Box 3
How Can Movements in the Interest Rates Structure Affect the Profitability of Credit Institutions?

In Colombia, credit[1] institutions (CIs) are financial institutions responsible for channeling funds raised from the public toward lending activities and investment operations. In carrying out this financial intermediation function, CIs are exposed to the materialization of various risks, which may be generated or exacerbated by changes in interest rates. For this reason, *Banco de la República* assesses the potential impacts that changes in the structure of interest rates (i.e., short-, medium-, and long-term rates) may have on the profitability and capital soundness of intermediaries through continuous monitoring exercises presented in the *Financial*[2] *Stability Report*. These assess how the materialization of different scenarios could affect the operations of CIs through various transmission channels, enabling the early identification of vulnerabilities. This is essential to prevent stress situations in which severe shocks can erode capital levels and constrain the institutions' intermediation capacity.

This assessment is particularly relevant in the current context, characterized by recent increases in the term structure of interest rates in the economy. Indeed, various local and external macro-financial factors have a differentiated impact across the different maturities of this structure. In the short term, interest rates are influenced mainly by inflationary pressures, movements in the monetary policy rate, and expectations regarding its future path. In the medium- and long-term tranches, changes in global financial conditions have had an impact, with uncertainty associated with geopolitical conflicts prevailing. Interest rates have also been affected to a greater extent by developments in the local[3] fiscal situation.

In this context, a scenario of higher interest rates across the entire interest rate structure could lead to a decline in the net interest of these institutions, that is, the difference between interest income lending and investment activities and expenses associated with the payment of interest on the deposits they manage and financial obligations they owe. This reduction could materialize mainly through three transmission channels. The first depends directly on the sensitivity of each intermediary's financial income and expenses to movements in interest rates in banking intermediation activities. The second corresponds to the higher expenses and losses that these institutions could potentially incur as a result of a deterioration in their debtors' creditworthiness. Finally, the third channel corresponds to the potential decline in the investment portfolio, which, in the case of CIs, is concentrated particularly in public debt instruments (TES).

Therefore, the purpose of this box is to characterize the transmission channels described above and to reference some exercises used to analyze the impacts of an increase in the interest rate structure on the intermediation margin and profitability of credit intermediaries. The results of these analyses suggest that, in aggregate terms, CIs have sufficient capital to absorb hypothetical scenarios in which such risks materialize[4]. However, at the

1 Credit institutions include commercial banks, finance companies, financial corporations, and financial cooperatives.

2 https://www.banrep.gov.co/es/publicaciones-investigaciones/reporte-estabilidad-financiera/historico-reportes

3 A more detailed analysis of these factors and their risk balance is presented in the April 2026 *Monetary Policy Report*, available at: https://www.banrep.gov.co/es/publicaciones-investigaciones/informe-politica-monetaria/abril-2026.

4 See the *Financial Stability Report* (FSR) for the first half of 2026, available at: https://www.banrep.gov.co/es/publicaciones-investigaciones/reporte-estabilidad-financiera/primer-semestre-2026.

individual level, the impact will depend on each CI's exposure to the transmission channels analyzed below, which is determined by the composition of its assets and liabilities.

1. What happens to financial income and expenses when interest rates increase?

In their financial intermediation activities, CIs raise funds from the public through various instruments —such as current and savings accounts, term deposits (such as TDCs), or bond issuance— and allocate them to lending and investment holdings. These assets and liabilities, which summarize the core business of CIs, are recorded in what is known as the banking[5] book. To perform their intermediation function, CIs inherently engage in maturity transformation: they commonly finance themselves with short- and medium-term liabilities, while their assets are allocated to longer-term horizons (loans and investments). This structural asymmetry between the maturities of assets and liabilities exposes CIs' intermediation margin to fluctuations in market interest rates.

In particular, when there is a broad-based increase in interest rate structure, financial expenses tend to adjust at a faster pace than income, thereby reducing the intermediation margin. Consequently, the greater the maturity gap, the greater the institution's susceptibility to experiencing declines in its intermediation income. By way of illustration, if a bank funds itself with a six-month deposit at a specific interest rate and uses those funds to extend a one-year loan at a higher fixed interest rate, it initially obtains an intermediation margin equivalent to the difference between the interest it charges on the loan and the interest it must pay on the TDC. However, if market interest rates increase during the first six months, a higher rate will be required when the TDC is renewed, which increases interest payment expenses, while income from the loan remains unchanged. This compresses the institution's intermediation margin and reduces its profitability.

Additionally, the intermediation margin may be affected even when assets and liabilities have similar maturities, if their funding or assets are indexed to different reference interest rates, such as the Benchmark Banking Indicator (IBR). In a scenario of rising interest rates, if the benchmark indicator to which the liability is indexed increases by a greater proportion than that of the asset, the margin is reduced, affecting profitability. The intermediation margin may also be affected by changes in customer behavior in response to new market conditions, as occurs when depositors withdraw their funds early in search of instruments offering higher returns, forcing the CI to replace those sources with more costly funding. In the initial example, this risk could materialize if the depositor who held a six-month TDC has the option of making an early withdrawal and decides to cancel the deposit at the end of the third month to transfer the funds to a TDC issued by another institution that offers a higher interest rate during the remaining period. In this case, although the bank expected to have those funds available for six months, it would only have them for half of the originally expected term. To cover this funding shortfall, it would have to take new deposits at an interest rate higher than that agreed upon in the initial customer's TDC. As a result, the cost of funding would increase, and the intermediation margin would decrease.

Box 1 of the *Financial*[6] *Stability Report* for the first quarter of 2026 presented the results of an exercise reported by CIs to the Financial Superintendency of Colombia, which assesses the sensitivity of the intermediation margin to upward movements in the interest rate structure. As described in the document, most of the institutions analyzed would record a reduction in their intermediation margin, explained by negative maturity mismatches between their assets and liabilities. This occurs because a large share of the funding of the most affected

5 The banking book groups positions associated with the financial intermediation process of CIs, including borrowing operations related to fundraising —through current and savings accounts, term deposits, and bond issuance, among others— as well as lending operations, such as loan disbursements, the maintenance of investments classified as available for sale and held to maturity, among others.

6 For a detailed description of the risk, see Box 1: "Interest Rate Risk in the Banking Book: Current Regulation and Challenges in Higher Interest Rate Scenario," published in the *Financial Stability Report* for the first half of 2026.

institutions consists of deposits that are sensitive to changes in interest rates. The exercise finds that an increase in interest rates is quickly transmitted to the cost of funding, while a significant portion of assets adjusts at a slower pace, which increases the risk and reduces the intermediation margin. However, the analysis concludes that the impact of this shock does not threaten the capital strength of credit intermediaries.

2. What happens to the creditworthiness of households and firms?

The main source of income for CIs is the interest they charge their debtors in exchange for the funds they lend to them. This income depends crucially on debtors having sufficient creditworthiness to meet their obligations. However, it may be threatened by sharp increases in delinquency. To mitigate these effects, the Financial Superintendency of Colombia requires institutions to provision the loans they grant, that is, to set aside from their income expected losses associated with the level of risk of each debtor. Thus, granting loans to riskier debtors is associated with a higher level of provisions, which tends to negatively impact the expected income of these institutions.

Among the main determinants of a debtor's level of risk is, precisely, their creditworthiness, which may be affected by changes in their income, increases or decreases in their debt levels, or changes in the payments associated with those loans, which are often affected by interest rates in the economy.

Increases in the interest rate structure are expected to result in higher payments associated with household and corporate loans, which weakens their creditworthiness, increases the perception of risk by credit intermediaries, and potentially leads to deteriorations in the credit ratings that determine the level of provisions these institutions must incur. In this regard, higher interest rates increase institutions' provision expenses, which affects their expected income, reducing their profits.

It is important to mention that the effect of an increase in interest rates on debtors depends on two fundamental factors: the type of interest rate at which their loan is set, and the initial level of these rates prior to the increase. Regarding the former, debtors that tend to experience the largest increases in their financial burden are those with loans tied to variable interest rates, which means that changes in these rates are passed through directly and proportionally to the loans they pay. Firms, which have loans in the commercial loan portfolio, are those with the highest proportion of their loans at variable interest rates. In contrast, debtors whose loans are predominantly set at fixed interest rates (such as households) are less susceptible to changes in their payments when interest rates increase, although they are affected if they need to access new loans or renew existing ones, which tends to occur, for example, with products such as credit cards or revolving loans.

On the other hand, the initial levels of interest rates are important for assessing the effect on the level of credit risk assumed by intermediaries: from this perspective, it is riskier for debtors to face increases in their interest rates when these are already at high levels and result in high payments as a percentage of the debtor's income, compared with situations in which increases occur when firms and households have a low financial burden, in which additional payments are easier to meet.

These risk channels are assessed by the technical staff of *Banco de la República* as part of the stress test conducted for the *Financial Stability Report*, in which the scenarios assessed involve movements in interest rates that affect debtors in the financial system, particularly those with lower creditworthiness. The results show that, although these shocks have effects on intermediaries' incomes, they are limited and do not compromise their capital position or their prudential liquidity indicators, demonstrating the strength of CIs.