

Box 2: Countercyclical Provisioning Scheme: Credit Cycle Adjustment Considerations

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1. Introduction

Credit institutions (CIs) are exposed to credit risk, which can be understood as the possibility of incurring losses arising from a debtor or counterparty defaulting on its obligations. To mitigate this risk, CIs must constitute provisions based on the balance of loan disbursements loan portfolio and adjust its level based on the credit risk of the latter. To this end, the Financial Superintendency of Colombia (SFC) establishes, within its regulatory framework, the rules that the CIs must use for the constitution and adjustments of the provisions of the different types of loans.

A fundamental part of this framework is the countercyclical provisions, which have been in operation since 2007 for the commercial loan portfolio and since 2008 for consumer loans, representing approximately 80% of the total loan portfolio. This mechanism allows CIs to accumulate more provisions at times when credit risk does not materialize (cumulative phase) and use this buffer to smooth out the expense on provisions that can be generated in phases of lower growth and higher non-performing loans in the credit cycle (de-accumulative phase).

The scheme is based on individual provisions and depends on the performance of each CI's loan portfolio so that its different phases are activated. Although this is based on the performance of each institution's own business, allowing institutions facing difficulties to de-accumulate provisions and reduce their derived expenses (even in a favorable economic scenario), the scheme may leave aside macroeconomic factors that affect the credit cycle and potentially impact the financial health of CIs.

At the international level, the most widely used macroprudential tool to mitigate the procyclicality between the financial health of institutions and the credit cycle is the requirement for countercyclical capital buffers (CCyB). This was introduced as part of the changes to the Basel III regulatory standards proposed by the Basel Committee on Banking Supervision after the 2008 international financial crisis¹. Unlike the countercyclical provisioning scheme in Colombia, the phases of this usually depend on indicators that measure the aggregate conditions of the credit cycle to accumulate capital in periods in which credit growth is above its long-term trend, associated with an accumulation of risk, to seek anticipation of possible episodes of financial stress. On the other hand, capital would be de-accumulated during cooling periods in the credit cycle to absorb losses and avoid a reduction in the supply of loans. In addition, unlike countercyclical provisions, where their accumulation affects the cost of making new disbursements through higher expenditure on provisions, countercyclical capital is implemented by increasing the minimum requirement of the solvency ratio that institutions must have, which has a general impact on the capital strategy.

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1 BCBS. (2010). "Guidance for National Authorities Operating the Countercyclical Capital Buffer." Bank for International Settlements. December. <https://www.bis.org/publ/bcbs187.pdf>

Since the end of 2022, in line with the orderly adjustment of the economy, there has been a significant slowdown in the dynamics of the credit cycle in Colombia, especially in consumer loans, accompanied by increases in loan portfolio deterioration. During this period, some CIs have de-accumulated countercyclical provisions to smooth out the expenditure generated by the greater materialization of credit risk. Despite the above, the current scheme has some inflexibilities that have led to the need to make transitory changes in the provisioning regulations to be more in line with the credit cycle². This, together with the latest recommendations of the FSAP to Colombia and the convergence to Basel III, motivates the need to carry out a structural review of the countercyclical prudential scheme, bringing with it the discussion on the effectiveness of the current countercyclical provisioning scheme in identifying the credit cycle, to analyze the advantages and disadvantages of a countercyclical capital scheme, much more common in both developed and emerging countries.

This box analyzes the current countercyclical provisioning regime and the advantages and disadvantages of an alternative to a countercyclical capital requirement. In addition to this introduction, this document consists of four sections. The second describes the current operation of the countercyclical provision requirement. The third analyzes the activation of the phases of the mechanism at different times of the local credit cycle. The fourth compares the local scheme with countercyclical capital, and finally, the fifth presents the conclusions of this analysis.

2. Countercyclical Provisioning Scheme in Colombia

Currently, the prudential scheme in Colombia follows a rules-based mechanism, where the required countercyclical provisions depend on a series of metrics per entity. The scheme has two components:

1. Procyclical Individual component (PIC): fraction that reflects the current credit risk of each debtor.
2. Countercyclical individual component (CIC): fraction that reflects possible increases in debtors' credit risk during times of deterioration in asset quality. This component is created to mitigate the impact on financial results in the event of risk materialization.

In particular, countercyclical provisions may be subject to two phases: accumulation and de-accumulation. The logic lies in the fact that, during periods of economic expansion, when credit is growing rapidly, larger provisions should be made than would be necessary under such conditions (i.e., cumulative phase), so that they can be used in periods of deterioration in credit quality (i.e., de-accumulative phase).

Thus, the scheme establishes the constitution of individual provisions (per loan) based on an expected loss model for commercial and consumer loan portfolios. For its calculation, the SFC, the regulatory body in charge, constructs two risk scenarios (A and B), with B being the highest risk. This analysis produces two default probability matrices for each type of credit and borrower. With this, the expected loss model is defined as:

$$PE = \underbrace{PI_A \cdot EA \cdot PDI}_{\text{CIP}} + \underbrace{(PI_B - PI_A) \cdot EA \cdot PDI}_{\text{CIC}}$$

Where:

- PE* it is the expected loss;
- PI_A* the probability of default calculated with matrix A;
- PI_B* the probability of default calculated with matrix B;
- EA* the exposure of the asset;
- PDI* the loss given the default.

² External Circulars 017 of 2023 and 014 of 2024 of the Financial Superintendency of Colombia.

Within the scheme, the activation of the phase (accumulation/de-accumulation) depends on four specific indicators for each CI.

1. Portfolio deterioration: Real quarterly change (deflated by the total CPI) of individual provisions in the total loan portfolio B, C, D, and E³:

$$\Delta provisiones_t = \left(\frac{provisiones_t}{provisiones_{t-3}} \right) - 1 \geq 9\%$$

2. Efficiency: Cumulative quarterly net provision from recoveries of the loan portfolio and leasing (*PNR*) as a percentage of the cumulative quarterly income from the loan portfolio interest and leasing (*I · C*):

$$\left(\frac{PNR}{I \cdot C} \right)_t \geq 17\%$$

3. Stability: Cumulative quarterly net provisions from recoveries of the loan portfolio and leasing as a percentage of the cumulative quarterly adjusted gross financial margin (*MFB_a*):

$$0 \leq \left(\frac{PNR}{MFB_a} \right)_t \geq 42\%$$

4. Loan portfolio growth: Real annual growth rate of the gross portfolio (*CB*):

$$\Delta CB = \left(\frac{CB_t}{CB_{t-1}} \right) - 1 < 23\%$$

The indicators are designed to detect signs of a recessionary phase of the economic cycle. In the default scenario, if any of the four indicators are not met, the institution will be subject to the accumulation of countercyclical provisions. This will correspond to an expansion phase of the cycle, where the PIC calculation uses the risk scenario A, and the CIC calculation corresponds to the maximum between the countercyclical value of the previous period and the difference between the expected losses calculated with matrices A and B.

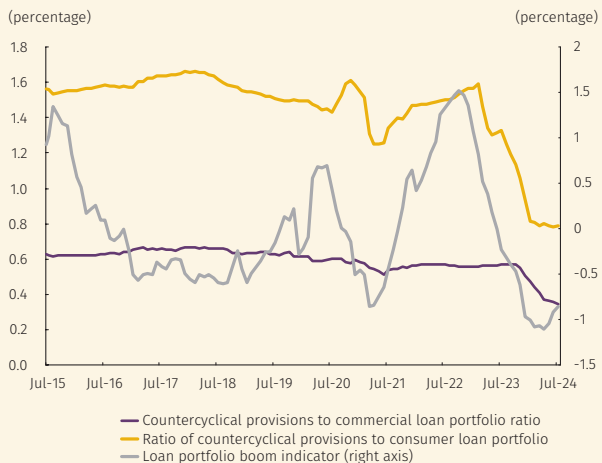
If the four indicators are met for three consecutive months, the institution may decide to enter the de-accumulation phase for six months. This results in a lower expenditure on provisions, since it could use the buffer of countercyclical provisions to cover part of it. In this phase, a combination of matrix A and B is used for the calculation of the PIC depending on the credit rating. Once the six months of the de-accumulation phase have passed and the conditions for continuing in this phase are not maintained, institutions must move on to the accumulation phase and establish a reconstitution plan for the countercyclical provisions that were spent. For this, in accordance with the provisions of chapter XXXI of the FABC of the SFC, the institutions have a period of eighteen months⁴.

In this regard, the scheme constitutes a macroprudential tool based on each institution's individual results, with some consideration of the systemic risks that may arise from the aggregate performance of the economic cycle. However, since the de-accumulative phase has a set duration of six months, a lag can be generated to the extent that individual metrics could indicate the need to accumulate, even when the credit cycle is in its low phase.

3 Understood as the time for the evaluation of the indicators.

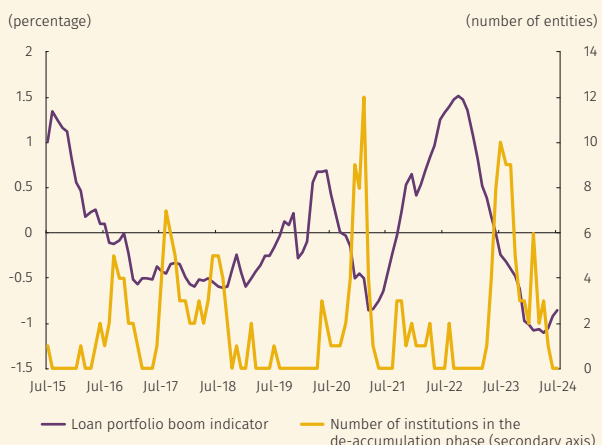
4 This term was implemented as of June 2023, when the Comprehensive Risk Management System (SIAR) came into force. Due to the current credit cycle, the SFC temporarily extended this term to twenty-four months through EC 017 of 2023, which was in force until June 2024.

Graph B2.1
Ratio of Countercyclical Provisions to Loan Portfolio, and Credit Boom Indicator



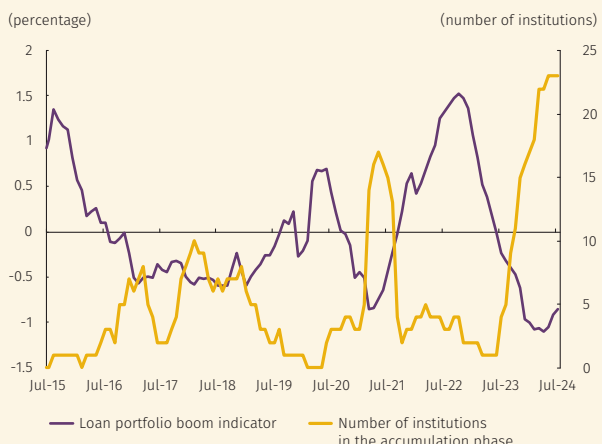
Source: Financial Superintendency of Colombia (SFC); calculations by Banco de la República.

Graph B2.2
Number of Institutions in the De-Accumulation Phase and Credit Boom Indicator



Source: Financial Superintendency of Colombia (SFC); calculations by Banco de la República.

Graph B2.3
Number of Institutions in the Accumulation and Reconstitution Phase and Credit Boom Indicator



Fuente: Superintendencia Financiera de Colombia (SFC); cálculos del Banco de la República.

3. Countercyclical Provisioning Scheme and Credit Cycle

As of July 2024, the balance of countercyclical provisions reached COP 2.8 trillion (t), of which COP 1.2 t corresponded to the commercial loan portfolio and the remaining COP 1.6 t to the consumer portfolio. Graph B2.1 exhibits the ratio of these provisions to the gross loan portfolio for the two types of loans and is compared with an indicator that seeks to measure the credit cycle (credit boom indicator⁵). As can be seen, between 2015 and 2023 the share of countercyclical provisions in the total loan portfolio showed stability in both types of loans, despite the fact that the credit boom indicator showed significant variations in the credit cycle, with expansions in 2015, 2020, and 2022, followed by a cooling in the credit market between 2016 and 2018, and 2021 and 2024. Although countercyclical provisions were reduced in the current contractionary phase of the credit cycle, they have historically remained stable due to different factors, such as the inflexibility of the parameters of the four activation criteria and the reconstitution time, the costs derived from the reconstitution of the countercyclical component, and the absence of macro financial factors of the credit cycle in the definition of these criteria.

To measure the capacity of the current regime for defining the phases of accumulation, de-accumulation, and reconstitution of the countercyclical component of provisions to react to the different phases of the credit cycle, an exercise was carried out that compares the credit boom indicator with the number of institutions that met the conditions for de-accumulation at each point in time. Intuitively, the number of institutions authorized to de-accumulate provisions would be expected to increase in the contractionary phases of the cycle and decrease in expansionary phases. As can be seen in Graph B2.2, increases in the number of institutions in the de-accumulative phase are identified in the cooling periods of the credit market in 2016-2019, 2020 and 2024. However, the correlation between both indicators is relatively low, and there are a significant number of institutions that fail to meet the tool's activation criteria.

Although there is some degree of correlation between the activation of de-accumulations and the credit cycle, the accumulation and reconstitution phases of the countercyclical component of provisions are less sensitive to the situation of intermediaries and the credit cycle. Assuming that all institutions that met the criteria choose to de-accumulate their countercyclical provisions and decide to rebuild them within the maximum term allowed, a negative correlation would be observed between the stage of the credit cycle and the number of banks in reconstitution (Graph B2.3). In other words, many institutions would be reconstituting and accumulating their countercyclical provisions in contractionary phases of credit, so their ability to reactivate the loan portfolio may be affected, thus resulting in procyclical performance.

Considering the low correlation between the credit cycle and the phases of the current countercyclical provisioning scheme and the rigidities in several of its parameters, the SFC has issued some measures in recent years to correct these shortcomings.

In March 2023 (Circular Letter 19), to promote preventive actions that would allow supervised institutions to face particular economic conditions and preserve the healthy growth of the loan portfolio, they

5 The credit boom indicator allows measuring the expansionary and contractionary phases of the credit cycle. It is defined as the sum of the real annual growth of the loan portfolio per capita and its cyclical component. High records of the indicator imply expansionary phases, while low records reflect contractionary phases.

were allowed to activate the portfolio impairment indicator by modality instead of for the total loan portfolio, as stipulated until then.

From November 2023 (External Circular 17), until 30 June 2024, CIs that met three of the four conditions established to enter the phase of de-accumulation of countercyclical provisions were temporarily allowed to submit a plan to apply the de-accumulation methodology for three consecutive months. Also, after using the de-accumulative phase of provisions for six months, CIs were allowed to request the constitution of the additional provisions in the cumulative phase that resulted from applying the methodology no more than twenty-four months, a term longer than the eighteen months that were required until that moment. Finally, institutions in the de-accumulation phase were allowed to continue using matrix A (lower risk) in the procyclical individual component.

Finally, in September 2024 (External Circular 14), considering the macroeconomic context, the effects it has had on the financial system, and to mitigate the impact of the credit cycle, the SFC considered it necessary to adopt additional transitional measures that would allow supervised institutions to face this context. To this end, institutions were given the possibility of not accumulating the individual countercyclical component until March 2025, provided that certain requirements were met, and CIs that met three of the four conditions established to enter the phase of de-accumulation of countercyclical provisions for three consecutive months were again allowed to present a plan to apply the de-accumulation methodology.

Although the current regulation on credit risk management contemplates measures aimed at reducing procyclicality and sustaining stable loan portfolio growth in the medium and long term, through a countercyclical provisioning scheme that compensates for the increase in provisioning expenses when credit risk increases, these transitional measures are a reflection of some opportunities for improvement that the current scheme has presented. In particular, given that the constitution of countercyclical provisions affects the marginal cost of originating new loan portfolios, impacting the profits of the CIs, the scheme mustn't increase the expenditure on provisions at times of low growth and low risk accumulation. Therefore, the activation of the different phases of the scheme must be synchronized with the financial cycle.

4. International Standard: Countercyclical Capital

Unlike what is established in the Colombian regulatory framework, at the international level, to mitigate the cycles faced by CIs, the most widely used macroprudential countercyclical tool is the CCyB, which, under the Basel standard, ranges between 0% and 2.5% of assets weighted by risk level, where the required value must be associated with growth periods in aggregate credit that could be excessive or with an accumulation of risk across the board. In turn, the capital requirement could be reduced or deactivated during periods of financial stress, thus helping to preserve the supply of credit and avoid the amplification of shocks.

In accordance with Basel III, this policy tool is implemented as an extension of the capital conservation buffer and should be composed only of capital tier 1 (CET1). In addition, it recommends some restrictions when the CCyB requirement is not met by an entity, such as restrictions on the distribution of dividends. At the international level, there are many jurisdictions that have implemented regulations on countercyclical capital, specifically 78, compared to only four that adopt the provisioning scheme⁶. Among those that use the CCyB, the following stand out:

- United Kingdom: In 2016 a CCyB above zero was established before an increase in the level of risks was observed (positive “neutral” rate). In particular, the CCyB was set at 1.0% in a neutral risk scenario. In 2019, the requirement was increased to 2.0%, due to considerations of the difficulty of assessing systemic risk.
- United States: A series of indicators are considered for activating the CCyB, such as asset price pressures, risk appetite, leverage in both the financial and non-financial sectors,

⁶ In accordance with the most recent *Macroprudential Policy Survey* of the International Monetary Fund.

and the transformation of liquidity maturities in the financial sector. In practice, the percentage of CCyB has been set at 0.0% since its implementation in 2013.

- European Union: The percentages of the CCyB in the jurisdictions of the European Union are established by the national authorities using different methods. Some members have a positive “neutral” rate, while others have chosen a CCyB percentage of 0.0% in the absence of risk accumulation. However, a particular feature is that the European Central Bank can request an addition from the national authorities.
- Latin America: Jurisdictions such as Mexico and Chile have CCyB. In particular, in May 2016, the *Junta de Gobierno de la Comisión Nacional Bancaria y de Valores de México* (Governing Board of the Mexican National Banking and Securities Commission) approved a 0.0% countercyclical capital charge. In turn, in Chile in 2021, the General Banking Law confers on the Central Bank of Chile (BCCh in Spanish) the responsibility of determining the activation or deactivation of the CCyB, which can be established between 0.0% and 2.5% of the assets weighted by risk level. In May 2023, the BCCh decided to activate the CCyB by 0.5% within twelve months after identifying a higher than usual degree of uncertainty about the future evolution of financial conditions at the global level and the relevance of continuing to make progress in rebuilding the economy’s capacity to face adverse scenarios.

5. Conclusions

Prudential countercyclical buffer schemes are relevant to smoothing the impact of economic and financial cycles on the performance of CIs, while helping to maintain the provision of credit in the economy at different stages of the cycle. In Colombia, the countercyclical provisioning scheme has been in operation for more than seventeen years and has helped financial institutions face episodes of adverse shocks to the financial system. However, from the above analysis, it can be concluded that it is necessary to review the scheme of this countercyclical measure within the framework of the Financial System Coordination and Monitoring Committee (CCSSF in Spanish) so that it can be better adapted to the financial cycle and the performance of systemic risks.

Internationally, the countercyclical prudential standard has converged to the use of capital buffers, whose implementation usually depends on aggregate variables that indicate the state of the financial cycle and seek to increase the financial system’s resilience as a whole. Likewise, the value of the countercyclical capital buffer required depends on cycle’s intensity and the risks that are accumulating in the financial system.

Although the current scheme in Colombia establishes general rules for all CIs, it defines stages based on the performance of each institution’s loan portfolio. This has the advantage of recognizing each institution’s niche and business model, but it makes it difficult to address more general measures when the economy and the financial system face adverse shocks. This has led to the need to make changes in the scheme at times of low dynamics and greater credit risk in the loan portfolio of credit institutions.

Thus, given the financial cycle’s constant fluctuations and changes in nature, such as duration and intensity, strengthening the current countercyclical prudential scheme in Colombia by considering the factors mentioned above is relevant. In addition, it is worth studying the convenience of complementing this measure with requirements such as the CCyB to strengthen the system and adequately prepare it for adverse scenarios.

References

- Central Bank of Chile. (2021). Countercyclical capital requirement (CCR). Available at https://www.bcentral.cl/documents/33528/6455644/20210909_CCyB_pm.pdf/52ea77fa-2f2c-28f0-b083-5d5a61401988?t=1728676790097
- Coelho, R.; Restoy, F. (2024). “Capital Buffers and the Micro-Macro Nexus,” BIS-FSI, Briefs, No. 24 July.