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The implementation of the countercyclical capital buffer: Practice and implications

Longjie Lu*

Abstract

In order to deal with the procyclical effects of bank lending, a countercyclical capital buffer (CCyB) has been adopted in many jurisdictions since the global financial crisis (GFC). Some jurisdictions follow an automatic approach and base the decisions on the results of financial and economic indicators. Alternatively, others adopt a discretionary approach, which gives leeway to regulators to adjust the buffer rate. The automatic approach lacks flexibility and cannot avoid technical errors, whereas the discretionary approach embeds more cognitive and political bias. Considering these flaws, some jurisdictions have required banks to maintain a positive CCyB at all times, which is known as the precautionary approach. However, this strategy attenuates the role of the CCyB as a countercyclical tool. Regulatory responses to the recent economic recession caused by the COVID-19 pandemic demonstrate that jurisdictions with a positive CCyB have more capacity to adjust capital requirements, but this may lead to a misunderstanding that the precautionary approach is the correct way to implement the CCyB. In fact, the best options to deal with such a crisis are non-cyclical buffers, whereas the functions of the CCyB in early warning and slowing down the build-up of risks should be prioritised. Therefore, the precautionary approach should not be applied and the role in coping with unpredicted and unexpected situations should be shifted to other buffers.

Introduction

After the GFC, bank capital regulation has been tightened. A number of mandatory capital buffers have been placed by regulators at the international, supranational and national levels to enhance the resilience of the financial system.

Among all these buffers, the CCyB is a special one. It aims particularly at mitigating the procyclicality of banks' credit supply. Procyclicality means that banks tend to expand the scope of loans when the economy is booming whereas reducing it during a bust.¹ In either direction, bank lending is an amplifying factor. When credit supply increases, it finances more businesses and further fuels economic development. In contrast, when credit supply shrinks, it exacerbates the economic recession as there are fewer funds available for businesses to survive. The impact of procyclicality on both the macroeconomy and financial system is negative. Banks accumulate risks when expending loans and investments, which

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¹ Mathias Drehmann et al., "Anchoring Countercyclical Capital Buffers: The Role of Credit Aggregates" (2011) *BIS Working Papers* No.355, p.2, <https://www.bis.org/publ/work355.pdf> [Accessed 24 June 2021].

will turn into real losses and affect their capitalisations during a downturn.²

One of the important lessons of the GFC is that financial institutions are intertwined and systemic risk is embedded in the financial system. With exposures to similar assets or markets, financial institutions tend to take similar behaviours to adjust lending and investments, which leads to the build-up of systemic risk.

The idea of the CCyB is two-fold. On the one hand, it curbs risk-taking by requiring banks to maintain more capital when the economy is booming. On the other hand, if the economy starts to deteriorate, the reserved capital can be released to encourage banks to continue lending to businesses.³

At the core of the CCyB is the way to identify the build-up of risks. The Basel Committee of Banking Supervision (BCBS) has recommended using the credit-to-GDP gap as the start point⁴ to measure whether credit growth is excessive or not. However, due to the differences among domestic financial markets, the decision-making is primarily left with national authorities.

Since the CCyB has been introduced in 2011, majority member jurisdictions of the BCBS have established their frameworks to implement it. Diversity in substantial rules can be observed. In particular, the methods applied to identify the upturn and downturn phases and adjust the CCyB rate vary from one to the other. This article aims to examine the approaches adopted by national authorities to implement the CCyB and analyse the comparative advantages and flaws of these approaches.

In addition, the COVID-19 pandemic that spread to the world in early 2020 has already resulted in serious economic recessions in many countries. It is the biggest challenge to the global financial market and the first real test to the post-crisis capital regulatory frameworks. The article will also examine how jurisdictions with different CCyB policies have responded to this economic recession, based on which it will draw implications about the role of the CCyB.

The article proceeds as follows. The section to follow further explains the procyclicality of bank lending in the context of the risk-based capital requirements in the Basel framework. The next section elaborates on the general rules of the CCyB set by the BCBS and its recommendations for member jurisdictions. Then the following section compares the main approaches of implementation adopted by several national frameworks and analyses the advantages and flaws of each approach. There is then a discussion on the regulatory responses to the pandemic-led economic shock, focusing primarily on the role of the CCyB and the related conceptual and policy issues. To conclude, there is a presentation of the findings and arguments.

² H. Huizinga and L. Laeven, “The Procyclicality of Banking: Evidence from the Euro Area” (2019) *European Central Bank Working Paper Series* No.2288, p.2, <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2288~e0622ceb43.en.pdf> [Accessed 23 June 2021].

³ Financial Stability Forum (FSF), “Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System” (2009), FSB, p.14, https://www.fsb.org/wp-content/uploads/r_0904a.pdf [Accessed 23 June 2021].

⁴ BCBS, “Guidance for National Authorities Operating the Countercyclical Capital Buffer” (2010), BIS, p.3, <https://www.bis.org/publ/bcbs187.pdf> [Accessed 23 June 2021].

The procyclicality of bank lending

Procyclicality refers to the mutual reinforcing interactions between the financial system and the real economy, which can amplify business cycle fluctuations and cause financial instability.⁵ The term “business cycle” refers to the recurrent upward and downward movements of aggregate economic activity, which are shown by the expansion and contraction phases of economic indicators, such as GDP.⁶ Banks’ lending decisions change along with macro-economic situations, which in turn affect economic activity. During the upturn phase of a business cycle, economic conditions are improving and collateral prices are increasing, so banks are more willing to increase the scale of loans to finance businesses. With sufficient access to external finance, businesses can continue to prosper and add to economic stimulus.⁷ In the booming environment, banks tend to be overoptimistic about asset prices and returns and thereby ease their lending standards. However, increasing the scale of loans may result in the accumulation of underlying risks.⁸ During the downturn phase, when economic conditions are deteriorating, many businesses may be trapped in financial difficulties, banks will have to face an increasing number of defaults on loans and the decrease in collateral prices, which may lead to a credit crunch.⁹ Under these circumstances, banks tend to reduce credit supply. Without available external finance, massive businesses will finally collapse, which will further exacerbate the downturn. Thus, banks’ lending decisions, which correspond to economic fluctuations, are the amplifying factors of both economic boom and recession.¹⁰

The disruptive effects of procyclicality were typically observed during the GFC.¹¹ In particular, there has been a widespread consensus that the procyclical effects were amplified by the risk-based capital requirements set in the Basel framework.¹²

The framework was first established in 1988 to strengthen international cooperation on banking regulation and supervision, which was known as the Basel

⁵ FSF, “Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System” (2009), FSB, p.8.

⁶ A. Burns and W. Mitchell, *Measuring Business Cycles* (National Bureau of Economic Research, 1946), p.3.

⁷ C. Borio et al., “Procyclicality of the Financial System and Financial Stability: Issues and Policy Options” in *Marrying the Macro and Micro-prudential Dimensions of Financial Stability* (2001) BIS Papers No.1, p.1 <https://www.bis.org/publ/bppdf/bispap01a.pdf> [Accessed 23 June 2021].

⁸ M. Ojo, “Measures Aimed at Mitigating Procyclical Effects of the Capital Requirements Framework: Countercyclical Capital Buffer Proposals” (2016) *MPRA Paper 70906*, https://mpra.ub.unimuenchen.de/70906/1/MPRA_paper_70906.pdf [Accessed 23 June 2021].

⁹ Committee of European Banking of Supervisors, “Position Paper on a Countercyclical Capital Buffer” (2009), p.8, <https://eba.europa.eu/sites/default/documents/files/documents/10180/16166/6cd73c1e-68d6-4494-bd2b-fa55829d764e/CEBS%20position%20paper%20on%20a%20countercyclical%20capital%20buffer.pdf?retry=1> [Accessed 23 June 2021].

¹⁰ Borio et al., “Procyclicality of the Financial System and Financial Stability: Issues and Policy Options”, in *Marrying the Macro and Micro-prudential Dimensions of Financial Stability* (2001) BIS Papers No.1, p.1.

¹¹ FSF, “Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System” (2009), FSB, p.8.

¹² Paolo Angelini et al., “Procyclicality of Capital Regulation: Is It a Problem? How to Fix It?” (2010) Banca D’Italia Occasional Papers 74, p.7, <https://core.ac.uk/download/pdf/6372236.pdf> [Accessed 24 June 2021].

Capital Accord (Basel I). It was the beginning of regulating bank capital in a risk-based way.¹³ According to the risk-based capital requirements, a bank must hold regulatory capital against the perceived risks of its asset portfolio.¹⁴ Credit risk is the most important one that has been factored into the calculation of The implementation of the countercyclical capital buffer risk-weighted assets (RWAs).¹⁵ In general, banks' exposures to borrowers with a low probability of default come with a low risk weight and vice versa. Regulatory capital is formulated as the minimum percentage of aggregate RWAs.¹⁶

The framework evolved over time. In 2004, the Basel II framework was issued with the objective to improve the way regulatory capital requirements reflect underlying risks.¹⁷ Basel II provided a standardised approach for banks to measure the credit risk of every independently rated asset.¹⁸ However, considering that the "one-size-fits-all" approach would not be suitable for all banks, it also allowed banks to develop institution-specific models based on their historical data of losses¹⁹, known as the Internal Ratings-based (IRB) approach.²⁰ When assessing the riskiness of a certain exposure, banks using the IRB approach must measure two key components - the probability of default (PD) and the loss given default (LGD).²¹ PD indicates the likelihood of a default over a specific period and LGD represents the percentage of net loss in the total exposures at default once a specific borrower goes into default.²² The risk weight of a specific loan is based on the estimates of these two components.

Empirical evidence reveals that PD and LGD are negatively correlated to asset prices and macroeconomic variables, such as GDP.²³ Therefore, in an economic

¹³ BCBS, "International Convergence of Capital Measurement and Capital Standards" (1988) BIS, <https://www.bis.org/publ/bcbs04a.pdf> [Accessed 24 June 2021].

¹⁴ I.A. Moosa, *Good Regulation, Bad Regulation: The Anatomy of Financial Regulation* (New York: Springer, 2015), p.98.

¹⁵ According to Basel I, Banks were required to hold capital only against credit risk. J. Armour et al., *Principles of Financial Regulation* (Oxford: Oxford University Press, 2016), p.297.

¹⁶ BCBS, "International Convergence of Capital Measurement and Capital Standards", (1988) *BIS*, p.14.

¹⁷ BCBS, "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (2004), BIS <https://www.bis.org/publ/bcbs107.pdf> [Accessed 24 June 2021].

¹⁸ Under the standardised approach, the risk weight of a bank's claims on a specific borrower was based on credit rating of the borrower provided by credit-rating institutions, such as Standard & Poor's. See BCBS, "International Convergence of Capital Measurement and Capital Standards: A Revised Framework (Comprehensive Version)", (2006) BIS, pp.19–51, <https://www.bis.org/publ/bcbs128.htm> [Accessed 24 June 2021].

¹⁹ Armour et al., *Principles of Financial Regulation* (2016), p.300.

²⁰ The adoption of the IRB must be subject to the approval of national supervisors and in accordance with the minimum requirements set by the BCBS.

²¹ BCBS, "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (2006) BIS, p.12.

²² Maria Misankova et al., "Determination of Default Probability by Loss Given Default" (2015) 26 *Procedia Economics and Finance* 411, 412.

²³ L. Allen and A. Saunders, "Incorporating Systemic Influences into Risk Measurements: A Survey of the Literature" (2004) 26(2) *Journal of Financial Services Research* 161; T. Jacobson et al., "Firm Default and Aggregate Fluctuations" (2008) Sveriges Riksbank Working Paper Series No.226, Sveriges riksbank, http://archive.riksbank.se/Upload/Dokument_riksbank/Kat_publicerat/WorkingPapers/2008/wp226.pdf [Accessed 24 June 2021].

downturn, many borrowers' PD and LGD figures will rise,²⁴ and the risk weights of loans will increase accordingly. Due to higher risk weights and more write-offs of defaulted loans, banks have to maintain more capital to satisfy higher capital requirements and absorb losses. Moreover, due to the depreciation of assets, banks will face higher costs of raising new capital. Under all these circumstances, banks have to reduce the credit offered to firms.²⁵ Therefore, applying risk-based capital requirements and integrating PD and LGD into the calculation were the main factors that exacerbated the pro-cyclical effects of bank lending before and during the GFC.

The response in Basel III

After the GFC, the BCBS has taken a comprehensive set of reform measures to strengthen banking regulation. These reform measures have formed the new Basel III framework, which has been in place since 2010.²⁶ Basel III particularly emphasises containing systemic risk and maintaining macro prudence.²⁷ Mitigating procyclicality is integrated into these two objectives, for which modifications have been made to the bank capital requirements.

In Basel III, regulatory capital is categorised into Common Equity Tier 1 (CET1), Additional Tier 1 (AT1) and Tier 2.²⁸ The aggregate shall be at least eight per cent of RWAs at all times.²⁹ Clearly, the calculation of regulatory capital is still based on RWAs as the denominator, which means that the capital requirements remain risk-sensitive and will continue to amplify procyclicality. Thus, a specific countercyclical tool—the CCyB has been introduced into Basel III. Banks should build up and maintain sufficient capital in good quality during economic upturns so that the capital reserves can be drawn down during economic downturns.³⁰

The BCBS requires that the CCyB should be made up of CET 1, varying from zero per cent to two-and-a-half of RWAs.³¹ This portion of capital is additional to

²⁴ R. Repullo and J. Suarez, "The Pro-cyclical Effects of Basel II" (2008) CEMFI Working Paper No.0809, Cite Seer X, p.1, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.961.471&rep=rep1&type=pdf> [Accessed 24 June 2021].

²⁵ K.O. Salaam, "Procyclicality Effects on Bank Lending Decisions: A Case Study of the British Banking Sector" (2015) 5(2) *International Journal of Academic Research in Accounting, Finance and Management Sciences* 185, 187.

²⁶ BCBS, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (2011), BIS, <https://www.bis.org/publ/bcbs189.pdf> [Accessed 24 June 2021].

²⁷ E. Avgouleas, *Governance of Global Financial Markets: The Law, the Economics, the Politics* (Cambridge: Cambridge University Press, 2012), p.266.

²⁸ The types of eligible capital that are categorised into the three tiers are specified in the Basel III framework. The categorisation is based mainly on the quality of capital, particularly loss-absorbing capacity. For instance, banks' common shares are usually CET 1 capital; subordinate debt, due to its supplementary feature in loss-absorbing, is usually considered as Tier 2 capital. See BCBS, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (2011), BIS, pp.12–19.

²⁹ BCBS, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (2011), BIS, p.12.

³⁰ FSF, "Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System" (2009), FSF, p.10.

³¹ BCBS, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (2011), BIS, p.58.

the eight per cent regulatory capital and must be maintained at all times unless the buffer rate is reduced by national authorities. The function of the CCyB is two-fold. First, when banks increase credit supply during the economic upturn, they may take excessive risks. With a positive CCyB rate in place, the more loans a bank intends to extend, the larger its RWAs will be, and the more capital it should reserve as the CCyB. In this way, the buffer can restrain risk-taking.³² Second, during the downturn, the reserved capital can be released to absorb loan losses and cushion the financial distress.³³ Usually, it is easier for banks to raise CET 1 capital when the economy and capital market are booming. In this way, banks become more resilient to withstand poor economic conditions.

The implementation of the CCyB is left with member jurisdictions. A national banking regulator shall constantly monitor the country's credit growth and assess whether or not it may be excessive and lead to the build-up of system-wide risks. According to the macro-financial environment and the aggregate scale of credit growth, the regulator would set a CCyB rate within two-and-a-half per cent.³⁴ The implementation of the countercyclical capital buffer rate is time-varying, which should be adjusted in different phases of the business cycle.

The BCBS has provided guidance for national regulators to assess credit risk and decide the CCyB rate. To establish an international guide, The BCBS has suggested using the aggregate credit-to-GDP gap as a common reference.³⁵ The credit-to-GDP gap is defined as the difference between the credit-to-GDP ratio, which is the ratio of a country's total credit supply to its GDP,³⁶ and its long-term trend. The ratio is based on actual figures and the trend is the statistical estimation of future developments in a period between 25 to 30 years.³⁷ The BCBS considers the credit-to-GDP gap as the best indicator for measuring business cycles and determining the good and bad periods³⁸ because it rises smoothly above the trend before the actual financial distress occurs.³⁹ If there is a large gap, which means the current credit-to-GDP ratio is much higher than the estimation of its long-term trend, it shows that the credit may have climbed to an excessive level.⁴⁰

The usefulness and suitability of the gap in warning system-wide vulnerabilities

³² Drehmann et al., "Anchoring Countercyclical Capital Buffers: The Role of Credit Aggregates" BIS Working Papers No.355, p.1.

³³ Drehmann et al., "Anchoring Countercyclical Capital Buffers: The Role of Credit Aggregates" BIS Working Papers No.355.

³⁴ BCBS, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (2011), BIS, pp.57–58.

³⁵ BCBS, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (2010), *BIS*, p.3.

³⁶ M. Drehmann and K. Tsatsaronis, "The Credit-to-GDP Gap and Countercyclical Capital Buffers: Questions and Answers" (March 2014) *BIS Quarterly Review* 55, 56.

³⁷ J. Hannes Lang and P. Welz, "Measuring Credit Gaps for Macroprudential Policy" (May 2017) *European Central Bank Financial Stability Review* 144, 145.

³⁸ S. Bakhuashvili, "Credit to GDP Gap as An Indicator for Upcoming Financial Crisis", 32nd International Academic Conference (Geneva, June 2017) <https://ideas.repec.org/p/sek/iacpro/5408042.html> [Accessed 24 June 2021], p.58.

³⁹ BCBS, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (2010), *BIS*, p.3.

⁴⁰ BCBS, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (2010), *BIS*, p.5.

have been questioned by academics.⁴¹ Arguably, it will never be possible for a single indicator to perfectly signify the risk-taking episodes in all countries at all times. In fact, the credit-to-GDP gap is only the start point to assess credit growth and member jurisdictions have considerable discretion to implement the CCyB based on their specific national circumstances.

National implementation approaches

The decisions to set up or release the CCyB are made by national regulators in accordance with domestic economic and financial situations. The national assessment systems are different in many aspects, such as the types of indicators and the conditions for adjusting the rate. Therefore, over these few years, the CCyB rates at the national level are varied.

In 2017, the BCBS published a statistical report on the implementation of the CCyB in its member jurisdictions, in which it found that the numbers of indicators adopted by national authorities for assessment varied from one to thirty.⁴² Some jurisdictions use the credit-to-GDP gap as the only indicator, whereas the majority have established a system made up of multiple indicators related to macroeconomy, credit market, business and banking. According to whether or not the decision-making relies strictly on the results of indicators, the approaches that have been adopted by national authorities are classified into the automatic and discretionary approach. The former is also known as the “rule-based” approach, which means that the regulator establishes an assessment system in advance and specifies the calibrations for placing, increasing, decreasing and removing the buffer. In contrast, the discretionary approach means that the regulator has the leeway to decide the CCyB rate based on their judgements or regulatory experience. When making judgements, they may or may not take into consideration financial or economic indicators.

The automatic approach

The way Iceland applies to decide the CCyB rate is a typical illustration of the automatic approach.

The Central Bank of Iceland (CBI)⁴³ has adopted a methodological framework established on the empirical analysis of a variety of indicators. The selection of indicators is based on Iceland’s historical data of economic fluctuations and banking crises, which can demonstrate the correlation between these indicators and systemic risk. Apart from the credit-to-GDP gap, the core indicators used by the CBI to calibrate the CCyB rate also include “growth in credit-to-GDP ratio”, “real growth in credit to households and firms” and “real rise in property prices”. The CBI has

⁴¹ For a review of these academic debates, see Drehmann and Tsatsaronis, “The Credit-to-GDP Gap and Countercyclical Capital Buffers: Questions and Answers” (March 2014) BIS Quarterly Review 55, 56.

⁴² BCBS, “Implementation: Range of Practices in Implementing the Countercyclical Capital Buffer Policy” (2017), BIS, p.3, <https://www.bis.org/bcbs/publ/d407.pdf> [Accessed 24 June 2021].

⁴³ The CBI and the Financial Supervisory Authority merged in early 2020. Previously, the latter was responsible for deciding the CCyB rate.

also set the thresholds of these indicators to judge whether systemic risk in the credit market has started to rise or not.⁴⁴ The CBI⁴⁵ reviews these indicators on a quarterly basis and decides whether to change the current CCyB rate or not. From 2016 to 2019, the Icelandic regulator has raised the rate three times as the changes in selected indicators showed a strong growth of household and business credit, which signified a cyclical upturn.⁴⁶ However, in response to the pandemic-led economic downturn, CBI reduced the CCyB rate to zero in March 2020.⁴⁷

The effectiveness of the automatic approach relies primarily on the appropriateness and accuracy of selected indicators. Although the BCBS considers the credit-to-GDP gap as the best indicator, it may not be reliable. The expansion of the gap is caused by the rise of the current credit-to-GDP ratio, which may result from the decrease of GDP, rather than excessive credit growth.⁴⁸ Moreover, empirical evidence shows that, on the one hand, the gap may expand slower than the materialisation of risks, failing to give an early warning of a forthcoming crisis; on the other hand, the gap may wrongly indicate a “crisis” which finally turns out to be unreal.⁴⁹ Many national authorities also deem that the gap is not a suitable indicator under the specific circumstances in their jurisdictions. For example, Iceland has found that in its history the gap signified the need for countercyclical tools too late.⁵⁰ If the assessment of credit growth and systemic risk rests only with the credit-to-GDP gap, it is possible that the result deviates from the real situation of the business cycle. As a result, many national authorities have selected alternative indicators for reference. However, if there are just a small number of alternative indicators used for assessment, this problem may remain.

⁴⁴ Financial Stability Council, “Recommendation Concerning the Countercyclical Capital Buffer: Rationale” (2016), CB, pp.2–4, https://www.cb.is/library/Skraarsafn---EN/Financial_Stability/Capital-Buffers/en_Countercyclical-capital-buffer_final.pdf [Accessed 24 June 2021].

⁴⁵ The CBI (previously the Financial Supervisory Authority) makes decisions based on the recommendations made by the Financial Stability Council, which is a government body responsible for policymaking related to financial stability.

⁴⁶ The original ratio set in January 2016 was 1.0% which was raised to 1.25%, 1.75% and 2.0% in November 2016, May 2018 and February 2019. See Financial Supervisory Authority, “Decision on Raising the Countercyclical Capital Buffer” (2019), CB, https://www.cb.is/library/Skraarsafn---EN/Financial_Stability/Capital-Buffers/Decision-on-raising-the-countercyclical-capital-buffer-feb_19.pdf [Accessed 24 June 2021].

⁴⁷ “Iceland Cuts Rate 2nd Time in a Week, Cuts Buffer”, Central Bank News, 19 March 2020, <https://www.centralbanknews.info/2020/03/iceland-cuts-rate-2nd-time-in-week-cuts.html> [Accessed 2 July 2021]

⁴⁸ N. Tente et al., “The Countercyclical Capital Buffer in Germany: Analytical Framework for the Assessment of An Appropriate Domestic Buffer Bate” (2015), Bundesbank, p.16, <https://www.bundesbank.de/resource/blob/617868/6a3e844955eb265699751037bc6633a0/mL/the-countercyclical-capital-buffer-in-germany-data.pdf> [Accessed 24 June 2021].

⁴⁹ Bakhushvili, “Credit to GDP Gap as An Indicator for Upcoming Financial Crisis”, 32nd International Academic Conference (Geneva, June 2017) p.71 .

⁵⁰ Financial Supervisory Authority, “Decision on Raising the Countercyclical Capital Buffer” (2019), CB, p.2, https://www.cb.is/library/Skraarsafn---EN/Financial_Stability/Capital-Buffers/Decision-on-raising-the-countercyclical-capital-buffer-feb_19.pdf [Accessed 24 June 2021]. A similar view is also held by several other EU member states, such as Hungary. See The Magyar Nemzeti Bank, “Methodology Underlying the Determination of the Benchmark Countercyclical Capital Buffer Rate and Supplementary Indicators Signalling the Build-up of Cyclical Systemic Financial Risk” (2015), Magyar Nemzeti Bank, p.4, <https://www.mnb.hu/letoltes/ccyb-methodology-new-en-1.pdf> [Accessed 24 June 2021].

A narrow range of indicators can only reflect some aspects of the business cycle, rather than the overall situation, which may fail to correctly inform the regulator of the time to adjust the buffer. Given the complexity of the business cycle, using a wider array of indicators, including both quantitative data and qualitative information, may enhance the quality of signalling.⁵¹ The European Systemic Risk Board (ESRB) has recommended the EU member states to refer to a combination of multiple factors indicating not only credit growth but also banks' robustness, leverage ratio, assets price and stock price to inform the decisions related to the CCyB.⁵²

The discretionary approach

However, no matter how many indicators are selected and how closely they are monitored, it is impossible for regulators to exactly detect every period of excessive credit growth and take timely precautions to prevent all risks.⁵³ Apart from the problem that the selected indicators cannot give warnings about the build-up or materialisation of risks, the results of different indicators may be inconsistent or contradictory with each other. In this situation, the decisions of CCyB relies more on regulators' judgements. Therefore, some national authorities have alternatively adopted the discretionary approach.

In the US, decisions on the CCyB are made by the Federal Reserve System (the Fed)—the US central bank in coordination with the Federal Deposit Insurance Corporation⁵⁴ and the Office of the Comptroller of the Currency at their unfettered discretion.⁵⁵ The Fed will monitor and assess financial vulnerabilities by synthesising the information related to financial and economic performance, supervisory information, surveys, and other interactions with market participants.⁵⁶ It is at the regulators' discretion to develop empirical models, including either small sets of indicators representing a specific aspect of the financial system or large sets reflecting the overall situation of the national economy. In Regulation Q, a number of credit market indicators have been recommended.⁵⁷ Nevertheless, none of these indicators is specified as a "must" in the assessment system. It is believed that fixed indicators and models cannot adequately capture all risks, so the types of indicators and assessment models should be adjusted in accordance with the regulators' experience.⁵⁸ Moreover, the Fed also has the discretion to consider whether the CCyB is the most appropriate policy instrument to address

⁵¹ BCBS, "Implementation: Range of Practices in Implementing the Countercyclical Capital Buffer Policy" (2017), BIS, p.11.

⁵² ESRB, "Recommendation on Guidance for Setting Countercyclical Buffer Rates" (2014/C 293/01), s.1.

⁵³ BCBS, "Implementation: Range of Practices in Implementing the Countercyclical Capital Buffer Policy" (2017), BIS, p.12.

⁵⁴ The Federal Deposit Insurance Corporation is a federal agency mainly responsible for implementing the deposit insurance scheme for US commercial banks. The Office of the Comptroller of the Currency is within the US Treasury to regulate and supervise national banks and savings institutions.

⁵⁵ Appendix A to Part 217 (Regulation Q), a.1(c).

⁵⁶ Appendix A to Part 217 (Regulation Q), a.4(a).

⁵⁷ Appendix A to Part 217 (Regulation Q), a.4(b).

⁵⁸ Appendix A to Part 217 (Regulation Q), a.4(c).

the financial vulnerabilities that have been identified.⁵⁹ That is to say, even the build-up of risks is observed, the Fed may also decide not to activate the CCyB.

Following the discretionary approach, policymaking by regulators is more flexible. However, it is doubtful whether giving regulators more discretion will avoid the shortcomings of the automatic approach. An essential problem with the discretionary approach is the cognitive and political bias in the decision-making process.⁶⁰

Quantitative analysis demonstrates that if a two-and-a-half per cent CCyB were applied in the US prior to 2007, it would have largely prevented the GFC and the subsequent recession.⁶¹ Despite the finding, the CCyB rate in the US remains at zero per cent since it was introduced in 2016. In March 2019, the Fed announced that they would not increase the rate, which was based on the four to one voting result by the Federal Reserve Board.⁶² Two board members who voted to keep the zero CCyB viewed financial stability risks as moderate, whereas the member who was against the decision warned that risks were increasing to high levels, and this opinion was supported by several regional Fed presidents.⁶³ Moreover, having observed the increase of asset valuations and the expansion of leveraged lending, experts also warned the Fed to raise the CCyB rate.⁶⁴ In fact, as admitted by a Board member, both asset valuations and business debt outstanding reached historically high levels in the 2017–2018 period.⁶⁵

If the decision to set a zero CCyB is wrong, it will not actively harm financial stability.⁶⁶ However, it will delay the actions to prevent a crisis and finally fail to attenuate the detriments. It is hard to prove that the zero CCyB in the US is incorrect. Nevertheless, those dissenting opinions demonstrate that decision-makers' cognitive and political bias may result in the errors in judgements, and the probability of making these errors is higher in the discretionary approach.⁶⁷

There are two flaws in the design of the Fed's decision-making. First, decisions are made by just several officials in the Board. Although the Board has alleged

⁵⁹ Appendix A to Part 217 (Regulation Q), a.4(g).

⁶⁰ B.H. McDonnell, "Designing Countercyclical Capital Buffers" (2013) 18(1) North Carolina Banking Institute 123, 126.

⁶¹ M. Faria e Castro, "A Quantitative Analysis of the Countercyclical Capital Buffer" (2020) Federal Reserve Bank of St. Louis Working Paper Series 2019-008D, p.4 <https://s3.amazonaws.com/real.stlouisfed.org/wp/2019/2019-008.pdf> [Accessed 24 June 2021].

⁶² The Federal Reserve Board is the governing body of the Fed. C. Vanderpool and P. Rocha, "Fed Declines to Raise Countercyclical Buffer for Biggest US Banks" (S&P Global Market Intelligence, 6 March 2019) <https://www.spglobal.com/marketintelligence/en/news-insights/trending/XDO4VKKtBfS-MQvqipM81w2> [Accessed 24 June 2021].

⁶³ C. Vanderpool and P. Rocha, "Fed Declines to Raise Countercyclical Buffer for Biggest US Banks" (S&P Global Market Intelligence, 6 March 2019).

⁶⁴ J.L. Yellen, "Seven Questions on Financial Stability", Brookings (2019), <https://www.brookings.edu/blog/up-front/2019/01/03/seven-questions-for-janet-yellen-on-financial-stability/> [Accessed 24 June 2021].

⁶⁵ R.K. Quarles, "Frameworks for the Countercyclical Capital Buffer", Strategic Approaches to the Fed's Balance Sheet and Communications' Meeting (New York, 29 March 2019) <https://www.federalreserve.gov/newsevents/speech/quarles20190329a.htm> [Accessed 24 June 2021].

⁶⁶ McDonnell, "Designing Countercyclical Capital Buffers" (2013) 18(1) North Carolina Banking Institute 123, 127.

⁶⁷ McDonnell, "Designing Countercyclical Capital Buffers" (2013) 18(1) North Carolina Banking Institute 123.

that they base the assessments on four types of vulnerabilities,⁶⁸ these decision-makers may weight these indicators differently and their subjective stances about risks are varied. Activating a positive CCyB means that banks have to reserve more capital and accordingly less will be available for lending, a possible subsequence of which is the slow-down of the economy. Different individuals may have different priorities between these trade-offs. The votes by the Board members represent different views and evaluations, especially when there are divergences. Therefore, the majority opinion may not be correct. In addition, the Fed reviews the CCyB rate once a year.⁶⁹ In comparison, the EU member states usually update their assessments on a quarterly basis. To make the CCyB effective, activating, deactivating, increasing or decreasing the rate should be a timely manner. A longer gap between reviews may result in the regulators missing good opportunities to prevent a crisis.

Clearly, the discretionary approach embeds more policy uncertainties whereas the automatic approach may lead to ossified decisions. Thus, the BCBS, some national authorities and academics incline to an eclectic approach. Having drawn on the ESRB's recommendations, the EU member states usually operate an assessment system made up of pre-designated indicators and calculation methods. Nevertheless, some have particularly emphasised that it is necessary for regulators to retain some degree of discretion. For example, the German framework combines formal rules, which provide specific guidance to measure indicators and assess risks, with the regulator's discretionary judgements.⁷⁰

In practice, an absolute automatic approach is impossible as the analysis of indicators is still done by regulators. However, compared to the discretionary approach, the essential feature of the automatic approach is that the application of indicators is standardised and written in formal rules. Restricted by formal rules, regulators usually have less leeway and flexibility, which to some degree can mitigate cognitive and political bias.

The eclectic choice is expected to cope with the drawbacks of both approaches. However, despite the combination of scientifically and methodologically selected indicators and regulators' discretion to apply their experience and expertise, neither technical nor human errors can be completely avoided.

The precautionary approach

Due to the inherent weaknesses embedded in the automatic and discretionary approach, a perfect system which can exactly indicate every dangerous phase of the business cycle is impossible. The errors in decision-making can be categorised into two. First, the regulators may keep the CCyB rate at zero or a low level if they

⁶⁸ These are asset valuation pressures, household and business debt, funding risk, and financial-sector leverage. See Quarles, "Frameworks for the Countercyclical Capital Buffer" Strategic Approaches to the Fed's Balance Sheet and Communications' Meeting (New York, 29 March 2019).

⁶⁹ Appendix A to Part 217 (Regulation Q), a.5(a).

⁷⁰ Tente et al., "The Countercyclical Capital Buffer in Germany: Analytical Framework for the Assessment of An Appropriate Domestic Buffer Bate" (2015), Bundesbank, p.3.

fail to identify the build-up or materialisation of risks. As mentioned earlier, this error will not actively harm financial stability, but it does not help enhance systemic resilience. Another error is that the regulators mistakenly predict that a crisis would materialise should they do nothing and place a positive CCyB. This error makes banks' capital positions more robust, but it may unnecessarily disturb the credit market and impede economic growth.⁷¹ Some national authorities consider that the costs of the second error are more tolerable than the severe consequence of a crisis, especially the persistent impact on the economy. Thus, they have taken a precaution, which is to maintain a non-zero CCyB even during normal periods. This is also conceptualised as a "positive neutral CCyB rate".⁷²

In the UK, the Financial Policy Committee (FPC) has decided to maintain the CCyB rate at one per cent when risks are judged to be neither subdued nor elevated.⁷³ It demonstrates that the FPC's CCyB policy is not fully consistent with the deliberation of the BCBS. As explained earlier, the CCyB is expected to be activated during the upturn phase of the business cycle. A main purpose of the buffer is to cool down credit growth and restrain risk-taking, which typically distinguishes it from other buffers aimed only at cushioning losses rather than mitigating procyclicality. However, the FPC has made clear that coping with procyclicality "is not its primary objective and will not usually be the primary objective guiding its setting."⁷⁴ Instead, the primary objective is "to ensure that the banking system is able to withstand stress without restricting essential services, such as the supply of credit". That is to say, even without actual threats to financial stability, the UK regulator still intends to keep something for a rainy day. Unlike many other national authorities, the FPC is also informed of the results of stress tests to decide the CCyB rate. Stress tests are designed to examine whether banks are resilient enough to cope with severe and extreme economic and financial scenarios.⁷⁵ The probability of these scenarios taking place in reality is small, so they are also known as "tail risk". However, once a scenario becomes real, it will be significantly destructive. Using the results of stress tests as a reference demonstrates that the FPC hopes to keep the banking system precautionous and alert so that it can get well prepared for the worst.

It is worth noting that the precautionary approach is not an alternative to the discretionary or automatic approach, but an add-on. The FPC adopts a discretionary

⁷¹ McDonnell, "Designing Countercyclical Capital Buffers" (2013) 18(1) North Carolina Banking Institute 123, 127.

⁷² E. O'Brien et al., "Measuring and Mitigating Cyclical Systemic Risk in Ireland: The Application of the Countercyclical Capital Buffer" (2018) Central Bank of Ireland Financial Stability Notes No.4, p.4, [https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-4-measuring-and-mitigating-cyclical-systemic-risk-in-ireland-\(o'brien-o'brien-and-velasco\).pdf?sfvrsn=6](https://www.centralbank.ie/docs/default-source/publications/financial-stability-notes/no-4-measuring-and-mitigating-cyclical-systemic-risk-in-ireland-(o'brien-o'brien-and-velasco).pdf?sfvrsn=6) [Accessed 24 June 2021].

⁷³ Bank of England (BoE), "The Financial Policy Committee's Approach to Setting the Countercyclical Capital Buffer" (2016), Bank of England, p.6, <https://www.bankofengland.co.uk/statement/2016/the-financial-policy-committees-approach-to-setting-the-countercyclical-capital-buffer> [Accessed 24 June 2021].

⁷⁴ BoE, "The Financial Policy Committee's Approach to Setting the Countercyclical Capital Buffer" (2016), Bank of England, p.6.

⁷⁵ K. Dent and B. Westwood, "Stress Testing of Banks: An Introduction" (2016) 3 BoE Quarterly Bulletin 130, 131.

approach as it makes decisions by synthesising the information related to macroeconomic and political situations, rather than the observation or analysis of specific financial and economic indicators. Based on the one per cent threshold, the FPC can increase the rate to a higher level when it believes that there is a higher possibility of financial instability or economic deterioration.⁷⁶ In December 2019, the FPC raised the rate to two per cent⁷⁷ because it predicted that financial vulnerabilities would become severe due to the foreseeable falls in the global and domestic economy that resulted from the US-China trade war and Brexit respectively. It demonstrates that apart from the one per cent threshold, further increasing the rate may also be a precautionary action, even without any clear signalling of the upturn phase.

For the BCBS, the ESRB and many other national authorities, the CCyB is adjusted against procyclicality. Therefore, when to place, increase, decrease or release the buffer is of great importance. A right timing helps keep the balance between protecting financial stability and developing economy. However, instead of “acting timely”, the UK regulator emphasises “moving early”, which demonstrates that the objective of building countercyclicality is second to maintaining capital. The nature of the one per cent threshold is just an additional cushion of capital for loss-absorbing. In this sense, the difference between the CCyB and other buffers, such as the Capital Conservation Buffer (CCoB) is blurred.

The CCoB is another set of CET 1 which is required to be built up outside the periods of economic busts. Instead of targeted at the problem of procyclicality, the CCoB simply requires banks to maintain more capital above the minimum level. According to the BCBS, the CCoB rate is fixed at two-and-a-half per cent. Unlike the CET 1 capital used to meet the minimum capital requirements, which should never be drawn down below the four-and-a-half per cent bottom line, when a bank’s CCoB is less than two-and-a-half per cent, it can still run the business normally. However, the bank is restricted from distributing earnings, including dividend payments, employee bonuses and share buy-backs until the two-and-a-half per cent CET 1 is restored.⁷⁸

In addition, the BCBS has imposed a higher loss absorbency requirement on global systemically important banks (G-SIBs). Based on the scores measured by size, complexity, interconnectedness, and so on, G-SIBs have to maintain an additional level of capital, ranging from one per cent to three-and-a-half per cent

⁷⁶ BoE, “The Financial Policy Committee’s Approach to Setting the Countercyclical Capital Buffer” (2016), Bank of England, p.6.

⁷⁷ BoE, “Financial Stability Report 2019”, Bank of England, p.88, <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2019/december-2019.pdf> [Accessed 24 June 2021].

⁷⁸ The purpose of restricting distributions is to prevent banks from operating under the 2.5% ratio to make it more competitive. The extent to which distributions are limited is determined by the bank’s available CET 1 for CCoB. The ratios of earnings that cannot be distributed in specific circumstances are stipulated in Basel III. See BCBS, “Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems” (2011), BIS, p.56.

CET 1.⁷⁹ The EU has implemented the G-SIBs buffer⁸⁰ and extended it to other financial institutions by placing an Other Systemically Important Institutions (O-SIIs) buffer and a systemic risk buffer (SRB).⁸¹ The O-SIIs buffer applies to systemically important institutions that are identified by national authorities and the SRB can be imposed on all kinds of financial institutions. If a firm has to comply with all the three buffers, the highest rate will apply.⁸² Unlike the CCoB, these three buffers do not apply to all institutions uniformly.⁸³ What is in common is that they are not supposed to cope with procyclicality, either. Instead, they are also maintained constantly against non-cyclical systemic and macro-prudential risk. Therefore, the role of all these buffers in giving early warnings and slowing down credit growth is rather limited. In this sense, the non-zero CCyB adopted during normal periods does not essentially differ from these non-cyclical buffers.

The time to build up non-cyclical buffers does not hinge on the evolution of the business cycle. If they have been built up prior to the upturn phase, both banks and regulators may feel safe. As long as banks have maintained sufficient CET 1 to meet these buffers, no matter the upturn phase comes or not, they would expand credit supply. Regulators may also be overoptimistic when these buffers are in place and regard further increasing the CCyB rate unnecessary. As a result, they may miss the opportunity to curb excessive credit growth in time. The probability of this mistake is higher when there is a “positive neutral CCyB” as it creates the illusion that the procyclicality issue is being controlled. In addition, since the CCyB rate is usually up to two-and-a-half per cent, with a “positive neutral CCyB” being in place all the time, there is a smaller range for regulators to adjust bank capital. For instance, if the “positive neutral CCyB” is maintained at one per cent, the regulator can only increase the rate by up to one-and-a-half per cent when an upturn phase has been identified.

Summary

The automatic approach relies primarily on pre-designated indicators and methodology, whereas regulators’ discretion is limited. It is good at controlling human errors or bias, but lacks flexibility. If the selected indicators and methodology are inappropriate, it may result in incorrect decisions. In contrast, the discretionary approach allows regulators to adjust the CCyB rate flexibly, but the decisions may be more influenced by cognitive and political bias. Due to the complexity and uncertainty of the business cycle, incorrect decisions cannot be

⁷⁹ For details, please see BCBS, “Global Systemically Important Banks: Revised Assessment Methodology and the Higher Loss Absorbency Requirement” (2018), BIS, <https://www.bis.org/bcbs/publ/d445.pdf> [Accessed 24 June 2021].

⁸⁰ It is known as the Global Systemically Important Institutions (G-SIIs) Buffer. See Capital Requirements Directive (CRD) IV, a. 131. The requirements are not changed in the CRD V.

⁸¹ The O-SIIs buffer rate was up to 2% in CRD IV and has been increased to 3% in CRD V. See CRD IV, a. 131 and CRD V, a. 47(e). The SRB rate is usually up to 5%. A national authority may set a rate over 5% to apply the buffer to exposures in third countries subject to the agreement of the Commission, See CRD IV, a. 133.

⁸² See CRD IV, a. 131(14).

⁸³ Only when a bank is identified as a G-SIB or O-SII, will the corresponding rate apply. The SRB rates are institution-specific. A national authority can assign different SRB rates to different banks.

completely avoided under either approach. Therefore, some jurisdictions have adopted a precaution, which is a non-zero CCyB that should be maintained even without cyclical risks being built or becoming materialised. This approach provides an additional cushion to absorb losses, however, it blurs the difference between the CCyB and non-cyclical buffers and weakens its role as a countercyclical tool.

The Role of the CCyB during the COVID-19 pandemic and implications

The COVID-19 pandemic has already caused the global economic recession, and financial systems across the world have been taking the brunt. It is the largest challenge to the global financial markets and the first system-wide test for the post-GFC regulatory framework.⁸⁴ There have been macro-level stabilising measures, either posited previously to avoid another financial crisis or particularly issued to cope with this recession. In particular, the capital buffers discussed above are “on the front line” to help banks withstand such a sharp downturn.

The table below shows the changes in the CCyB rates in some jurisdictions during the pandemic.

The Release of the CCyB in BCBS Member Jurisdictions and EEA Countries

Sources: <https://www.bis.org/bcbs/ccyb/> [Accessed 24 June 2021]; https://www.esrb.europa.eu/national_policy/ccb/html/index.en.html [Accessed 24 June 2021]

Jurisdiction	Previous rate %	Current rate %	Jurisdiction	Previous rate %	Current rate %
France	0.25	0	Denmark	1	0
Germany	0.25	0	Iceland	2	0
Belgium	0.5	0	Sweden	2.5	0
Bulgaria	0.5	0	Czech	1.75	0.5
UK	1	0	Hong Kong	2	1
Ireland	1	0	Norway	2.5	1
Lithuania	1	0	Slovakia	2	1

The statistic is the result of a survey covering the 31 EEA countries and the 18 non-EU member jurisdictions of the BCBS. Jurisdictions that are not listed in the table held a zero CCyB prior to the pandemic. Clearly, minority activated the buffer and had some resources to release.

Among the above jurisdictions, the UK, Ireland, Lithuania, Denmark and Norway have adopted a precautionary approach. As mentioned earlier, the EU member states usually use quantitative and qualitative indicators for the setting of the

⁸⁴ Financial Stability Board, “COVID-19 Pandemic: Financial Stability Implications and Policy Measures Taken” (2020), FSB, p.1, <https://www.fsb.org/wp-content/uploads/P150420.pdf> [Accessed 24 June 2021].

CCyB. Their strategies are based largely on the automatic approach, with some degree of regulatory discretion. Iceland and Hong Kong also follow a typical automatic approach.⁸⁵ Therefore, jurisdictions in the list above usually adopt an automatic or precautionary approach. Under the automatic approach, the possibility of failing to signify the build-up of risks and activate a positive CCyB can be reduced, though not completely eliminated, by referring to a more comprehensive set of indicators. The precautionary approach itself is just a safeguard measure against this type of decision-making failure. However, as human bias or mistakes in the discretionary approach are more difficult to control, the possibility of this failure may be higher.

It has been commonly observed that jurisdictions with a positive CCyB chose to release it first to support on-going lending to the real economy while maintaining other buffers temporarily. In contrast, others had to start with lowering the rates of the O-SIIs buffer and SRB. Some jurisdictions without these tools even encouraged banks to use the CCoB or directly reduce capital requirements.⁸⁶ Where available, the CCyB has been prioritised, meaning that it is regarded as the best-suited tool to stabilise the economy. Nevertheless, regulators who did not place a positive CCyB before the pandemic should not be blamed as the CCyB is not originally designed to deal with a pandemic-led recession like what the world has been suffering since 2020.

Having learned from the lesson of the GFC, the CCyB is particularly designed to mitigate procyclicality. Its effectiveness is based on the assumption that the business cycle can be assessed and predicted with scientific methods or historical experience. Therefore, the quantitative indicators and qualitative information used for setting the CCyB are all finance or economy-related. It is not problematic if these indicators and information are used to monitor endogenous risks or detect an endogenous crisis. However, when it comes to this recession which is caused by an exogenous, non-economic factor, the monitoring and warning function of the CCyB fails.

In addition, the risk assessment for the CCyB is based on domestic situations. However, the current economic recession is caused by a pandemic, which has spread fast to all economies almost simultaneously and thereby dramatically changed the tendency of domestic business cycles, leaving no time for any precautions. That is why some jurisdictions had a positive CCyB by coincidence whereas others were just unlucky.

By observing the responses of national authorities to this recession, it can be concluded that a system-wide buffer aimed at dealing with system-wide tail risk is needed. It seems that the precautionary approach should be widely applied as it

⁸⁵ See Hong Kong Monetary Authority, “CCyB—Approach to Its Implementation” (2017), HKMA, <https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/supervisory-policy-manual/CA-B-1.pdf> [Accessed 24 June 2021].

⁸⁶ Institute of International Finance, “Prudential Regulatory Measures in Response to COVID-19 (as of May 15, 2020)” (2020), IIF, https://www.iif.com/Portals/0/Files/Databases/COVID-19_regulatory_measures.pdf?ver=2020-05-15-140736-500 [Accessed 24 June 2021].

is aimed exactly at supporting the banking sector to overcome unexpected or unpredictable situations.

However, it is worthy of note that, considering the original objective of the CCyB, it is not the best-suited tool to deal with this kind of economic recession, but its variation—the so-called “positive neutral CCyB” is. The problem with the “positive neutral CCyB” has been clarified in the above section that it attenuates the early warning function of the buffer. It is important that the CCyB should be activated or increased at an appropriate point to effectively slow down risk-taking. Therefore, the function of supporting banks to withstand tail risk should be carried out by another regulatory tool independently, rather than in the name of the CCyB. The nature of the “positive neutral CCyB” is an extension of non-cyclical buffers. In this sense, it is reasonable to vest this role in the G-SIBs/O-SIIs buffer, SRB or CCoB. However, there are imperfections in the current policy frameworks of these buffers.

During the GFC, institutions that were most intertwined with others, especially at the global level, were the most affected. Therefore, the G-SIBs/O-SIIs buffer and SRB are institution-specific. Differently, this time all banks and credit institutions are affected as they are all interconnected with the real economy and households. Although the impact on larger institutions may be wider and deeper, they have established stronger capital positions after the GFC. In contrast, these buffers are not available for smaller, local institutions. For instance, most building societies in the UK are not identified as O-SIIs,⁸⁷ and the SRB was imposed only on five ring-fenced banks and one building society.

The CCoB differs from the other three non-cyclical buffers as it is not institution-specific. Since the pandemic, a number of national authorities have decided to lower the CCoB rate or generally encourage banks to fully use it.⁸⁸ As mentioned earlier, when banks run below the two-and-a-half per cent rate, distributions of earnings, share buy-backs and bonuses payments are restricted. The aim is to prevent banks from making loans with the buffer to make themselves more competitive. However, in reality, the concern is the other way around. These requirements limit the benefits of banks’ shareholders, directors and senior employees and upset banks’ plans to adjust capital structure or share price. To avoid these restrictions, once banks have fully built the CCoB, shareholders and managers would like to maintain it at the required level rather than drawing it down. For their own interests, even if the regulator encourages the banks to use the buffer during hard times, they may eschew decisions of running below it.⁸⁹

Arguably, many national authorities have temporarily prohibited banks from

⁸⁷ The UK’s list of O-SIIs is available at <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/crd-iv/2020-list-of-uk-firms-designated-as-osis.pdf?la=en&hash=2EFECF4EC47BBDB9C6CF745DCBC299D56EA3A44C> [Accessed 3 July 2021]

⁸⁸ For instance, Brazil has lowered the CCoB from 2.5% to 1.25%. Countries such as Japan, Italy and Russia have allowed banks to operate below the CCoB. See Institute of International Finance, “Prudential Regulatory Measures in Response to COVID-19 (as of May 15, 2020)” (2020), IIF.

⁸⁹ Armour et al., *Principles of Financial Regulation* (2016), p.307.

paying dividends and bonuses or at least recommended banks to do so.⁹⁰ However, this cannot be a constant policy, whereas the economic consequence of the pandemic is long-term. Building the CCoB is a time-consuming process. The BCBS proposed a phase-in strategy for banks to gradually build the buffer from 2016 to 2019. If banks use the buffer to absorb losses or support normal lending activities during the pandemic-led recession, there will be a long period ahead before they can fully restore it. Operating with the restrictions attached to the CCoB for a long time is detrimental to banks and their shareholders and managers.

In comparison to the CCyB, these non-cyclical buffers are more suitable to be released during such an economic recession, which is impossible to be estimated by monitoring the business cycle. In particular, the CCoB is more ideal than others as it covers a much wider range of institutions. However, in practice the strict restrictions on distributions, buybacks and bonuses may discourage banks to use the buffer.

Differently, when the CCyB is released, no additional requirements are imposed on banks, which may be one of the reasons for it being the first choice of those jurisdictions with a positive CCyB. However, this kind of regulatory responses to this recession may lead to a misunderstanding that maintaining a positive CCyB at all times is a better way to implement this tool. Although the precautionary approach offers a safeguard for financial stability, it is a distorted application of the CCyB as its function in curbing procyclicality is not prioritised. During the pandemic, the “neutral positive CCyB” happens to be proven useful. However, it only demonstrates that it is good for banks to maintain a buffer to cope with tail risk; it does not mean that the CCyB, which is a countercyclical tool, should be made to play this role. To leave the CCyB as a particular countercyclical tool, the role to cope with tail risk shall be shifted to the CCoB or other buffers. However, considering the imperfections in the current policies, there are two possible ways to make these buffers more viable.

First, the restrictions attached to the CCoB can be relaxed. For instance, instead of restricting banks from distribution until they restore the two-and-a-half per cent CET 1, the restriction period can be relatively shorter. It is reasonable for regulators to limit banks’ distributions during the hardest period. However, banks’ normal business and governance should be allowed if the market starts to revive, even if some banks may not be able to fully rebuild the buffer quickly. This gives banks an expectation that while they need to prioritise lending to the real economy to overcome the most difficult period, stakeholders’ interests in the long run are also balanced. Another way for relaxation is that regulators can remove all restrictions and alternatively require banks to use the buffer only for credit supply, which means that other types of capital can be used for distributions, buy-backs or bonuses.

Second, in terms of the institution-specific buffers, they can be extended to

⁹⁰ Institute of International Finance, “Prudential Regulatory Measures in Response to COVID-19 (as of May 15, 2020)” (2020), IIF.

smaller or less interconnected institutions, with the rates flexibly adjusted by national regulators in accordance with the exposures of individual firms. Currently, the O-SIBs buffer and SRB are only supranational or national initiatives in some jurisdictions. In the future, the BCBS may recommend a wider application of these buffers or a variation of G-SIBs buffer that applies to other institutions.

Conclusion

This article has examined the implementation of the CCyB during the post-GFC period. As the policymaking and rate-setting processes rest with national authorities, the practices among jurisdictions are various. In general, there are two different approaches of implementation. Jurisdictions following an automatic approach usually have a standardised framework comprised of pre-designated financial and economic indicators and assessment methods. Banking regulators are bound by rules and should adjust the CCyB rate in accordance with the results of indicators. In contrast, under a discretionary approach, regulators are given the leeway to refer to either objective indicators and information or subjective experience to form their judgements.

Neither of the two approaches is perfect. The effectiveness of an automatic approach relies heavily on the appropriateness of selected indicators and the preciseness of the assessment method. However, a variety of factors may result in the accumulation of systemic risks, and the upturn phases of business cycles may emerge in different patterns. That is to say, the framework may fail to detect a crisis or wrongly signify one that does not exist. A wider range of financial indicators and frequent reviews may lower the probability of these errors. However, they are impossible to be completely avoided. The discretionary approach offers more flexibility but it also brings more uncertainties. Regulators' experience and knowledge may fill the gap in the automatic approach, however, humans' cognitive and political bias will be a more serious issue.

Therefore, to avoid technical and human errors, some jurisdictions have adopted a "neutral positive CCyB". Instead of activating the buffer during the upturn phase of a business cycle, these jurisdictions keep the rate above zero at all times to get well prepared for financial distress. Even if the build-up or materialisation of risks is not detected in time, this precautionary approach can still mitigate the impact on credit supply. However, this approach may also attenuate the role of the CCyB as a countercyclical tool, especially its functions in early warning and slowing down the build-up of risks. In essence, the "neutral positive CCyB" is an extension of the CCoB. That is to say, the difference between the roles of the CCyB and non-cyclical buffers is blurred. In addition to the CCoB, there are also institution-specific buffers that perform a similar function, including the G-SIBs/O-SIBs buffer and SRB.

During the economic recession caused by the COVID-19 pandemic, many national authorities have chosen to use these buffers to support banking lending. Jurisdictions with a positive CCyB rate prior to the outbreak had more capacity and usually chose to release this buffer first, whereas those with a zero CCyB had to directly

start with using other buffers. It seems that the precautionary approach is the best for maintaining banks' resilience during a sudden and unexpected downturn.

In fact, this is a misunderstanding. The superior performance of the precautionary approach demonstrates that it is necessary for banks to build a particular buffer against system-wide tail risk. However, this task shall not be undertaken by the CCyB. A crisis which is caused by exogenous, non-economic factors has nothing to do with the business cycle. Therefore, under the CCyB framework, it is unpredictable. If a zero rate is held when such a crisis bursts out, the CCyB is powerless. If a "neutral positive CCyB" is in place all the time, its countercyclical function is obstructed. Therefore, there is a dilemma in using the CCyB against unexpected or unpredictable downturns.

Instead, the non-cyclical buffers, which are built and maintained outside the upturn phases, can be taken into consideration. At present, the policies of the CCoB and the three institution-specific buffers may cause problems in practice. If the restrictions attached to the CCoB can be relaxed or removed, or the scopes of the institution-specific buffers can be extended to the entire banking system, these buffers should be more suitable tools.