



CENTRAL BANK OF THE REPUBLIC OF ARMENIA

**CBA'S APPROACH TO THE APPLICATION OF THE COUNTERCYCLICAL CAPITAL
BUFFER**

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INTRODUCTION

As it is known, with the amendments to the Constitution in 2015, the CBA was also vested with the mandate of ensuring the financial stability, in addition to the function of ensuring the stability of prices. For the purpose of ensuring the financial stability, the CBA is implementing macroprudential policy, one of the most important tools of which is the countercyclical capital buffer (hereinafter referred to as “CCyB”).

This document presents the essence, logic of application of the CCyB, the process of adoption of CCyB decisions by the CBA, and other essential points. The document aims to raise the awareness of interested participants about the CCyB, perception of decisions adopted by the CBA and the general transparency of the macroprudential policy.

COUNTERCYCLICAL CAPITAL BUFFER

What is the countercyclical capital buffer?

The countercyclical capital buffer is one of the key tools of the macroprudential policy implemented by the CBA, and serves as an additional capital requirement for the banks. Compared to **the other capital requirements that already exist (capital adequacy indicator, capital conservation buffer, etc.)**, the CCyB rate may be **changed (increased/decreased) depending on changes of cyclical systemic risks**.

In other words, through the CCyB the CB adjusts the capital reserves necessary for the stability/soundness of the banking system according to the cyclical developments of systemic risks. For example, when CB estimates that systemic risk build-up occurs during the growth phase of the financial cycle (which may be expressed with excess credit lending or by other means), the CB in anticipation of possible future shocks may increase the CCyB requirement, aiming at increasing the shock absorbing capacity of banks. And the opposite, in case of shocks, when the banks are recording large-scale credit losses and there is a risk of disruption of the normal lending process to the economy, the CB may immediately decrease the CCyB requirement or reduce it up to zero, providing the banks with the opportunity to have an additional “reserve” of capital necessary for absorbing losses and continuing their normal operation.

Objectives of the countercyclical capital buffer

The aim of the CCyB is the formation of capital reserves, necessary for absorbing the losses in the banking system, which, in turn, may assist to preserve the continuity of the lending process to the economy in case of financial/economic shocks. In other words, the purpose of applying the CCyB tool is to address the risk of reduction or termination of credit supply to the real sector of the economy by banks during shock periods, which, in turn, may further amplify the adverse effects of the shock on the economy.

Thus, the CCyB aims to:

- Increase the shock absorption capacity of the banking system or;
- Smooth or mitigate the risk developments across the credit cycle.

APPLICATION OF THE COUNTERCYCLICAL CAPITAL BUFFER

Principles of application of the CCyB

The application of the CCyB by the CBA is based on the following principles:

- The application of the CCyB should be targeted to increase strength of banks and ensuring the normal credit supply to the economy in stress conditions.
- The change of the CCyB rate should be proportionate to the level of systemic risk build-up.
- The increase of the CCyB rate should be prior to the materialisation of systemic risks.

CCyB and financial cycle developments

The process of setting the direction of change (increase/decrease/unchanged) of the CCyB and rate of the latter is greatly derived from the position of the economy on the financial cycle and the level of cyclical systemic risk build-up. In general, the financial cycle is characterised by stages of rise and fall, lower and upper turning points, to each of which various levels of systemic risk build-up are typical. The main stages of the financial cycle and the assumed directions of the possible change and rates of the CCyB in each of those stages are presented below.

Stage 1. Standard or normal risk environment.

This stage is characterised with a moderate level of risks, when the indicators characterising the financial system are close to their historical average values, incomes and creditworthiness of borrowers also show tendency of recovery, participants of the financial market are not risk averse any more, but the opposite trend is also not available. In other words, at this stage of the financial cycle, the level of systemic risks is considered neither elevated nor subdued. This stage usually follows the post-crisis stage of the financial cycle.

At this stage of the financial cycle, the CB strives to set the CCyB rate at “normal” or “neutral” rate. The “neutral” rate may also be interpreted as the minimum necessary lower level of the CCyB, which may be decreased/used in case shock situations emerge.

Neutral rate of CCyB.

The existence of the “normal” or “neutral” CCyB rate is conditioned by the preventive nature of this tool, which means that the increase of the CCyB rate should be maximum forward looking, and the build-up of the “neutral” level of the CCyB should usually precede the essential build-up of cyclical systemic risks. Prior to the beginning of the overheating stage of the financial cycle, the banking system should have already be secured/equipped with a minimum capital reserve for effectively facing future unforeseen shocks. The following judgements underlie the application of the neutral CCyB rate:

- Measurement of the financial cycle and the systemic risk especially at the early recovery stage of the cycle is a quite complex process, and there is a risk that the steps by the CB to address the systemic risk build-up may be anachronistic or late. Several circumstances may contribute to it, in particular:
 - the indicators/models serving for measurements of systemic risks especially at the stage of early recovery of the financial cycle may give ambiguous or wrong signals;
 - receipt and proper analysis of those indicators itself assume a certain time lag;
 - In turn, the application of the CCyB enters into force for a certain time lag (usually 6 months to 1 year).

Conditioned by the listed factors, time lags may create a situation when the systemic risk build-up and steps addressing that build-up do not correspond to each other in terms of time. **In order to minimize those risks, the CB prefers the forward looking prudential regulation approach, according to which the creation of necessary reserves of capital for facing future shocks should start prior to the emergence of obvious signs of systemic risk overheating.**

- Increase of the CCyB may also add costliness for the banking system as it requires replenishment of reserves of capital/creation of new capital reserves. The creation of such reserves may be as smooth as possible and less costly for the banking system, if it is implemented gradually and distributed in time. **In this sense, the application of the neutral rate of CCyB distributes the build-up of buffers to be created in future within a longer time period, thereby smoothing/decreasing the risks of increase of costliness of additional capital engagement and the unwanted reaction by banks (for example, credit rationing, etc.).**

At the “normal” stage of the financial cycle, the CB tends to build up to 1.5% CCyB. It should be noted that the CB may achieve the build-up of this threshold with various “speeds” and steps, taking into account the current developments of the banking system and the possible effects of increasing the CCyB. In the case when the increase of the CCyB may hinder the recovery trends of the banking system or create risks of disruption of the normal lending of the economy, the CB may “slow down” the process of build-up of the neutral CCyB rate and condition further steps with the developments of the financial system. However, it should also be noted that this rate is estimated taking into account the structural peculiarities of the current financial system and the size of sensitivities of the system to potential microeconomic shocks. In future, in case of structural movements in the financial system (for example, essential changes in the structure of the banking system, etc.) or essential changes in the size of risk exposure, review of the neutral CCyB rate is possible.

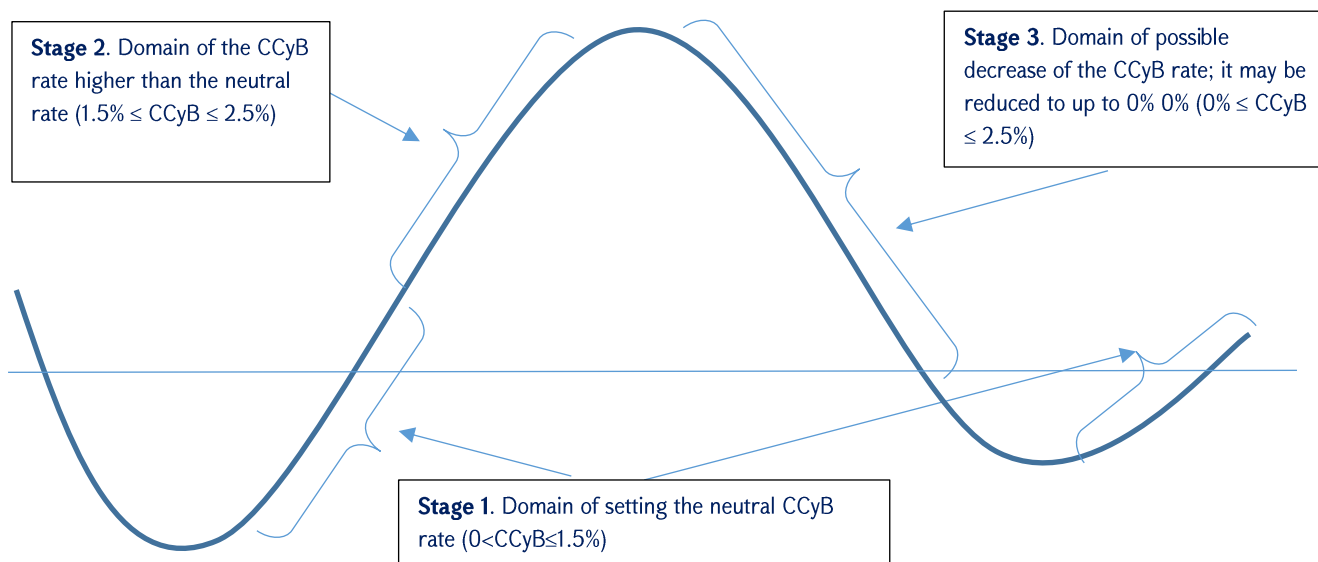
Stage 2. Build-up of risks/increase of the financial cycle.

This stage is usually characterised by the increase of the risk appetite of financial market participants (both borrowers and lenders), mitigation of crediting conditions and fast growth of lending of the economy. The indicators characterising the financial market mainly deviate from their long-term fundamental levels, increasing the risks of drastic adjustment (or, which is the same, of the critical situation) in future. Very often, market participants underestimate the risks, which may lead to the disproportionate growth of the debt burden of borrowers compared to the incomes. **At this stage, the CB is targeted at increasing the CCyB rate at a level higher than the neutral level, parallel to the build-up of cyclical systemic risks and in compliance with the assessments of the financial and economic situation.** According to the internationally accepted standards (BIS, ESRB, etc.), the maximum level of the CCyB should be limited

at the level of 2.5%. The CB has also adopted this approach¹, but in special cases, when the stemming and/or mitigation of risk developments would require the application of a greater CCyB size, that upper threshold may be reviewed.

In some cases, the build-up of cyclical systemic risks may not be immediately followed by the increase of the CCyB. For example, if the return of the banking system is temporarily low and the increase of the CCyB may, upon the CB's assessment, lead to an unacceptable reduction of normal rates of lending of the economy, the CB may postpone the increase of the CCyB or address the build-up of existing risks by another macroprudential policy tool.

Diagram 1. Stages of the financial cycle and the CCyB rate



Stage 3. Stage of decrease of the financial cycle (shock situation (3.1) or environment of reduced cyclical risks (3.2)).

The stage of decrease of the financial cycle may be conditioned by both by the emergence of shock events and the process of normal adjustment of risks. In this case, the policy response, in particularly with the CCyB tool, may differ.

3.1 Decrease of the financial cycle conditioned by a shock or critical situation. Risks built up in the previous time periods materialise in critical/shock

¹ The document on the legal regulation of the CCyB is available at the following link: <https://www.cba.am/AM/laregulations/Capital%20buffers.pdf>

situations, participants of the financial system become risk averse, and there is a risk that the process of normal lending to the economy by banks may be disrupted, even more increasing the scale and duration of the negative effects of the initial shock on the economy and the banking system. **At this stage, the CB is targeted at reducing the previously built-up CCyB rate, by freeing additional capital which may be used by the banking system for the considerations of the smooth absorption of losses increasing as a result of the shock and ensuring the continuity of lending to the economy.**

Moreover, the CB may release the CCyB partially or fully, and it enters into force immediately (without a time lag).

It should be noted however, that the CCyB rate will not be decreased for the purpose of compensating for the losses of capital arisen by the materialisation of idiosyncratic risks of a separate bank.

3.2 Decrease of the financial cycle conditioned by the gradual reduction of cyclical systemic risks.

Often, the stage of build-up of cyclical systemic risks and the high growth of the debt burden may be followed by a time period when the credit supply becomes relatively stemmed even in the case when no critical/shock events have taken place. After the period of quick growth of crediting and quick build-up of risks, the participants may consciously adjust their behaviour, becoming relatively less risk-seeking. Trends of reduction of the financial cycle may emerge also conditioned by autonomous adjustment (reduction) of the growth rates of the credit market. For example, conditioned by the growing base effect, high growth rates (for rather long time period) of the credit portfolio or prices of assets may be followed by the decrease of growth rate or negative growth rates. The logic that the CCyB should be increased parallel to the growth of cyclical systemic risks or in critical situations underlies the recommendations of the European Systemic Risk Board (ESRB). This means that the CCyB tool may be applied asymmetrically during the entire period of financial risk. **In the above-described environment of gradual risk reduction/mitigation, the CB will show cautiousness with respect to decreasing the CCyB rate and is targeted to leave the CCyB unchanged so long as there are no shock events or difficulties in engaging financial resources.**

The asymmetric application of the CCyB is substantiated by the circumstance that the systemic risk assessment indicators are not perfect, the financial crisis expenses are incomparably greater than the expenses for increasing the CCyB rate², and unlike the increase, the decrease of the CCyB rate enters into force immediately.

² "Macroprudential policy at the ECB: Institutional framework, strategy, analytical tools and policies", ECB 2019, <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op227~971b0a4996.en.pdf>

DETERMINING THE COUNTERCYCLICAL CAPITAL BUFFER RATE

Risk monitoring and indicators

In order to get an idea of the degree of build-up of cyclical systemic risks, the CB continuously monitors various early warning indicators which may be conditionally divided into 2 groups:

- macroeconomic indicators, including:
 - loans/GDP indicator;
 - loans/GDP gap;
 - debt service/GDP indicator;
 - financial cycle index;
 - real estate prices, deviation from their fundamental level;
 - other indicators;
- financial sector specific indicators, including:
 - credit stock and flow indicators, their growth rates;
 - credit growth rates in specific sectors;
 - leverage indicator;
 - loan/deposit ratio;
 - interest rates, spreads by sectors;
 - Indicators characterising the risk-absorption capacity of banks (capital adequacy, liquidity, return, etc.);
 - Other indicators.

The list of the above-described indicators is not exhaustive and includes the main part of indicators. This list may be expanded during time, depending on sources of arising of systemic risks and peculiarities of financial system developments.

CCyB decision-making process

The general approach to setting the CCyB rate has been recommended by the Basel Committee on Banking Supervision (BCBS). According to this approach, the size of deviation of the loans/GDP ratio from its long-term trend (gap) underlies the decisions of the CCyB³.

³ See “Guidance for national authorities operating the countercyclical capital buffer” (BCBS); www.bis.org/publ/bcbs187.pdf

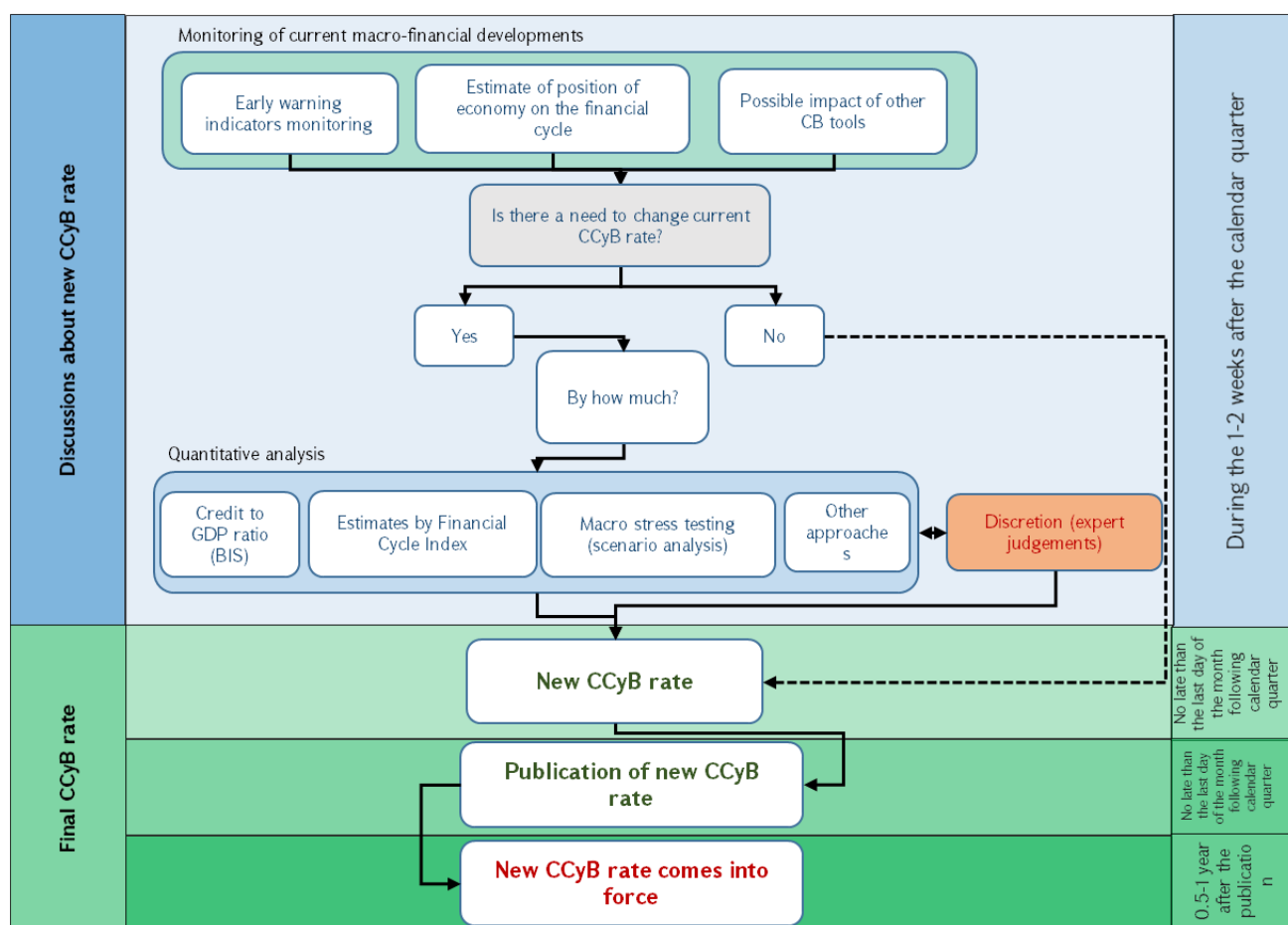
Nevertheless, the Basel Committee advises not to be based exclusively on the mechanical application of the loans/GDP indicator when making decisions on the CCyB, as it may often bring to wrong conclusions on the developments of the loan cycle. In particular, the use of short time series, as well as various patterns of lending typical to developing economies and the imperfectness of the indicators used may be a cause of wrong conclusions. Besides, the Loans/GDP gap may be considered only as a preliminary indicator for assessment of the excessive growth of loans, which, however, is not sufficient for determining the developments of the credit cycle, particularly at the turning points between its stages (rise stage, fall stage). Conditioned by the above-stated, in addition to the loans/GDP gap, the Basel Committee recommends considering also other indicators, indexes and expert judgements when making decisions on the CCyB.

The CBA applies discretion as well, and, when making decisions on CCyB, parallel to the assessments derived from the loans/GDP gap, applies also other early warning indicators describing excessive loan growth and systemic risk build-up, analyses the changes of the summary data obtained as a result of their consolidation, assesses the position of the economy on the financial cycle, and makes expert judgements. The main part of the indicators used in the decision-making process is listed in the previous section.

In the CBA, the decision-making on setting the CCyB (determining, increasing, decreasing the rate, leaving it unchanged) is carried out according to the successive steps described in Diagram 2. According to the described process, at the initial stage, it is first necessary to determine whether the actual level of the CCyB complies with the current financial and economic developments. That is to say, the CBA should make a decision on increasing, decreasing the CCyB or leaving it unchanged. At this stage, the potential of arising (build-up) of systemic risks as a result of the general developments of the credit market is assessed through quantitative indicators (financial cycle index, loan/GDP gap, and other indicators). Then, these assessments and decision derived therefrom may be adjusted taking into account the expert judgements and potential impacts of other CB tools⁴.

⁴ The potential impacts of changing the maximum threshold of loan/pledge or debt servicing/income ratios may serve as an example, which may partially mitigate the build-up of risks.

Diagram 2. The process of the CCyB determination in the CBA



In case when the CBA concludes that there is no need to change the CCyB rate, the process ends (indicated in black dotted lines in the picture). In the case when it is decided to review the CCyB rate (for increasing or decreasing it), the process continues, and discussions on changing the rate start. In this stage various quantitative indicators determining excessive loan growth are assessed more thoroughly, specifically the amount of deviation from their trends and duration of deviation, changes in volume, results of scenario analysis (macro stress testing), etc.

Before making a final decision on the CCyB rate, the above-listed input data are complemented again with the expert judgements, and a final CCyB rate is determined (green shaded part of the diagram).

The role of stress testing in the CCyB decision-making process

Macro stress testing or scenario analysis has a special role in the process of determining the CCyB rate. The importance of stress testing is highlighted by the fact that the domain of macroprudential policy tools is mainly in the distribution tails of the indicators; in other words, **from the perspective of the MPP, not “what will happen but what may happen” is important.** Accordingly, from the perspective of determining

the CCyB rate, not the baseline scenarios (most probable average forecasts) but stress scenarios (low probability/severe enough) and the assessment of their potential impacts are important.

The results of the macro tests show whether the CCyB set for the banking system will be sufficient for absorbing the possible additional unexpected losses in case the assumed stress scenario takes place⁵. If they are not sufficient, the CCyB rate change may be conditioned, among other circumstances, by the results of the stress testing.

It should be noted also that there is no mechanical connection between stress test results and the change of the CCyB, it only serves as an input data for the approximation of the rate of the CCyB.

COMMUNICATION OF DECISIONS ON THE COUNTERCYCLICAL CAPITAL BUFFER

The Central Bank makes decisions on the CCyB at quarterly intervals and publishes the rationale on the rate on the website of the CB. Information on the dynamics of the main indicators characterising financial stability during the quarter is published as well. [Decisions on CCyB rates and rationales attached thereto](#), set by the CB for the previous time periods, are also available on the website of the CB.

A summary analysis of the macroprudential policy (including of CCyB decisions) is also available in the [Financial Stability Report](#), where the general orientation of the macroprudential policy, analysis of the impact of previously applied tools are presented at annual basis.

Where necessary, special presentations and discussions with banking system representatives are possible, which aims to increase of awareness about decisions of the macroprudential policy and more effective perception of the messages of the CB by the banking system.

⁵ The magnitude of the losses is calculated as a difference of the total losses arising in case of a stress scenario and the expected losses (Unexpected losses=Stress losses-expected losses).