sup>. On the contrary, a capital buffer that cannot be

<sup>29</sup> As regards EU subsidiaries, the O-SII requirement shall not exceed the lower of (i) the sum of the higher of the G-SII or O-SII buffer rate applicable to that group on a consolidated basis, plus 1% of the total risk-weighted exposure amount, and (ii) 3% of the subsidiary's total risk-weighted exposure amount, or the rate the European Commission has authorised to be applied to the group on a consolidated basis.

<sup>30</sup> According to Articles 141, 141a and 141b CRDV.

<sup>31</sup> CBR definition according to Article 128 (6) CRD IV.

<sup>32</sup> Preparation and submission of a capital conservation plan, in accordance with Article 142(1) CRDV.

<sup>33</sup> According to Articles 141, 141a and 141b CRDV.

<sup>34</sup> For example, in case an institution has a CET1 ratio that meets Pillar 1 and P2R requirements and an additional margin of only 3% of total risk-weighted exposure amount, for compliance with a CBR of 4.5%, this institution is between the 2<sup>nd</sup> and the 3<sup>rd</sup> quartile ( $3/4.5=0.67$ ). Therefore, the MDA is 40%.

<sup>35</sup> CRD V excludes the possibility of a systemic risk buffer to address risks already covered by the countercyclical capital buffer.

released means that the macroprudential authority has no power to reduce or remove the buffer requirement. Therefore, although these buffers can be used by institutions to absorb losses, by accepting the automatic distribution restrictions resulting from the calculation of the MDA, it is not envisaged that the macroprudential authorities will be able to formally reduce or remove buffer requirements when the risks materialise. The capital conservation buffer is the only one that cannot be released, in whole or in part, by the macroprudential authorities. It should also be noted that the release of a given capital buffer requirement is only effective if that amount of own funds released is not required for the fulfilment of another regulatory minimum requirement (namely for LR and MREL-LR purposes).

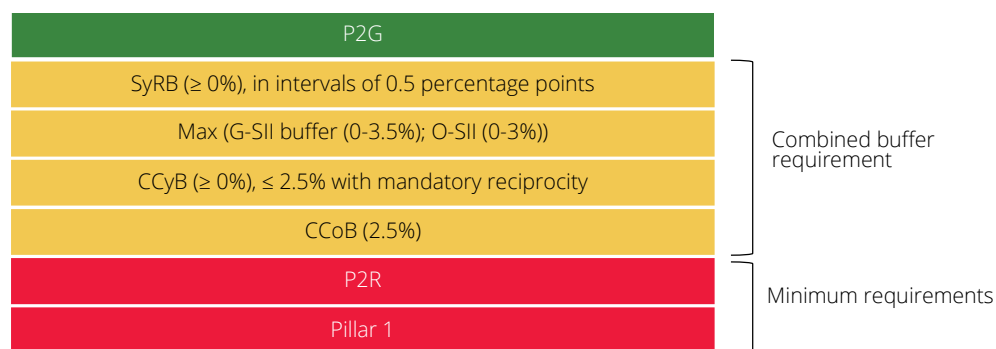
### Guidance on additional own funds

At a level above the risk-based prudential requirements, Pillar 2 guidance on additional own funds (P2G) can also be established, corresponding to a supervisory expectation for additional own funds that the institutions should hold (Figure 3). P2G is additive to Pillar 1, P2R and CBR requirements.

The P2G<sup>36</sup> provides a 'safety margin' for prudential requirements, that is calculated considering the expected reduction in own funds in the event of an adverse scenario, characterised by a low probability of occurrence, but by a high magnitude shock. An institution that fails to meet the P2G shall be the object of increased attention by the microprudential authority<sup>37,38</sup>, but shall not have the same type of consequences inherent in non-compliance with minimum requirements and capital buffers. However, where an institution repeatedly fails to comply with P2G, the microprudential authority may take additional measures, including the conversion of the P2G into an additional own funds requirement under P2R.

A schematic overview of minimum requirements, capital buffers and guidance on additional own funds (P2G) is shown in Figure 3.

**Figure 3 • Risk-based minimum requirements, capital buffers and P2G**



Note: Not to scale. The stacking order of capital buffers in the figure is not to scale, since the fulfilment or the use of the buffers is en bloc, constituting, as a whole, the so-called CBR. The highest subcategory currently occupied by G-SII is 2.5% and, according to the regulatory framework, the lowest subcategory is assigned a G-SII buffer of 1% of total risk-weighted exposure amount. Key: CBR – Combined Buffer Requirement; CCoB - Capital Conservation Buffer Requirement; G-SII - Global Systemically Important Institutions ; O-SII - Other Systemically Important Institutions; CCyB - Countercyclical Capital Buffer; SyRB - Systemic Risk Buffer; P2R - Pillar 2 Requirements; P2G - Pillar 2 Guidance.

<sup>36</sup> In accordance with Article 104b CRD V.

<sup>37</sup> Where an institution no longer meets or is likely not to meet the P2G, it shall be subject to an intense dialogue with the microprudential authority, and the institution is expected to prepare and report to the authority a set of actions to restore compliance with P2G.

<sup>38</sup> i.e., they do not reduce the maximum distributable amount (MDA) that the institutions may distribute to shareholders and debt holders.



## Leverage ratio

The minimum leverage requirement aims to introduce a barrier to avoid situations where optimisation and consequent reduction in risk weights can lead to potential undercapitalisation of institutions<sup>39</sup>. As in the case of risk-based capital requirements, the minimum leverage requirement includes the Pillar 1 and P2R components.

Pillar 1 corresponds to a minimum level requirement for the leverage ratio of 3%, as a percentage of the total exposure measure (including on-balance sheet assets and off-balance sheet items) and should be met with Tier 1 capital<sup>40</sup>. Moreover, institutions shall comply with the P2R leverage ratio requirement (P2R-LR) specific to the institution, as determined by the microprudential supervisory authority<sup>41</sup>. With respect to the leverage ratio regulatory requirement, it is required that, besides the minimum leverage ratio requirements (Pillar 1 and P2R-LR), the G-SIIs maintain a buffer for the leverage ratio expressed in terms of total exposure measure, resulting from 50% of G-SII buffer expressed as a percentage of total risk-weighted exposure amount. G-SIIs shall meet the buffer requirement for the leverage ratio with Tier 1 capital. As with risk-based capital requirements, the supervisor may also introduce a guidance on the leverage ratio (P2G-LR).

## MREL

The MREL requirement is intended, in case an institution enters either resolution or insolvency, to ensure a minimum loss absorption capacity and, in the event of resolution, also to ensure its recapitalisation, following the implementation of the measures provided for in the resolution plan, and must be complied with at all times from the date on which it becomes required. Hence, MREL makes it possible to protect the critical functions of an institution, by restraining the use of extraordinary public financial support, and promoting financial stability.

In BRRD II, a distinction is made between various types of institutions, and they are subject to different requirements and timelines for MREL implementation, in line with the principle of proportionality: (i) G-SII, (ii) top-tier banks<sup>42</sup>, (iii) smaller banks, but considered by resolution authorities as likely to constitute a systemic risk in insolvency (fished banks)<sup>43</sup>, and (iv) all other institutions.

As intermediate objectives to be met in a binding manner, those institutions that are G-SIIs or subsidiaries of G-SIIs shall meet, until the end of 2021, the minimum requirements for Pillar 1 MREL which correspond to 16% of total risk-weighted exposure amount and 6% of the total exposure measure. As of 1 January 2022, the minimum requirements for Pillar 1 MREL are increased to 18% of total risk-weighted exposure amount and 6.75% of the total exposure

<sup>39</sup> Given the decision of the Group of Central Bank Governors and Heads of Supervision of the Basel Committee on Banking Supervision (BCBS GHOS) on 27 March 2020, the implementation date of the Basel III standards finalised in December 2017 was postponed by 1 year to 1 January 2023. It includes the introduction of changes to the way the minimum leverage ratio requirement is calculated and the introduction of the leverage ratio buffer for G-SIIs.

<sup>40</sup> In accordance with Article 92 (d), Article 429 (1) and (3) CRR II.

<sup>41</sup> The composition of own funds to meet the P2R leverage ratio is set forth in Article 104a (4) CRD V.

<sup>42</sup> According to Article 45c (5) BRRD II, top tier banks represent resolution entities, other than G-SIIs, that are part of resolution groups with total assets exceeding €100 billion.

<sup>43</sup> According to Article 45c (6) BRRD II and Article 12d (5) SRMR II, the so-called fished banks are entities subject to resolution that are part of smaller resolution groups (whose total assets are less than €100 billion) considered to constitute a systemic risk in a situation of insolvency, and may be subject to the same requirements as top tier banks by decision of the resolution authority, after consulting the competent authority.

measure<sup>44</sup>. In the case of resolution entities<sup>45</sup> that are top-tier banks or fished banks, the minimum requirements for Pillar 1 MREL are expected, from 2022 onwards, to be at least 13.5% of total risk-weighted exposure amount and 5% of the total exposure measure. In addition, the above institutions shall comply with Pillar 2 MREL requirements<sup>46</sup>. However, as mentioned above, the Single Resolution Board is available to give to institutions the flexibility required to implement MREL expectations on a case-by-case basis.

For institutions other than G-SII, top-tier banks and fished banks, the requirements of Pillar 1 MREL are not applicable, but the Pillar 2 MREL-RW requirement is, which is, in turn, the sum of: (i) the loss absorption amount (LAA) in resolution, which corresponds to a total capital ratio of 8% (Pillar 1 requirement), plus P2R, and (ii) a recapitalisation amount (RCA)<sup>47</sup> enabling the institution resulting from the resolution process to restore compliance with risk-based Pillar 1 and P2R requirements after the implementation of the resolution strategy<sup>48</sup>, and thus maintain the authorisation to exercise its activity, after the resolution. The RCA also includes the market confidence charge (MCC) defined by reference to the CBR, deducted from the countercyclical capital buffer. In addition, Pillar 2 MREL-LR requirements applied to these institutions constitute the sum of: (i) the amount of losses to be absorbed in resolution (Pillar 1 requirement for the 3% leverage ratio), and (ii) a recapitalisation amount allowing the institution resulting from the resolution to restore compliance with the Pillar 1 requirement for the leverage ratio after implementation of the resolution strategy<sup>49</sup>.

If the resolution plan provides for the liquidation of the entity under a normal insolvency proceeding (NIP) or other equivalent domestic proceeding, the resolution authority shall consider whether it is justified to limit the MREL of that entity so that it shall not exceed an amount sufficient to absorb the losses (LAA)<sup>50</sup>. If this is the case, the MREL will be covered only by the own funds used by the institution to meet capital requirements and there shall be no need to issue any other additional instrument.

A schematic overview of each of the three types of regulatory requirements mentioned above is presented in Figure 4.

<sup>44</sup> According to Article 92a CRR II.

<sup>45</sup> Resolution entities are those institutions in respect of which the resolution authority provides that they may be resolved (and not necessarily liquidated).

<sup>46</sup> Pillar 2 MREL for G-SIIs, top-tier banks and fished banks corresponds to an additional requirement for Pillar 1 MREL that allows reaching a MREL amount equal to the sum of the amount for loss absorption and for recapitalisation.

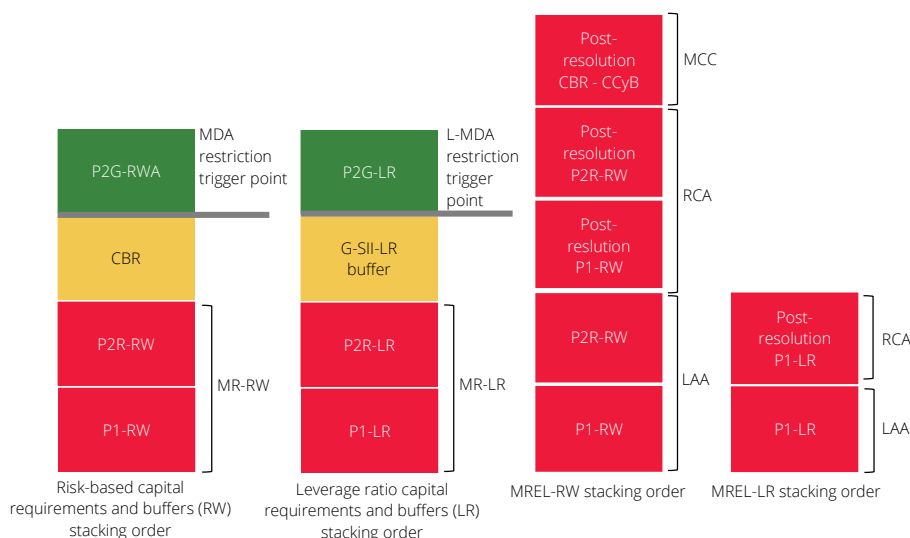
<sup>47</sup> Both the loss-absorption amount and the recapitalisation amount are defined by reference to Pillar 1 prudential requirements, as set out under Article 92(1)(c) CRR, and to Pillar 2 prudential requirements, as laid down in Article 104a CRD.

<sup>48</sup> In accordance with Article 45c (3) (a) and (7) (a) BRRD II.

<sup>49</sup> In accordance with Article 45c (3) (b) and (7) (b) BRRD II.

<sup>50</sup> For institutions in respect of which the resolution plan provides for liquidation, the standard formula is Pillar 1 and P2R requirements for MREL-RWA in accordance with Article 45c (3)(a) and (7)(a), in conjunction with Article 45 (2) BRRD II.

**Figure 4 • Risk-based capital requirements, leverage ratio requirements and MREL**



Note: Not to scale. The stylised example corresponds to the prudential requirements of a G-SII. Own funds used to meet the MREL-RW cannot be used simultaneously to meet the CBR. This stacking order between MREL-RW and CBR binds institutions to meet the MREL requirement before they can meet the CBR. Key: G-SII - Global Systemically Important Institutions; RW - Risk-Weighted; LR - Leverage Ratio; P2G - Pillar 2 Guidance; P2R - Pillar 2 Requirements; MDA - Maximum Distributable Amount; CBR - Combined Buffer Requirement.

### 3 Interaction between regulatory minimum requirements and capital buffers

This section shows, through stylised examples, how the minimum regulatory requirements analysed above may affect the effectiveness of measures taken by supervisory authorities (for example, where a designated authority decides to release all or part of a capital buffer and the institution cannot reflect that in its total requirements) or the usability of capital buffers by institutions.

#### Interaction between CBR and LR

The CRD V and the CRR II allow the same capital unit to be used to meet both risk-based capital requirements and leverage ratio requirements<sup>51</sup>. In this case, the institution's usability of capital buffers is constrained by the difference between the amounts of own funds required to meet the minimum leverage ratio (MR-LR) and the minimum risk-based capital requirement (MR-RW).

Figure 5 compares capital stacking orders in respect of loss absorption in case of risk-based capital requirements, represented by the RW bar, and leverage ratio requirements, represented by the LR bar. Between the risk-based requirements (RW) and the leverage ratio requirements (LR), the one that will require the largest amount of own funds will depend on the structure of the institution's balance sheet, in particular the risk weights assigned to each asset. It appears that there is one specific average risk weight for which both requirements impose the same amount of own funds, designated as the critical average risk weight (CARW). If a given institution has an

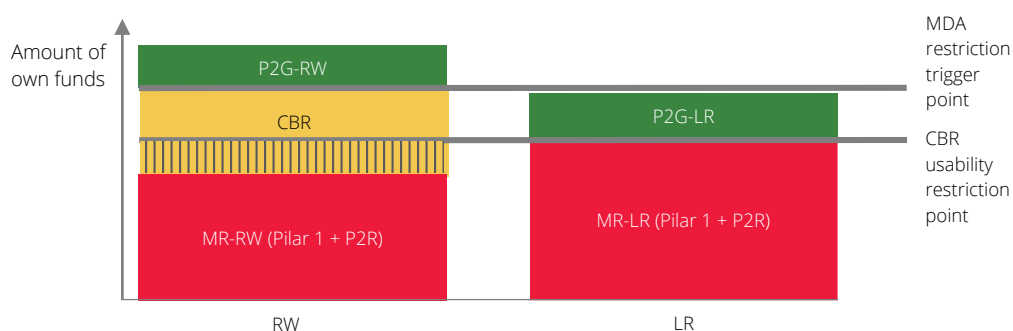
<sup>51</sup> The leverage ratio requirement can be met with the same capital units as the risk-based capital requirements (except for Tier 2 capital which cannot be used to meet the leverage ratio).

average risk weight below CARW, the LR will be the regulatory requirement that will require the largest amount of own funds (particularly relevant for institutions using internal approaches rather than the standard approach for determining risk weights).

The situation where the amount of own funds to meet the MR-RW is lower than for the MR-LR is represented in the figure below. In that scenario, assuming that the institution has a reduced amount of additional Tier 1 capital (AT1), should the macroprudential authority decide to reduce one of the capital buffers included in the CBR, a partial restriction on the usability of those buffers is observed in the amount represented in the yellow dashed figure. This is because the institution that uses part of the own funds of the CBR to simultaneously meet the MR-LR will have a partial overlap between total capital buffers and the MR-LR. It should be noted that institutions with lower buffer usability will be those with the lowest average risk weight, characterised by a lower amount (in relative terms) of own funds to meet risk-based capital requirements (except for Tier 2 capital, which cannot be used to meet the leverage ratio).

Thus, the amount of own funds of CBR represented in the figure in dashed yellow is restricted in its purpose to absorb losses and its use may cause failure to meet the MR-LR. In this case, the amount of own funds available to absorb losses with no failure to meet the minimum regulatory requirements corresponds to the amount of own funds represented in the figure in green (P2G), and in undashed yellow (part of the CBR).

**Figure 5 • Interaction between risk-based and leverage ratio requirements - CBR usability restriction triggered by MR-LR**



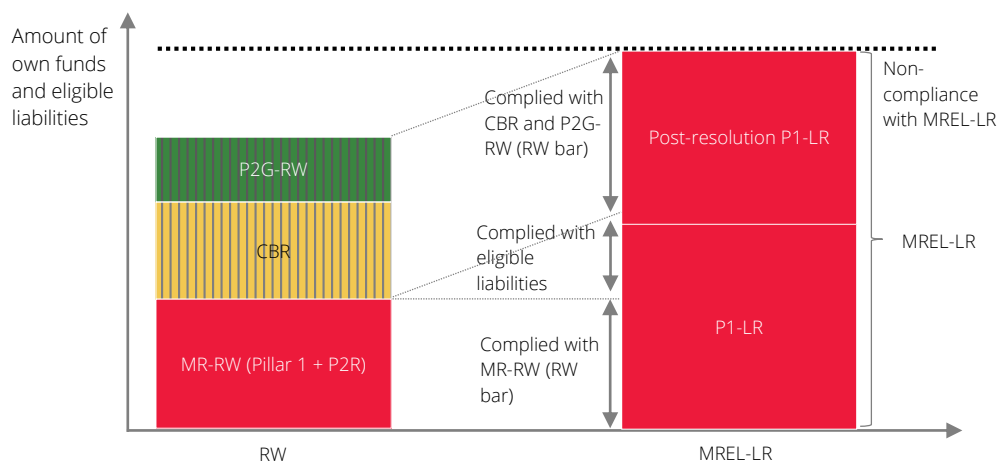
Note: The scale is not real, corresponding to a stylized example of an institution that is not a G-SII. Key: CBR – Combined Buffer Requirement; G-SII - Global Systemically Important Institutions; RW - Risk Weighted; LR - Leverage Ratio; P2G - Pillar 2 Guidance; P2R - Pillar 2 Requirements; MDA - Maximum Distributable Amount; MR - Minimum Requirements. The establishment of minimum risk-based capital requirements (Pillar 1 and P2R) are shown in Figure 1.

In the reverse scenario, where the amount of own funds to meet the MR-RW is higher than that of MR-LR, there would be no restriction on CBR usability.

#### Interaction between CBR and MREL-LR

Figure 6 shows the situation of an institution in respect of which the resolution plan provides for resolution measures, where the MREL-LR is the highest minimum requirement and the institution does not operate with eligible own funds or liabilities above those needed to meet the MREL-LR.

**Figure 6 • Schematic view of the interaction between MREL-LR and risk-based requirements**



Note: The scale is not real, corresponding to a stylized example. Key: CBR – Combined Buffer Requirement; G-SII - Global Systemically Important Institutions; RW – Risk-weighted; LR - Leverage Ratio; P2G - Pillar 2 Guidance; P2R - Pillar 2 Requirements; MR - Minimum Requirements. The establishment of risk-based capital requirements (Pillar 1 and P2R) are shown in Figure 1.

All own funds required to meet risk-based requirements (RW-bar), represented by colours green, yellow and red, can be used to meet MREL-LR (MREL-LR bar), with the remainder of the MREL-LR is met with eligible liabilities. In the absence of own funds or eligible liabilities in excess, beyond the minimum amount required to comply with MREL-LR, any such reduction for loss absorption in the context of risk-based capital requirements (RW-bar) would immediately lead to failure to meet the MREL-LR. Similarly, in this situation, if the macro or microprudential authority decides to release a capital buffer or P2G, and if the institution has no eligible liabilities or voluntary capital to absorb losses without breaching the MREL-LR, the CBR and P2G usability would be limited (dashed portion in the figure). However, if an institution were to increase its eligible liabilities, it could reach a point where the usability of own funds would increase because it would no longer need them to fully meet the MREL-LR.

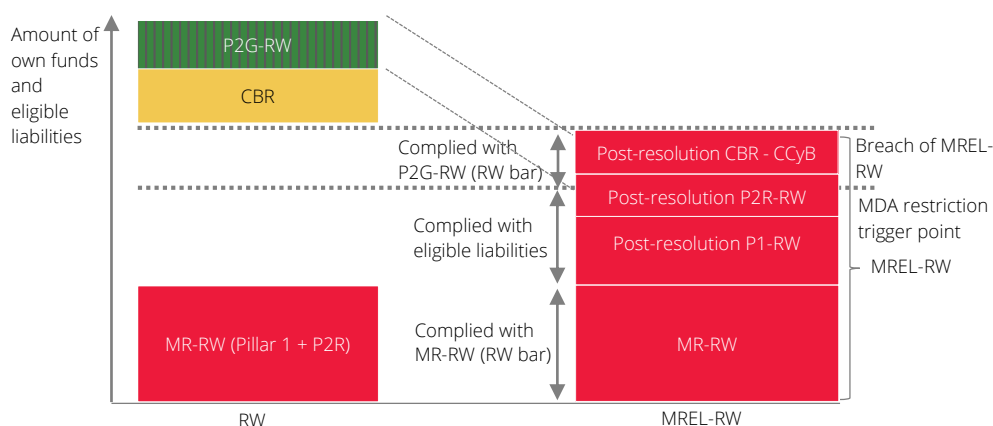
### Interaction between CBR and MREL-RW

The review of the BRRD and the SRMR clarifies the relationship between MREL and the CBR, making it clear that own funds used to comply with MREL-RW cannot be simultaneously used to meet the CBR. This rule is necessary to ensure that capital buffers can be used by institutions in the manner and with the intent with which they were originally designed, i.e., so that institutions can use capital buffers to absorb losses resulting from risk materialisation periods without this resulting in failure to meet the MREL.

As shown in Figure 7, the aforementioned condition requires the institutions to meet the minimum MREL-RW without recourse to the own funds used to comply with the CBR (in yellow in the Figure), which means that an institution may fail to comply with the MREL requirement without any change in its own funds position, e.g., because a set of eligible liabilities no longer meets the residual maturity criterion of one year or more and, as a result, it is necessary to reallocate the Common Equity Tier 1 capital that was being used in the combined requirement to continue meeting the MREL-RW<sup>52</sup>.

<sup>52</sup> Where CBR is used to meet the MREL-RW, i.e., in a situation where an institution fails to meet the CBR in the context of MREL-RW, but still complies with the CBR in the context of risk-based requirements, restrictions on the distribution of results are not automatic. The resolution authority, after consulting the microprudential authority, shall assess whether it should exercise this power, considering the reason, duration, and extent of the non-compliance, as well as its impact on resolvability. If non-compliance lasts for 9 months or more, the resolution authority, after consulting the microprudential authority, shall set restrictions on distributions, in accordance with the calculation resulting from the M-MDA, except where it is concluded that there is a stress scenario in the financial system (Article 16a BRRD II).

**Figure 7 • Schematic view of the interaction between MREL-RW requirements and risk-based requirements**



Note: Not to scale. Key: CBR – Combined Buffer Requirement; RW – Risk-weighted; P2G - Pillar 2 Guidance; P2R - Pillar 2 Requirements; MR – minimum requirements. The establishment of minimum risk-based capital requirements (Pillar 1 and P2R) are shown in Figure 1.

The interaction between MREL-RW and risk-based capital requirements, in the case of an institution with a resolution plan providing for resolution measures, is shown in the Figure above, by means of stacking orders of own funds and eligible liabilities, corresponding to a situation where the MREL-RW requirement is higher than the MR-RW. This is the case for all institutions whose resolution plan provides for resolution measures as the MREL-RW is equal to the LAA (Pillar 1 and P2R), RCA (post-resolution Pillar 1 and post-resolution P2R) and MCC (defined by reference to the CBR deducted from the CCyB) (Figure 4). The remaining part of MREL-RW is met with eligible liabilities and, should these be insufficient, also with own funds that are not covering Pillar 1 and P2R, as a last resort with own funds that are covering the CBR (pictured in yellow).

In this example, given that MREL-RW is met with MR-RW, eligible liabilities and P2G-RW, the CBR remains fully available by the institutions and does not constrain the action of the macroprudential authority. However, P2G (pictured in green), in the context of risk-based capital requirements, can be used to comply with MREL-RW, which may affect the P2G effectiveness as a tool of a microprudential nature. In case the microprudential authority decides to release P2G and the institution has no sufficient amount of eligible liabilities to cover the amount released, institutions may prefer to retain P2G own funds rather than use the CBR for compliance with MREL-RW, given the consequences for restrictions on distributions (according to the calculation resulting from the M-MDA).

As in the case of the interaction between CBR and MREL-LR, if an institution increases its eligible liabilities, it will reduce the amount of own funds allocated to meet the MREL-RW and, consequently, reduce the restriction of the P2G effectiveness as a tool of a microprudential nature.

## 2 Conclusions

The reform of the regulatory framework governing the banking sector is primarily aimed at increasing the resilience of institutions and the financial system to possible future shocks. In this context, at EU level, the institutions will have to simultaneously meet three types of requirements: RW, LR and MREL.

The fact that the same amount of own funds contributes to the fulfilment of more than one regulatory requirement it may affect, where such own funds are required for compliance with the minimum of another regulatory requirement, the effectiveness of some instruments, particularly those of a macroprudential nature (in the case of capital buffers) and of a microprudential nature (in the case of guidance on additional own funds), where the interaction between those regulatory

requirements reduces the flexibility of the instruments, conditioning their usability in adverse scenarios, such as the interaction between (i) the CBR and the LR and (ii) the CBR and the MREL-LR. However, there are regulatory requirements with specific rules to avoid this double counting of own funds to meet more than one requirement (in the case of instruments of a macroprudential nature), as described in the interaction between CBR and MREL-RW. Any interaction between minimum regulatory requirements and capital buffers depends on (i) the legal provisions relating to multiple gearing of own funds, (ii) the relative calibration of the different requirements and (iii) the structure of the institutions' balance sheets, including off-balance-sheet items. It should be noted that institutions with lower buffer usability shall be, everything else constant, the ones with the lowest average risk weights and therefore needing a lower amount of own funds to meet the risk-based capital requirements, as the non-risk-based capital requirements (LR and MREL-LR) become more binding in this case. Given that, in Portugal, the institutions that use the standardised approach for determining risk weights predominate, this interaction may be minimised.

Buffer usability has been particularly relevant in the current context of public health emergency caused by the COVID-19 pandemic, in which several supervisory authorities, including Banco de Portugal, made the use of capital requirements, both of a micro and a macroprudential nature, more flexible. This year, as the LR and MREL have not yet entered into force, the potential consequences resulting from the interactions reviewed in this Special issue have not yet emerged. However, since the minimum leverage requirement and the leverage ratio buffer (although no institution is currently identified as G-SII in Portugal) will come into force in June 2021 and January 2022 (with a legislative proposal from the European Commission to postpone the latter to January 2023), respectively, from that moment onwards the interaction between the CBR and the LR under review will be of relevance. Additionally, given that the MREL will have intermediate targets to be met in January 2022 and the phase-in period will end in January 2024, the analysis of the interaction between MREL and CBR will thenceforth be relevant.