



EUROPEAN CENTRAL BANK

EUROSYSTEM

A positive neutral rate for the countercyclical capital buffer – state of play in the banking union

Workshop on macroprudential policy,
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Need to increase macroprudential space as a key policy priority

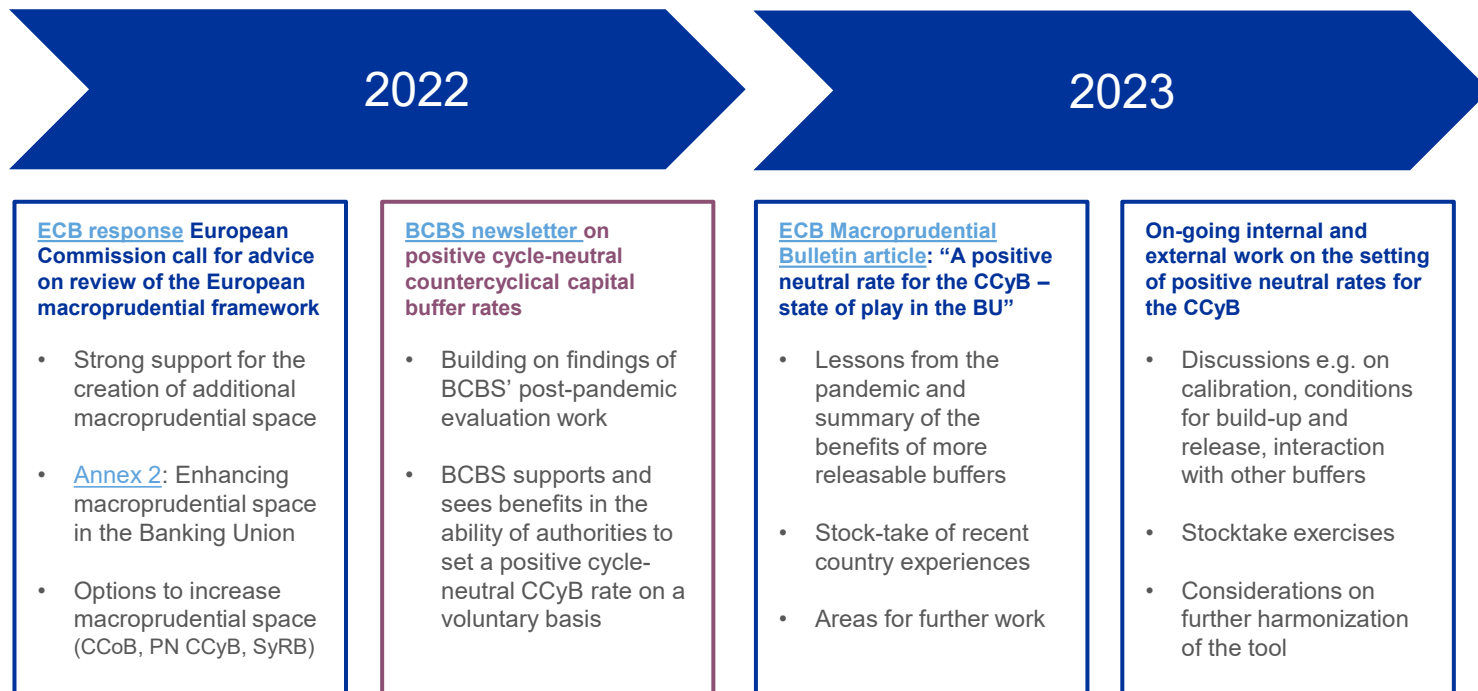
Key lesson from pandemic: having more releasable capital buffers would enhance banking system's ability to withstand large, systemic shocks unrelated to domestic credit developments while continuing to provide key financial services to the real economy.

ECB supports increasing clarity on the **positive neutral CCyB**, as an instrument to:

- Provide resilience against a broader spectrum of shocks
- Facilitate the earlier and more gradual build-up of CCyB rates, also given implementation lags
- Address concerns about buffer usability and uncertainty in measuring cyclical systemic risks

ECB has supported countries' macroprudential policy actions, including the implementation of positive neutral rates for the CCyB (now in place in seven countries)

Overview of recent ECB internal and international work



Overview

1 European CCyB policies before the pandemic

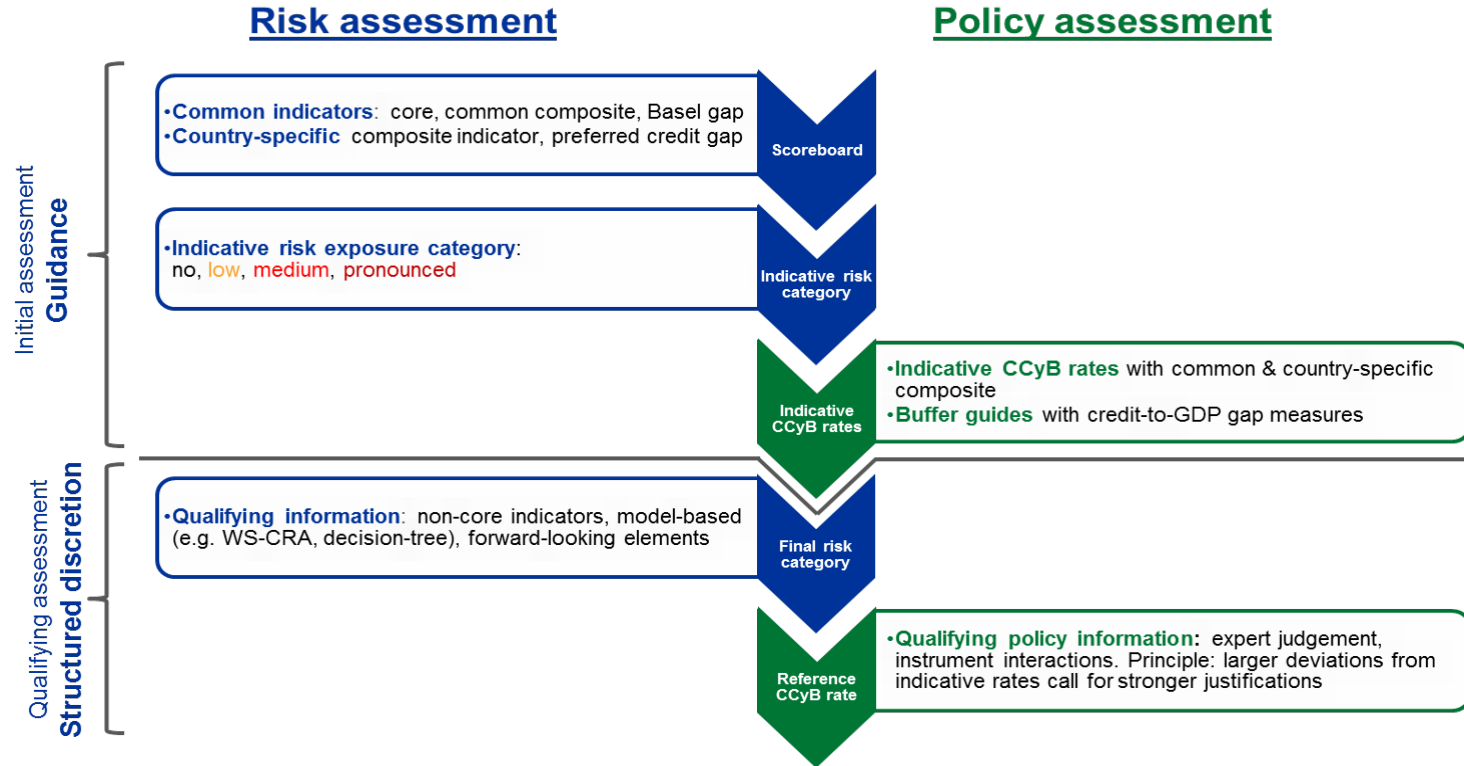
2 Lessons learnt from the pandemic

3 State of play with respect to the positive neutral rate

4 Open issues and areas for further work

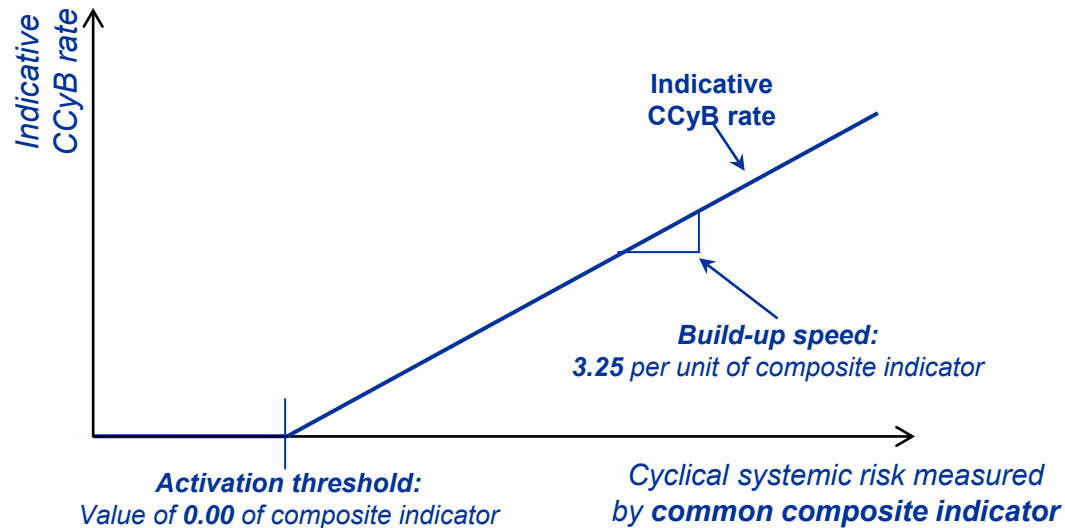
5 Conclusion and way forward

CCyB setting primarily guided by cyclical risk considerations



Mapping indicators into an initial policy assessment

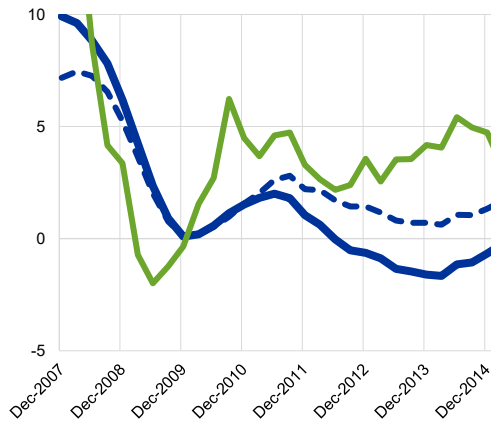
- **Common composite indicator** (CCI) aggregates information from **five core indicators** (change in bank credit-to-GDP ratio, growth of real total credit, change in debt service ratio, change in RRE price-to-income ratio, current account balance as % of GDP)
- CCI provides the basis for an **indicative CCyB rate** (buffer guide, similar to Basel gap)



Brief overview of macroprudential policy in the SSM area

- In the years preceding the pandemic build-up of vulnerabilities mainly concerned RRE
- ...while general credit growth developments remained muted (→ limited CCyB activation)

MFI loans to NFCs and HHs; residential real estate prices, y-o-y growth rates (%)

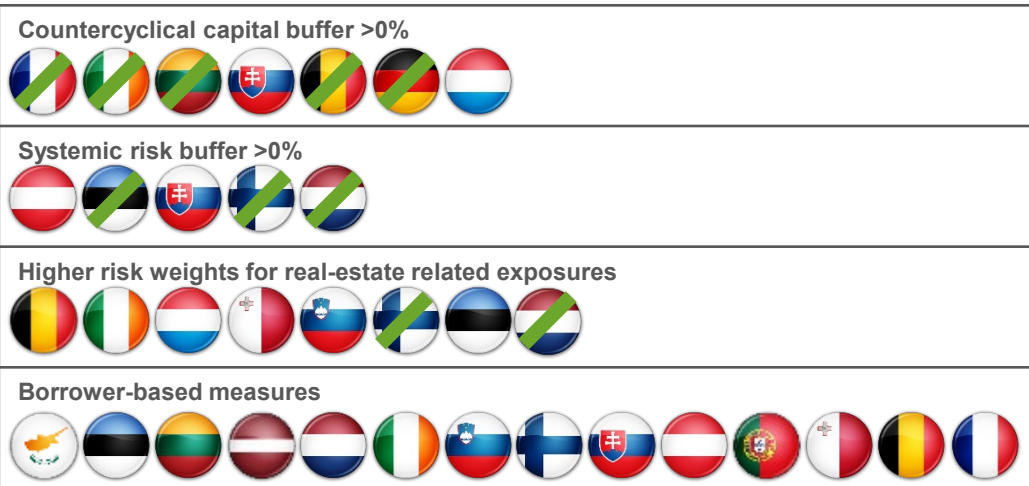


— MFI loan growth to NFCs and HHs (EA-19)
- - - MFI loan growth to NFCs and HHs (EA-7*)
— Residential real estate price growth (EA) - top 25th percentile

Source: ECB, ECB calculations
 * 7 EA countries with CCyB >0% (enacted/announced) as of end-2019 (BE, DE, FR, IE, LT, LU and SK).

Enacted and announced national measures

(end-2019)



Note: SII buffers implemented in all 19 EA/SSM countries

Capital release

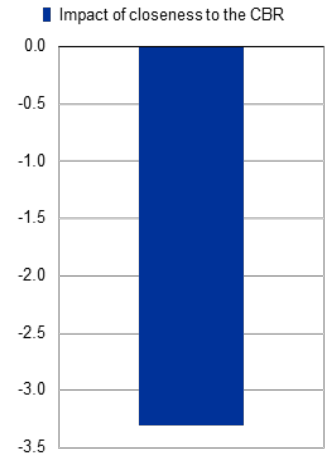
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Evidence on limits of buffer usability (from ECB EG)

- **Granular information** from supervisory data and corporate credit register (AnaCredit) **allows for accurate estimation** of buffer usability and the impact of capital relief measures around the COVID-19 pandemic (2019 & 2020) at the bank-firm level, controlling for credit demand and banks characteristics
- Banks with **little capital space above the combined buffer requirement** (lowest quartile) tended to defend capital ratios during the COVID-19 pandemic, in particular through **lower corporate credit supply** (-3.3% volume)
- **Credit guarantees** limit negative impact of closeness to buffer requirements, confirming that banks procyclical behaviour is aimed at reducing credit risk
- This affects firms' borrowing capacity due to **imperfect substitution across banks**: firm exposed to banks in proximity of the CBR exhibit lower borrowing

Impact on bank-firm credit (in pp)

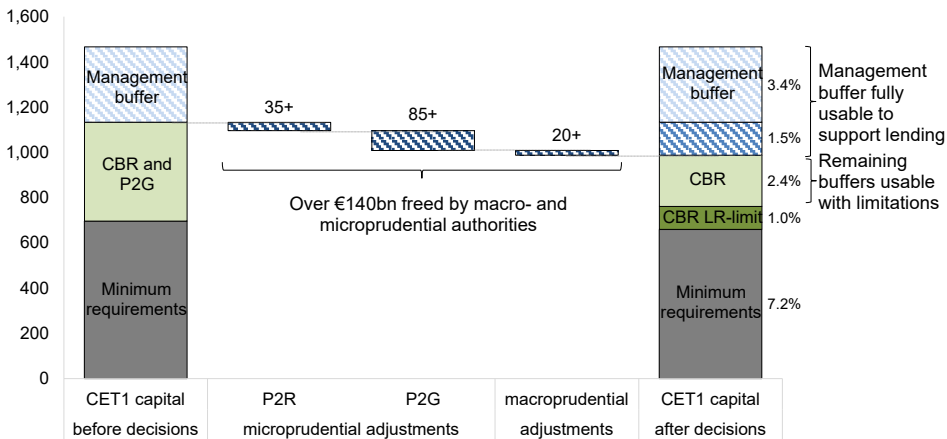


Source: ECB staff calculations on ECB data.

Macro- and microprudential authorities released over €140bn of bank capital to help banks absorb losses and support lending

CET1 capital stack before and after pandemic prudential actions

(2019Q4, lhs in € bn, rhs in % of risk weighted assets)



Sources: COREP, National Authorities.

Notes: Data refers to 2019 Q4, decisions considered up to 31 March 2020. Significant and Less Significant Institutions consolidated at system level. P2R adjustments refer to SSM frontloading of P2R composition in CRR5, macroprudential adjustments include releases of CCyB, SyRB and O-SII. Revoked announcements (CCyB) or delayed phase-in (O-SII, Art. 458 CRR) not considered.

Microprudential measures taken by the ECB

- Banks allowed to operate temporarily below **P2G** and meet **P2R with lower quality capital** (pre-empting CRD change)
 - P2G and P2R relief of ~ **€120bn** CET1 capital
 - Banks reminded that buffers (including CCoB) should be used in periods of distress to absorb losses
- Banks expected **not to pay dividends / buy back shares** until Oct. 2020 (2019 profit: €79bn; €35bn planned on dividends, only €5bn paid out).

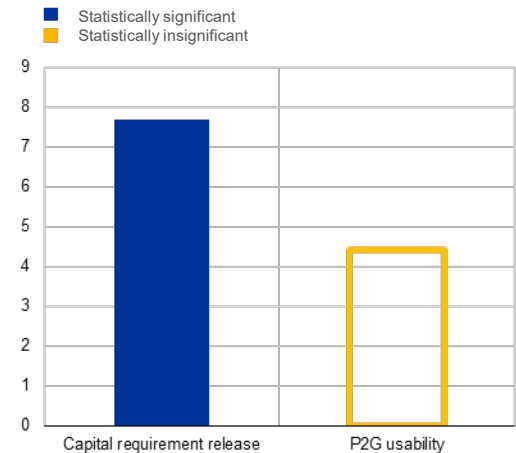
Macroprudential measures taken by nat. authorities

- CCyB** released by **BE, DE, FR, IE, LT** (**SK** revoked increase)
- SyRB** abolished by **FI** and **EE**, lowered in **NL**
- O-SII** lowered (**FI, NL**) or phase-in delayed (**LT, PT, CY**)
- Art. 458 CRR: NL** postpones risk weight floor for mortgages

Evidence on capital relief (from ECB EG)

- **Regulatory capital relief measures were effective in supporting credit supply** (higher credit volume and lower interest rate) during the COVID-19 pandemic, based on Anacredit and supervisory data
- The effect is concentrated in banks **close to the buffer requirement**
- The **nature of the relief drives the effectiveness of the release:**
 - **Actual capital requirement releases** (CBR release and change in P2R composition rule) **increased lending and decreased interest rates**
 - **Somewhat more limited effects** of supervisory **flexibility on use of P2G**

Impact of capital relief on credit volume (in pp for 1pp release)



Source: Authors' calculations on ECB data.

Key takeaways from the pandemic for the macroprudential framework

1. Banks do **not** seem **willing to draw on their regulatory buffers**

- Banks closer to their CBR displayed **procyclical adjustments**, de-risking balance sheets and curtailing corporate lending more than other banks
- The impact on firms can be larger under **limited credit substitution** opportunities

2. **Capital releases effectively supported credit supply**

- Larger effects of regulatory releases for banks closer to the CBR support and complement the evidence on possible **impediments to buffer usability**
- **Limited CCyB build-up** led authorities to apply ad hoc relief measures

Policy priorities: (i) make **buffers more usable** (communication on supervisory expectations, policy work on overlap of requirements, role and/or design of AT1 capital); (ii) enhance the **build up of releasable buffers** to respond to economic shocks

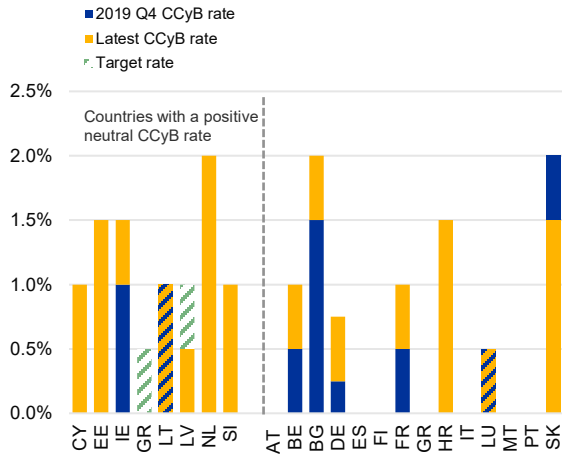
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More active implementation of CCyB since the pandemic

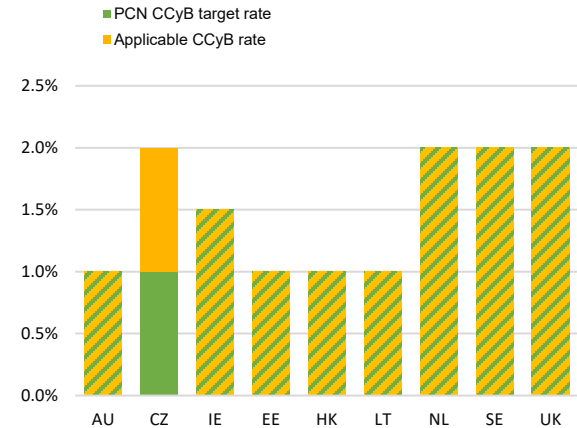
- More countries activating the CCyB, with rates generally higher than before the pandemic
- CCyB frameworks with a positive neutral rate in place / being implemented in 7 BU countries

8 BU countries have introduced a PN CCyB or are planning to introduce it, with target rates from 0.5% to 2%



Notes: announced rates for the CCyB as notified to the ECB by national authorities. The announced rate is already effective in Bulgaria, Germany, Lithuania, Luxembourg and Slovakia, while in other countries it will become effective by the end of 2023 (Estonia and Slovenia) or 2024 (Belgium, Ireland, France, Croatia, Cyprus, the Netherlands, Latvia and Slovenia), one year after the announcement date. In Latvia, a 1% CCyB rate will be effective in 2025. Greece announced its intention to reach the positive neutral target rate of 0.5%.

5 additional BCBS member jurisdictions have activated the PCN CCyB with target rates ranging from 1% to 2%



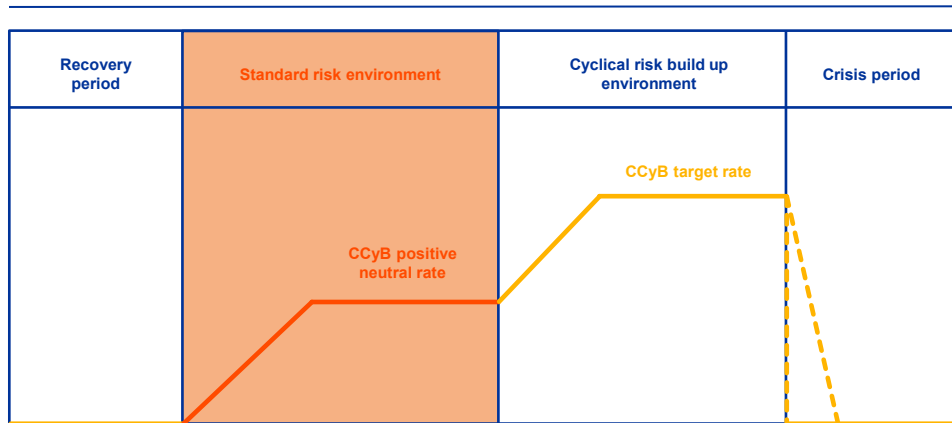
Source: PSG Macroeprudential Workstream "Thematic note on positive cycle neutral CCyB.

Notes: Information as of 13 October 2023. Denmark and Norway also follow approaches that feature an implementation of the CCyB early in the financial cycle. These approaches are akin to a CCyB framework with a positive neutral rate. Canada operates a time-varying domestic stability buffer of up to 4% of risk-weighted assets for its six largest banks to protect against external systemic vulnerabilities such as pandemics, conflict or political unrest, resembling a positive neutral CCyB. In Hong Kong, the implementation of the PNR CCyB is expected from 1 January 2024.

Use of the positive neutral CCyB in the Banking Union

- **Countries with positive neutral rate share some similarities ...**
 - distinction of four stages of the cycle
 - build-up starting in standard risk environment, defined by measures of macroeconomic, credit market and banking sector conditions
- **... but also rely on different approaches for calibration** (range of indicators, historical losses, stress test models, assessments of the impact of buffer releases during the pandemic and expert judgement), contributing to **differences in the reference rate.**

Stylised representation of a CCyB framework with a PNR



Source: ECB illustration.

Notes: This chart illustrates the setting of CCyB rates over the financial cycle applying the concept of a positive neutral rate. The two dashed lines at the very right indicate that a release of the buffer in crisis periods can either be gradual or in full.

Use of the Positive Neutral CCyB in the Banking Union

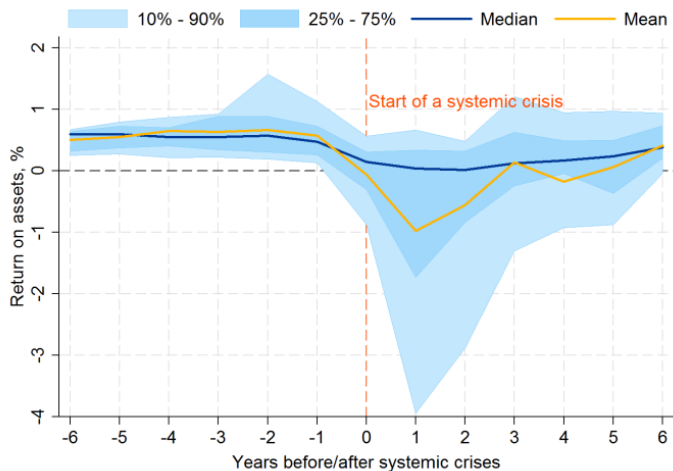
Country	PNR	Pace of increase	Timing for the building up	Conditions for the release
CY	0.5% (min.)	-	Lending market functioning normally Asset prices do not show signs of overvaluation or depreciation Risk appetite tends to be close to historical averages	Shift in the financial cycle or economic downturn
EE	1.0%	-	Economy on a growth path Strong bank profitability Lending market functioning normally No substantial loan losses	Economic downturn
IE	1.5%	Gradual	Economic and financial cycle are improving No significant banking sector losses are forecasted	Shift in the financial cycle or economic downturn
LT	1.0%	Gradual	Economic upturn, but no financial imbalances are observed High credit and real estate market activity Profitable banking activities	Shift in the financial cycle or economic downturn
NL	2.0%	1pp per year	Economic and financial conditions begin to normalize after a crisis	Economic downturn

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Positive neutral rate calibration – historical losses as a starting point

Distribution of ROA in EU countries around crises



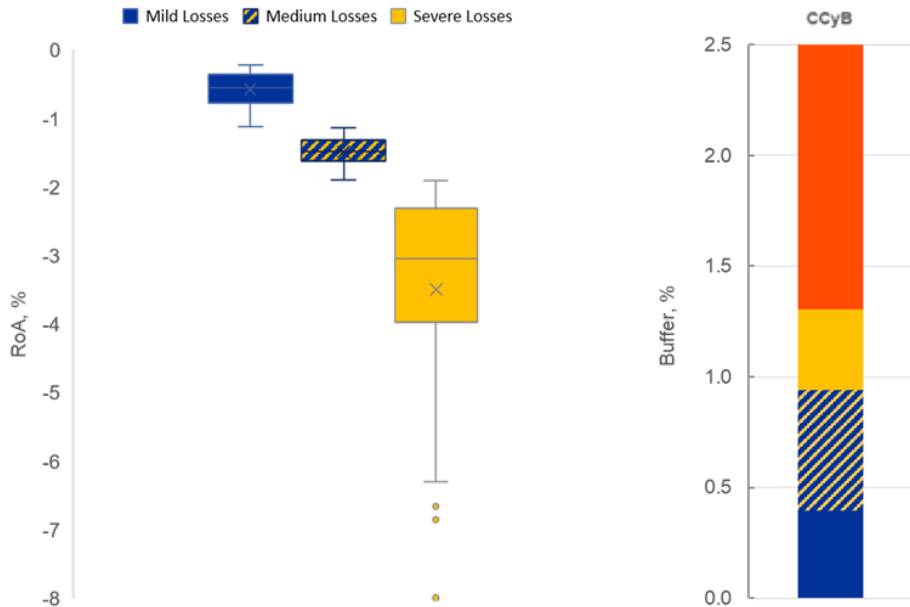
Sources: OECD, CBD2, ECB calculations, [Lana and Forletta \(2020\)](#).

Notes: Mean, median, interquartile range and 90-10 percentile range of the return on assets across countries during the 6 years before and after the onset of systemic financial crises. Crises dating based on the AWG/MPAG crises database described in Lo Duca et al. (2017). Purely foreign induced crises are excluded. In total there are 21 systemic crises events. 7 of these crises occurred before the onset of the global financial crisis in 2007.

- Calibration needs to be **sufficiently high** to **have a meaningful impact** upon release
 - Banking sector losses >1.7% [$>3.9\%$] of TAs in year one after onset of financial crises in 25% [10%] of the cases
 - Pandemic: capital release amounting to 1.5% of RWA
 - Current avg. CCyB of 0.56% may be too small in long run
- Further work on calibration approaches desirable

Positive neutral rate calibration – Losses-to-Buffer approach

Losses-to-Buffer – PNR Calibration

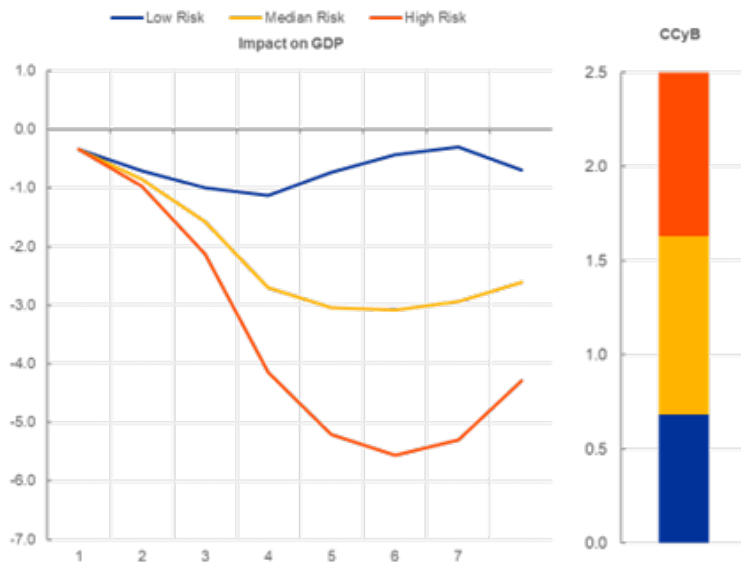


Sources: ECB calculations. Notes: left-hand side: empirical ROA interpercentile ranges. Blue box: 10th to 5th percentile; blue-striped box: 5th – 3rd percentile; yellow box: 3rd percentile. The stacked bar chart represents the different level of positive neutral CCyB resulting from the estimation of the quantile model on the 10th, 5th and 3rd percentiles. In particular, the blue bar corresponds to the model estimated on the 10th percentile, the blue-striped bar corresponds to the 5th percentile, and the yellow bar correspond to the 3rd percentile.

- Idea: **model (realised) bank losses** to understand how much capital is needed to cover them.
- **Disentangle losses in:**
 - Losses due to cyclical risk and other risk factors already covered by other micro and macroprudential buffers (e.g. CCyB).
 - Residual losses not necessarily related to the financial cycle or other risk factors (**positive neutral rate**).
- Use of a quantile model (allow to model tail risk) we can derive **rates for mild, medium and severe losses** (3rd, 5th and 10th percentile of the RoA distribution)
- The **required buffer**, is **larger when we target the most severe losses** and smaller when we target medium and mild losses, ranging between **0.4%** and **1.4%**

Positive neutral rate calibration – Risk to Buffer approach

Risk-to-Buffer – CCyB calibrations



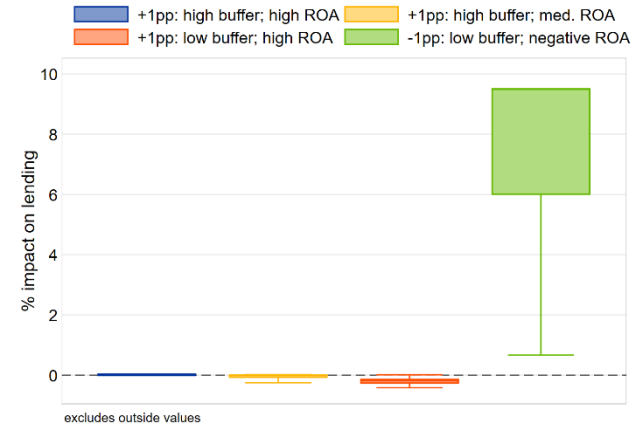
Sources: ECB calculations. Notes: Recessions under Low (blue line), Median (yellow line) and High risk (red line) simulated via the Cyclical Amplifier. The risk-related recessions are related to the CCyB capital stack via the Risk-to-Buffer approach. Low and Median buffers can provide a range for the positive neutral CCyB.

- The **Cyclical Amplifier** – a macro non-linear model – is used to estimate the impact on GDP of shocks occurring under different **cyclical systemic risk** regimes (e.g. Low risk, Median risk, High risk)
- All the shocks are simulated for four consecutive periods hitting the economy and overall higher **cyclical risks amplify economic fluctuations**
- The **risk-dependent impacts** of shocks on GDP are mapped into different elements of the CCyB calibration
- **The PNR** is calibrated to absorb losses occurring under **median systemic risk**
- The Risk-to-Buffer approach suggests **a positive neutral rate ranging between 0.7% and 1.6%**

Considerations on the phase-in of the buffer

- Implementation should **avoid procyclical effects**
 - Effects of higher capital on lending expected to be limited if banking sector and macro conditions are good
 - Gradual implementation (with transition period) can cater for banking sector conditions and country-specific factors
- **‘Buying insurance at low cost’** when conditions are good as reasonable macroprudential strategy
- **Targeted buffer increases** can still be sensible in the current late stage of the financial cycle
 - Facilitated by comfortable capital positions and solid profits
 - Preserve resilience in view of possible future shocks
 - Incentivise prudence in bank payouts

Limited effect of tightening, high impact of release (Expected effects of buffer changes depending on capital/profits)



Notes: Interquartile range and upper/lower adjacent values of the simulated impact on lending of a 1 p.p. increase/release in capital requirements based on the model in Lang, J.H and Menno, D. (2023), “The state-dependent impact of changes in bank capital requirements”, ECB Working Paper Series No. 2828, July 2023. The following category definitions apply: high ROA > 0.5; medium ROA [0.25, 0.5]; low ROA < 0.1; high voluntary capital buffer: greater than median; low voluntary capital buffer: lower than median.

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Conclusion and way forward

Considerable progress with respect to implementation of more releasable buffers as of late

Over the medium term, a **more harmonised approach** towards setting positive neutral rates across banking union countries would seem desirable. It would *promote the effective and consistent use* of the CCyB across countries and a *level playing field* while allowing for *national flexibility*. Such **an approach should consider:**

- The conditions for the build-up, release and subsequent restoration of the buffer
- The calibration of the positive neutral rate
- The degree of flexibility to accommodate country specificities
- The interaction with other macroprudential buffers, such as the systemic risk buffer

Further guidance/progress at international level (e.g. via BCBS) could help to facilitate this