



Banc Ceannais na hÉireann
Central Bank of Ireland

Eurosystem

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Information Note: The application of the countercyclical capital buffer in Ireland



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¹**Important Information:** This note discusses the role of the Central Bank of Ireland (hereafter 'Central Bank') in relation to setting the countercyclical capital buffer (CCB) rate in Ireland. This Note is for information purposes only. It does not purport to be official policy of the Central Bank and does not inhibit the actions of the Central Bank in setting the CCB rate. The legal requirements of the Central Bank are provided in Statutory Instrument 158 of 2014 European Union (Capital Requirements) Regulations.

SECTION 1: BACKGROUND

In the aftermath of the financial crisis the Basel Committee on Banking Supervision (BCBS) put forward a new global regulatory framework, known as Basel III, to enhance the shock absorption capacity of the banking sector and limit potential spillovers to the real economy.² The countercyclical capital buffer (CCB) was one element of the new framework. The CCB is aimed at reducing the procyclicality of the financial system and, more specifically, at protecting the banking sector from periods of excess aggregate credit growth that can be associated with the build-up of system-wide risk. The CCB will require banks to set aside additional common equity tier one capital during periods of strong credit growth and growing systemic risk.³ The buffer can be released during economic downturns to prevent undue restrictions in the supply of credit to the private sector.

The Capital Requirements Directive (CRD) IV and Capital Requirements Regulation (CRR) gave legal effect to the Basel III agreement in Europe.⁴ Under CRD IV/CRR, each Member State has a designated authority which is responsible for setting the CCB rate in their jurisdiction. There is, however, a strong European element to the framework also with the European Systemic Risk Board (ESRB), for instance, having the power to issue guidance to national authorities on the implementation of the CCB framework. In addition, the ECB has a role in setting CCB rates within the macro-prudential mandate given to it by the Single Supervisory Mechanism (SSM). The CCB has been operational throughout Europe since 1 January 2016.

SECTION 2: THE CENTRAL BANK AS DESIGNATED AUTHORITY

Statutory Instrument 158 of 2014⁵ designated the Central Bank of Ireland ('Central Bank') as the authority responsible for the CCB in Ireland.⁶ As the designated authority, the Central Bank will set the CCB rate applicable on Irish exposures on a quarterly basis and the rate will be announced on its website. The announcement will include the Central Bank's rationale for choosing the given rate and will be accompanied by relevant quantitative indicators for information.

Generally, the Central Bank may set the rate between 0 and 2.5 per cent of risk exposures - albeit subject to two caveats. The first, which is time limited, is that the CCB is being introduced on a

² [Basel Committee on Banking Supervision, International regulatory framework for banks](#)

³ By increasing the capital requirement during periods of strong credit growth, thereby making lending more expensive for banks, the CCB may have the additional benefit of leaning against the build-up of credit in the first instance.

⁴ [Capital requirements regulation and directive](#)

⁵ [SI No.158 of 2014 – European Union \(Capital Requirements\) Regulations](#)

⁶ The Central Bank Commission has delegated the "designated authority" powers of CRD IV/CRR to the Governor.

phased basis. Under the phased introduction, the effective CCB rate is capped at a maximum of 0.625 per cent in 2016, 1.25 per cent in 2017 and 1.875 in 2018. From January 2019, the full range of 0-2.5 per cent will apply. The second caveat is that a designated authority can set a rate above 2.5 per cent if deemed necessary by circumstance.

In the case of an increase in the CCB rate, institutions will have twelve months to meet the new requirement.⁷ A reduction in the CCB rate will be applicable immediately.

DECISION MAKING PROCESS

The rate announcement follows a process of assessment and consultation. Broadly speaking, the CCB regime follows the principle of guided discretion. This combines an element of rules-based strictness, by requiring the use of quantitative indicators to guide decision makers, while also allowing for flexibility around the particular rate to be set.

In line with the Central Bank's macro-prudential policy framework⁸, the rate setting process begins with a systemic risk assessment. This is based on a database of quantitative indicators maintained in the Financial Stability Division. 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 Governor will propose a provisional CCB rate. This process takes place in the context of principles set out by the ESRB for assessing and setting the appropriate CCB rates. Box 1 provides an overview of the recommended principles.

The Central 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 CCB rate 10 days prior to a decision being taken.⁹ The 10 days allows the ECB 5 days to respond to the notification and the designated authority – in this case, the Central Bank – a further 5 days to consider the ECB reply.¹⁰ The Governor then formally signs off on the rate. The process culminates with the Central Bank's public rate announcement.

⁷ The Bank can set a different implementation deadline, but is required to provide justification for the deviation if doing so.

⁸ [A Macro-prudential policy framework for Ireland](#)

⁹ The SSM also provides the ECB with the power to set a CCB rate which is more stringent than that set by the national designated authority if it deems the rate to be insufficient to protect the banking system from risks relating to excess credit growth.

¹⁰ Given the tight deadlines associated with the formal notification process, the ECB welcomes early informal discussions with national designated authorities, to the extent possible, well in advance of the actual decision being taken.

Following the announcement, the Central Bank notifies the ESRB of the rate set. The ESRB maintain a record of CCB announcements and the rates in effect throughout Europe.¹¹

Box 1: ESRB recommended principles for designated authorities when assessing and setting the appropriate CCB rate

1. Objective

Decisions on the appropriate CCB rate should be guided by the objective to protect the banking system against potential losses when excessive credit growth is associated with a build-up of system-wide risk.

2. Buffer guide

The credit-to-GDP gap should serve as a common starting point in guiding decisions on CCB rates. However, this is not the only input in assessing and setting the appropriate rate. Designated authorities should explain the quantitative and qualitative information used in setting the rate.

3. Risk of misleading information

Designated authorities should assess the information contained in the credit-to-GDP gap and any other variables, being mindful of their potential to give misleading signals.

4. Release of the buffer

A prompt partial or full release of the buffer in times of stress can help reduce the risk of the supply of credit being constrained by regulatory capital requirements.

5. Communication

A good communication strategy for the buffer decisions contributes to managing public expectations, and is essential for credibility and accountability.

6. Recognition of buffer rates

In addition to the mandatory reciprocity arrangements set by Union law, designated authorities should generally recognise the countercyclical buffer rates applied in other Member States.

7. Other macro-prudential instruments

As part of their macro-prudential policy strategy, authorities should consider when to use the buffer and when to use other instruments at their disposal.

SECTION 3: QUANTITATIVE INDICATORS

While the CCB rate is set based on the judgement of the decision making authority, the use of quantitative indicators to guide and inform decision making is a key element of the framework. CRD IV requires that when setting the CCB rate designated authorities take account of:

- A buffer guide – this is a mechanically-calculated CCB rate based on the deviation of the credit-to-GDP ratio from its long-run trend. It is to act as a reference point for authorities across Europe in setting the CCB rate.
- Any current guidance and recommendations issued by the ESRB.
- Additional variables the designated authority considers relevant for addressing cyclical systemic risk.

¹¹ <https://www.esrb.europa.eu/ccb/applicable/html/index.en.html>

In accordance with the second point, the ESRB issued guidance to designated authorities for the setting of CCB rates through Recommendation ESRB/2014/1.¹² There are a number of aspects to the Recommendation. As mentioned above, it outlines principles which should be applied when setting a CCB rate. In addition, however, it provides guidance relating to the quantitative indicators that should be taken into consideration.

In this regard, the ESRB recommend the calculation of a benchmark buffer rate based on a standardised methodology – see Box 2 for details. This is to act as a common benchmark and reference point across Europe in terms of setting the CCB rate. The ESRB acknowledge, however, that the standardised methodology may not provide the most appropriate benchmark for all countries. Therefore, in addition to using the standardised methodology, designated authorities can calculate a national specific credit-to-GDP gap and benchmark buffer rate in a manner they deem best suits their particular circumstances.

The Recommendation also outlines the types of variables that should be used to indicate cyclical systemic risk. Different indicators are put forward for the identification of the build-up of system-wide risk associated with excessive credit growth (the build-up phase) and for indicating that the buffer rate should be reduced or fully released (the release phase). Potential indicators for the build-up phase include those looking at credit developments, property prices and external imbalances. Suggested indicators for the release phase relate more to market-based indicators of stress in bank funding or general systemic stress.

¹² [ESRB/2014/1](#)

Box 2: Standardised approach to calculating credit-to-GDP gap and buffer guide

The credit-to-GDP gap, credit gap, is calculated as the difference between the current level of the credit-to-GDP ratio and its estimated trend level. The gap is, therefore, measured in percentage points of GDP. Recommendation ESRB/2014/1 outlines a standardised approach to calculate the credit gap in order to provide a common reference point across countries for the setting of the CCB rate.

Under the standardised approach, credit is defined as a broad measure of the stock of credit to the private non-financial sector (i.e. households and non-financial corporates). The credit-to-GDP ratio is then calculated as the outstanding stock of credit as a percentage of the 4-quarter sum of nominal GDP. The trend level of the credit-to-GDP ratio is calculated using what is known as a recursive Hodrick-Prescott (HP) filter.

Threshold levels are then applied to the credit gap in order to calculate a benchmark buffer rate. A lower threshold of 2 percentage points is used and the upper threshold is 10 percentage points. The benchmark buffer rate is then equal to:

- 0 per cent where the credit gap is less than the lower threshold of 2 percentage points
- 2.5 per cent where the credit-to-GDP gap is greater than the upper threshold of 10 percentage points
- $(0.3125 \times \text{Gap}) - 0.625$ between the thresholds of 2 and 10 percentage points. This ensures that the benchmark buffer rate increases linearly between 0 and 2.5 per cent as the credit-to-GDP gap increases from 2 percentage points to 10.

The benchmark buffer rate is to be used as a reference point for designated authorities to consider when setting the CCB rate, although there is no automatic link between the two.

1 The HP filter is a standard statistical tool used in economics to establish the trend of a variable over time. A recursive, or one-sided, filter means only information available at each point in time is used for the calculation of the trend. A smoothing parameter determines the sensitivity of the trend to short-term fluctuations in the data. The smoothing parameter used in this case is 400,000 reflecting the long-term trend in the credit-to-GDP ratio.

DATABASE OF INDICATORS

In setting the CCB rate, the Central Bank draws on a wide range of indicators and other information and operates within the framework recommended by the ESRB. The database of indicators used to inform rate setting discussions is flexible in nature. The database is continuously evolving and can be added to and/or adapted over time to ensure it provides a comprehensive overview of relevant systemic risks.

CREDIT-TO-GDP GAP

The Central Bank calculates and analyses two measures of the credit gap. The first follows the standardised approach outlined above. The second, referred to as the “national specific” measure of the credit gap, is based on an alternative measure of credit.

To calculate the broad measure of credit to the private non-financial sector required under the standardised methodology, the Central Bank uses data published in the Quarterly Financial Accounts (QFA).¹³ The QFA produces a comprehensive picture of the financial balance sheet for each sector of the economy. In calculating the credit-to-GDP gap, credit for both the household and NFC sectors is defined as loans plus debt securities. Total private non-financial sector credit then being the sum of household credit and NFC credit.

The QFA provides a quarterly time series beginning in 2002Q1. Currently there is a break in the series in 2012Q1 as the basis of compilation changed from ESA 1995 to ESA 2010. Over the coming years, the QFA time series will be extended back to 2002Q1 on an ESA 2010 basis, thereby removing the break in the series. The Bank for International Settlements (BIS) has developed a long-run series of total credit to the private non-financial sector and this is used to extend the QFA time series back to 1971.¹⁴

A much referenced issue in relation to private sector debt in Ireland, and in particular the NFC component, relates to the impact large multi-national corporations have on the figures.¹⁵ These companies are both large relative to the domestic economy and not dependent on domestic credit, regularly sourcing funding from foreign parents and/or international capital markets and banks. Aggregate credit developments that include these foreign components can give a misleading impression of credit developments related to the domestic economy. Therefore, rather than using the broad measure of credit to the NFC sector provided by the QFA, the national specific measure of NFC credit is based on bank credit only.¹⁶ The measure of household credit is unchanged from the standardised approach with the QFA being used.

In both cases, nominal GDP (seasonally adjusted) is used as the denominator. The time series is based on data available from the CSO quarterly from 1997, an internal Central Bank series back to 1980 and annual CSO data back to 1970.

BUILD-UP PHASE

The Central Bank monitors a broad range of additional indicators in terms of assessing excess credit growth and the build-up of systemic risks. These broadly cover the areas recommended as relevant by the ESRB.

¹³ [Quarterly Financial Accounts](#)

¹⁴ [Bank for International Settlements, credit to the non-financial sector.](#)

¹⁵ See for example [Cussen \(2015\)](#), [Cussen & O' Leary \(2013\)](#), [CSO 2014](#).

¹⁶ Central Bank of Ireland, Credit, Money and Banking Statistics, [Table A.1](#).

Given the objective of the CCB, that of protecting the banking system from risks associated with excessive aggregate credit growth, additional indicators of credit developments are assessed. Indicators here include measures of year-on-year credit growth and the flow of credit to the economy in both monetary terms and relative to GDP. The changes in the credit-to-GDP ratio may also be informative in terms of looking at the stage of the credit cycle.

Another aspect to the level of debt held is the repayment capacity. The debt service ratio (DSR) is a measure of the share of income used to service debt repayments (both interest and principal). As such, the DSR can provide important information on the link between debt and the real economy. As noted by the BIS, the DSR can be a useful early warning indicator of systemic banking crises. Unlike the credit-to-GDP ratio, the DSR takes account of the maturity and interest rate on the debt held by the private sector. Due to data limitations, however, aggregate debt service ratios tend to be constructed variables. The BIS has begun to produce DSRs on an internationally consistent basis.¹⁷ The Central Bank applies this methodology in calculating a DSR for Ireland.

Over and above credit developments, areas such as property prices and external imbalances can provide signals of growing imbalances or vulnerabilities. Credit and property price increases often occur in tandem with credit impacting on prices as property purchases are often financed through credit. Increases in prices can also lead to increased lending through the role of property as a source of collateral. Looking at external imbalances, if credit growth is significantly above growth in the domestic economy it tends to be the case that domestic savings are insufficient to finance the credit expansion and an inflow of foreign credit is required to meet demand. In both scenarios, research and previous experience point to such situations leading to a build-up of risks and potentially resulting in periods of financial stress.

The current account balance can be used as indicator of external imbalances, measuring as it does a country's lending to/borrowing from the rest of the world. Relating to property prices, the rate of increase is an obvious starting point. Indicators of potential misalignment of prices from fundamental values are also potentially informative, notwithstanding the difficulty in accurately measuring misalignment. A range of options are available in this regard from simple statistical indicators (e.g. price-to-rent ratio, gaps based on a statistical filter) to more formal econometric models.

RELEASE PHASE

¹⁷ For details see [BIS database for debt service ratios for the private non-financial sector](#)

The release of the CCB can be thought of in a couple of ways. One could think of the buffer rate being released/removed quickly in episodes of financial stress. Alternatively, one might release the buffer in a more gradual manner in circumstances where it was viewed that the risks which had built up were now dissipating gradually.

Certainly in episodes of financial stress where a prompt release of the CCB rate might be important, many of the indicators used in the build-up phase, including the credit-gap, may be inappropriate given both the lack of timeliness in terms of data availability and the slow moving nature of the indicators themselves.

Internationally, the development and use of release phase indicators has not progressed as much as those on the build-up side. Generally, however, market-based variables which react quickly to developments are considered to be of most benefit. Indicators such as equity prices (e.g. ISEQ, ISEQ Financial), general market conditions (e.g. VIX, CISS) and sentiment towards Ireland (e.g. government bond yields) are routinely looked at in terms of monitoring of systemic risks. The Central Bank continues to develop indicators which may be of use in terms of releasing the CCB. Work is underway, for example, in developing an Irish-specific financial stress index.

SECTION 4: SETTING THE CCB RATE

In understanding how the CCB rate will be set, a number of issues are of relevance. First and foremost is the objective of the CCB itself. The CCB is designed to increase the resilience of the banking sector against systemic risk that can arise from excess aggregate credit growth. The Central Bank has a range of macro-prudential instruments at its disposal which it can use individually or in combination to deal with risks to financial stability.^{18,19} Macro-prudential policies implemented by the Central Bank will be on the basis of the instrument or instruments deemed most appropriate to deal with the specific risk in question.

Judgement will play an important role in setting the appropriate CCB rate. While quantitative indicators form a key feature of the CCB framework, these are used to inform the decision-making process. In particular, it is important to bear in mind that while mechanical benchmark buffer rates are calculated based on the credit gap indicators and indicators will be published as background

¹⁸ It is also the case that policies and events not under the direct control of the Central Bank can have an impact on financial stability.

¹⁹ For a more indebt discussion of macro-prudential powers and instruments available to the Central Bank see [A Macro-prudential policy framework for Ireland](#) and [The instruments of macro-prudential policy](#).

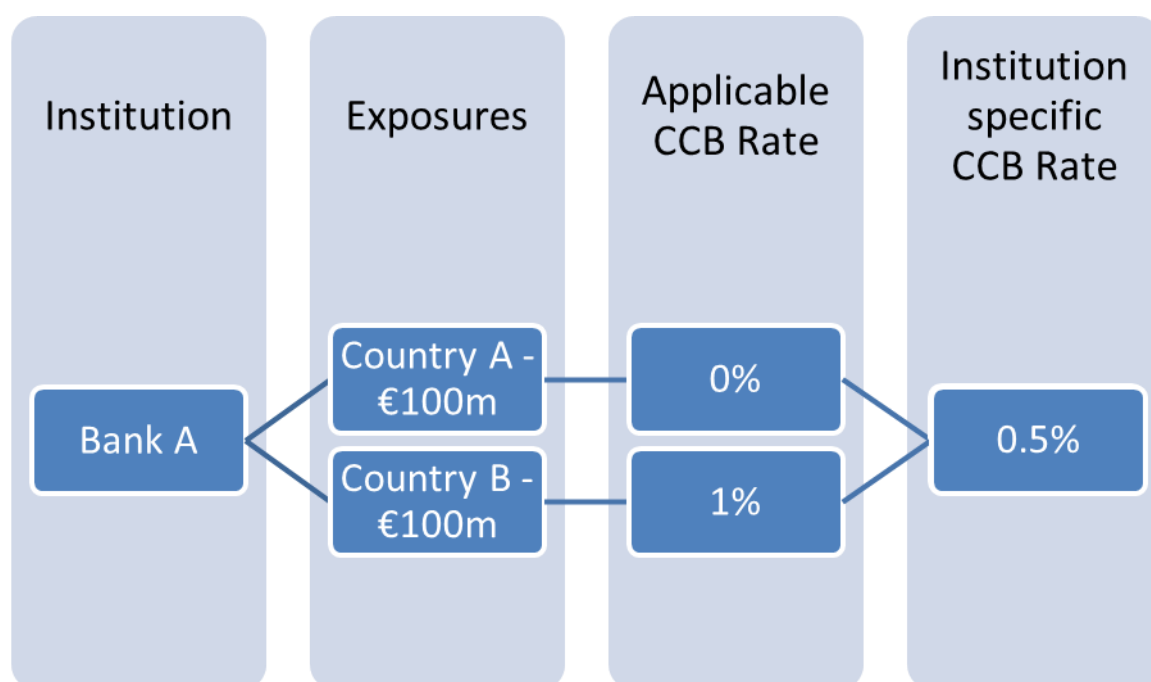
information to rate-setting decisions, there is no automatic link between any indicator(s) and the CCB rate set.

The importance of judgement can be seen when one considers that in certain circumstances different indicators might provide different or even conflicting signals. Conflict between indicators might be more likely in the release phase when slow-moving indicators such as the credit gap could indicate the need for a buffer whereas market-based indicators may be suggestive of a period of financial stress and the need to release/reduce the buffer. However, indicators may well suggest stronger or weaker signals of vulnerability or growing risks at any given point in time. Therefore, the policy-maker will have to weigh up individual indicators in the context of the broader assessment of the macro-financial environment. Action taken should be proportionate to the level of risk and take account of the overall macro-prudential policy stance in place at the time.

Timing considerations will also impact on the rate-setting process. Given the nature of the CCB framework, a significant time lag can occur between indicators pointing to an increase in credit and growing systemic risks and the CCB rate taking practical effect in terms of the level of capital held by institutions. The time lag arises for two reasons: first, many of the indicators are based on data which only becomes available with a significant lag e.g. GDP, QFA; secondly, institutions generally have twelve months to implement the increase in the buffer rate. Given this substantial lag and the need for the buffer to be built up in advance of the realisation of systemic risk/financial stress, it will be important to ensure the CCB rate is increased at a sufficiently early stage to allow it to have a practical effect.

SECTION 5: THE CCB IN A CROSS-BORDER CONTEXT

While designated authorities set the CCB rate for their jurisdiction the practical impact of the CCB occurs at the level of individual institutions. Each in-scope institution is required to hold a CCB based on their institution-specific capital buffer rate. This is the (exposure) weighted average of the CCB rates effective in the jurisdictions in which they have relevant exposures. A stylised example is shown below.



To impose this institution specific rate, designated authorities have to recognise the CCB rates set in other jurisdictions. The CRD IV stipulates that CCB rates up to 2.5 per cent will automatically be reciprocated in other jurisdictions – i.e. national authorities will not be required to take action to recognise these rates. However *discretionary reciprocity for the CCB* arises, for example, where a Member State designated authority sets a buffer rate in excess of 2.5 per cent. Notwithstanding this optional element, the ESRB has outlined its view that in general buffer rates should be reciprocated in full with notification requirements in place where authorities do not do so. Designated authorities also have flexibility when it comes to CCB rates on third country exposures.

The Central Bank will publish CCB rates reciprocated or set in relation to other jurisdictions where the Central Bank has taken a decision under the discretionary reciprocity arrangements for the CCB. The Central Bank will not make an official announcement where rates are covered by automatic reciprocity arrangements. Therefore, institutions need to be aware of the CCB rates in jurisdictions where they have relevant exposures and calculate their institution specific CCB rate accordingly.



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