BANK ĊENTRALI TA' MALTA
EUROSISTEMA
CENTRAL BANK OF MALTA

Note on Countercyclical Capital Buffer Methodology

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1. Background and Legal Basis

Following the recent financial crisis, the Basel Committee on Banking Supervision (BCBS) formulated a new international regulatory framework which incorporated a set of reforms designed to improve the regulation, supervision and risk management within the banking sector. One element of this new framework, known as Basel III, was the introduction of the Countercyclical Capital Buffer (CCyB).

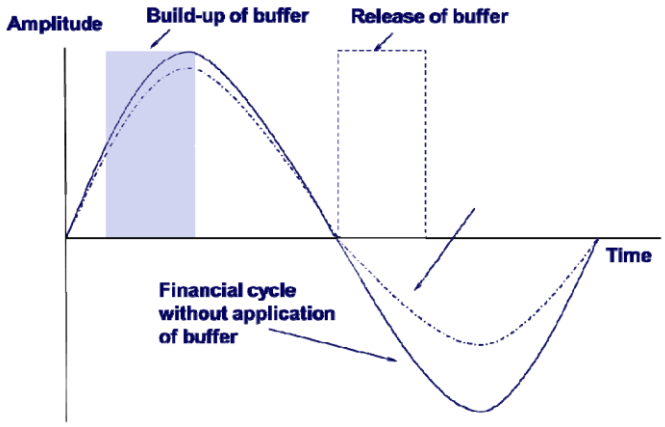
The Capital Requirements Directive (CRD IV) and Capital Requirements Regulation (CRR) gave legal effect to the Basel III agreement in Europe. As stipulated by the CRDIV/CRR, each Member State has a designated authority which is responsible for setting the CCyB rate in their jurisdiction. Nonetheless, the role of the European Systemic Risk Board (ESRB) is also very important as it has the power to issue guidance to national authorities on the implementation of the CCyB framework. Furthermore, the European Central Bank (ECB) has also an important part in setting the CCyB rates given its macroprudential mandate via the Single Supervisory Mechanism (SSM).

2. Objective

The CCyB is a CRD IV instrument which requires credit institutions to set aside additional Common Equity Tier One (CET 1) capital during periods of excessive credit growth. The aim of the CCyB is to increase the banks' resilience in good times to absorb potential losses that could arise in a downturn and to support the continued supply of credit to the real economy.

Figure 1 below illustrates how a CCyB can smoothen the credit cycle if the CCyB is activated in an excess credit growth environment and released thereafter.

Figure 1: Stylised Application of the CCyB



Source: ESRB Flagship Report on Macro-prudential Policy in the Banking Sector

3. The Central Bank of Malta as the Designated Authority

Pursuant to Article 5 of the Central Bank of Malta Act, the Central Bank of Malta (hereinafter referred to as 'the Bank') has the responsibility to formulate and implement macroprudential policy with the intention of ensuring the stability of the system. This means that the Bank is the authority responsible for setting the CCyB in Malta. Moreover, the Bank's Directive 11 on Macroprudential Policy creates the domestic legal framework for the implementation of macroprudential policy and the application of macroprudential instruments.[1] It transposes the EU Directive and Regulation related to macroprudential instruments (including the CCyB) and highlights the objectives of macroprudential policy.

The Bank sets the CCyB rate for credit risk exposures located in Malta, which is normally set between 0 and 2.5%, subject to a phase-in schedule that specifies a maximum of 0.625% in 2016, 1.25% in 2017 and 1.875% in 2018, respectively. From January 2019, the full range of 0-2.5% can be applied. Another operational aspect of CCyB is that in cases of justified severe accumulation of systemic risk, the buffer rate set can also exceed the 2.5%. Furthermore, the buffer is calibrated in steps of 0.25 percentage points.

The CCyB buffer rate has to be calculated every quarter. Where the Bank sets the CCyB rate above zero for the first time, or where, thereafter, the Bank increases the prevailing CCyB rate, it shall also decide the date from which institutions must apply that increased buffer for the purposes of calculating the institution-specific CCyB. That date shall be no longer than 12 months after the date when the increased buffer setting is announced. If the date is less than 12 months after the increased buffer setting is announced, that shorter deadline for application shall be justified on the basis of exceptional circumstances. When the Bank decides to reduce an existing CCyB rate, whether or not it is reduced to zero, it shall also decide on an indicative period during which no increase in the buffer is expected. However, this indicative period shall not bind the Bank.

Every quarter, the Bank publishes on its website: the CCyB rate; the methodology and rationale used to arrive at this rate; and the date of application of the rate. Charts depicting the buffer guide and the additional quantitative indicators are also published.

[1] https://www.centralbankmalta.org/file.aspx?f=436

4. Decision-Making Process

Prior to the announcement of the CCyB rate, a process of assessment and consultation takes place. In general, the principle of guided discretion is adhered to in the setting of the CCyB rate. Such a principle combines an element of rules-based rationale requiring the use of quantitative indicators to guide decision makers, while also allowing for flexibility around the particular rate to be set based on expert judgement.

Furthermore, the rate setting process begins with a systemic risk assessment which is based on a database of variables related to private sector lending and other banking sector indicators in accordance with guidelines issued by the ESRB and the Bank of International Settlements (BIS), as well as the experience of relevant international and European authorities. The assessment provides an overview of prevailing conditions as well as pointing to the potential build-up of risks and vulnerabilities. On the basis of the assessment and other relevant qualitative information, the Bank informs the Joint Financial Stability Board (JFSB) of the proposed CCyB rate for the next quarter. This process takes place in the context of principles set out by the ESRB Recommendation for assessing and setting the appropriate CCyB rates.[2]

The Bank then undertakes a formal consultation process with the ECB. The SSM requires national designated authorities to notify the ECB of its intention to set a CCyB rate 10 working days prior to the final decision being taken. The 10 days allows the ECB 5 days to respond to the notification and a further 5 days to allow the Bank to consider the ECB's reply. The Governor decides on the final CCyB rate. The process concludes with the Bank's public rate announcement on its website. Following the announcement, the Bank notifies the ESRB of the final CCyB rate.

5. Quantitative Indicators to Assess Excessive Credit Growth

In accordance with the macroprudential policy framework of the Central Bank of Malta, the Bank calculates a buffer guide for every quarter as a reference to exercise its judgement in setting the CCyB rate. The aim of this buffer guide is to reflect the credit cycle and the risks due to excessive credit growth and shall duly take into account specificities of the Maltese economy. In line with the domestic macroprudential framework, the guide is based on the deviation of the ratio of credit-to-GDP from its long-term trend, taking into account, inter alia:

[2] https://www.esrb.europa.eu/pub/pdf/recommendations/2014/140630_ESRB_Recommendation.en.pdf

- An indicator of growth of levels of credit and, in particular, an indicator reflective of the changes in the ratio of credit granted to GDP;
- Any current guidance maintained by the ESRB in accordance with Article 135(1)(b) of the CRDIV Directive.

5.1. Credit-to-GDP Gap (Buffer guide)

The Bank calculates the credit-to-GDP gap by following the standardised approach as indicated in the ESRB Recommendation. CRD IV Article 136 (2a) states that "*an indicator of growth of levels of credit within that jurisdiction*" shall be used by the authority. For the purposes of calculating the credit-to-GDP gap, **resident bank credit** is used.[3] The time series is based on an internal Bank series dating back to 1972. To calculate the credit-to-GDP gap, authorities have to estimate the trend whereby the BCBS recommends the calculation of a one-sided (backward looking) Hodrick-Prescott (HP) filter using quarterly data and a relatively high smoothing parameter (lambda equal to 400,000 which is adjusted for the length of the business/financial cycle and the frequency of the data used).

In the standardised approach, if the credit-to-GDP gap is below or equal to a lower threshold (L), the benchmark rate is zero. The benchmark buffer rate rises linearly with the credit-to-GDP gap until that gap reaches or exceeds an upper threshold (H). In the guidelines of the BCBS, the lower threshold for the gap, from which the buffer rate should be applied, is at two percentage points, and the upper threshold is at ten percentage points (see Figure below). The benchmark buffer rate rule can be expressed in simplified form as follows:

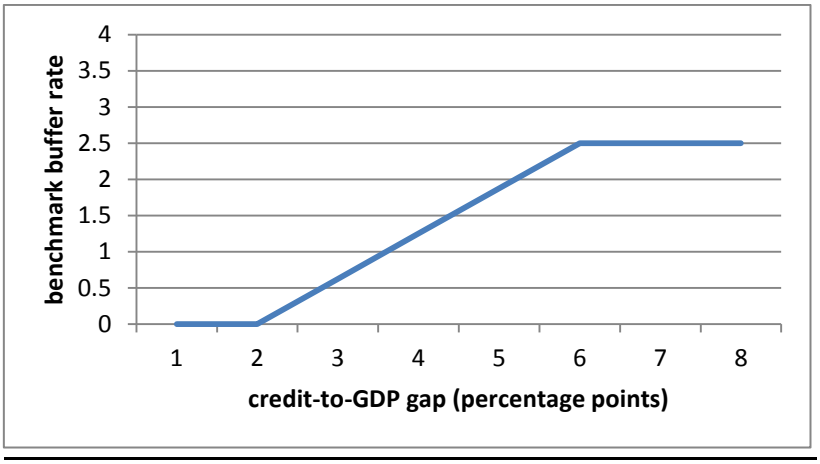
- If $GAPt \leq L$, then the benchmark buffer rate is 0%,
- If $GAPt \geq H$, then the benchmark buffer rate is 2.5%,
- If the gap is between L and H, the benchmark rate is interpolated linearly using the formula $0.3125 \times GAPt - 0.625$,

Where

- L is the lower threshold of two percentage points;
- H is the upper threshold of ten percentage points.

[3] This excludes financial and insurance lending.

Figure 2: Benchmark buffer rate found from the credit-to-GDP gap



Source: Internal workings

5.2. Additional Quantitative indicators used

In addition to evaluating the credit-to-GDP gap, the Bank monitors a spectrum of **additional indicators** when assessing excessive credit growth and the build-up of systemic risks. These indicators mainly cover the areas recommended by the ESRB as outlined in Table 1 below:

Table 1: Additional Indicators for Assessment of the CCyB Rate

I. Indicator group	Indicator
Indicators of credit developments	Annual growth of loans; including total and private corporate loans, household mortgages and consumer credit Household and corporate debt to GDP ratio Changes in the credit-to-GDP ratio (indicative of the stage of the credit cycle).
Indicators of potential overvaluation of property prices	Annual growth of housing prices Median advertised property price to income ratio
Indicators of external imbalances	Ratio of current account balance to GDP
Indicators of the strength of bank balance sheets	Banking sector capital ratios Loan-to-deposit ratio
Other indicators	Liquidity indicators Profitability indicators

5.2.1. Indicators of credit developments

Growth in the loan portfolio, including total and private corporate loans, household mortgages and consumer credit is an important indicator for assessing the build-up of credit risk. The indicator assesses the growth of credit intermediated by domestic banks and is available on a frequent basis. To assess whether there is excessive credit growth, household and corporate debt-to-GDP and changes in the credit-to-GDP ratio are also assessed.

5.2.2. Indicators of potential evaluation of property prices

Annual growth in house prices is another key indicator which is assessed by the Bank. This indicator is considered to be one of the most important indicators as it can signal financial stability risks, as property booms are often the source of vulnerabilities that lead to systemic crises. Another related indicator assessed by the Bank is the median property price-to-income ratio.

5.2.3. Indicators of external imbalances

Regarding external imbalances, the indicator used is the ratio of current account balance to GDP. Due to Malta's degree of openness, foreign investment and the resultant capital flows are of significant importance. A large current account deficit makes the national economy vulnerable to negative developments that could come from destination countries, source countries[4] or other countries.

5.2.4. Indicators of the strength of bank balance sheets

The two main indicators used to assess the strength of bank balance sheets include the banking sector capital ratios and the loan-to-deposit ratios. Bank capital can be viewed as a potential mitigating factor in the transmission of shocks through bank lending. The loan-to-deposit ratio captures the vulnerability of the banking sector to deterioration in funding conditions.

5.2.5. Other indicators

Other indicators analysed are bank profitability and liquidity indicators as they signal banks' resilience.

[4] Source countries are those countries from which Malta buys its imports. If a country is more dependent on imports and as a result has a current account deficit, negative development from its source countries can impact it negatively.

6. The CCyB in a Cross-Border Context

While designated authorities set the CCyB rate for their jurisdiction the practical impact of the CCyB occurs at the level of individual institutions. Each in-scope institution is required to hold a CCyB based on their institution-specific capital buffer rate. This is the (exposure) weighted average of the CCyB rates effective in the jurisdictions in which they have relevant exposures. The imposition of the CCyB rate is transposed under the MFSA Banking Rule 15.

7. CCyB Calibration – Release Phase

The following points are taken into consideration when deciding to gradually or promptly release the CCyB:

- Risks of excessive credit growth have diminished and threats to the resilience of credit institutions have weakened, or
- Signals of an economic or financial downturn.

A gradual reduction of the CCyB rate may take place when risks of excessive credit growth have abated. Any decrease in risk is monitored via the indicators that the Bank uses in its regular quarterly review of the buffer rate.

In a scenario of an economic downturn, a prompt release of the CCyB buffer would be considered, so banks would be able to absorb loan losses, maintain credit provisioning and in turn dampen the downswing of the financial cycle. The main indicator which will be used is the share of loans in the portfolio overdue by more than 30 and 60 days. This indicator provides a clear indication on the quality of the loan portfolio. Furthermore, the Bank will assess the new IFRS 9 measurement impairment allowances which are based on an expected credit loss approach methodology. The expected losses approach provides a fuller and timelier recognition of credit losses and therefore provides signals on the performance of the banks' loan portfolio.