

Box 2

Determinants of the Adjustment Speed of the MPR

The levels of the monetary policy interest rate (MPR) are periodically set after deliberation processes within the Board of Directors of *Banco de la República* (BDBR). These discussions are informed by a detailed assessment of the performance of inflation, inflation expectations, economic growth, and other key variables affecting macroeconomic stability. This analysis is regularly carried out by the technical staff of *Banco de la República* and is presented quarterly in the *Monetary Policy Report*.

The current phase of interest rate cuts, which began in December 2023, has been made possible by the observed decline in headline and core inflation (excluding food and regulated items). This annual inflation peaked during the first half of 2023 (13.3% for headline inflation in March and 10.5% for core inflation in June), which began declining to 7.2% and 6.0% in June 2024 for headline and core inflation, respectively. This decline in inflation is largely due to the adjustment in economic activity, particularly in domestic demand. This adjustment, partially driven by a contractionary monetary policy that aimed at correcting significant internal and external imbalances of the post-pandemic economy, helped to reduce inflationary pressures stemming from domestic demand.

The question arises: at what speed and to what extent should the MPR be reduced? To answer this question, it is useful to introduce the concept of the neutral interest rate. First proposed by Wicksell (1898), the neutral interest rate is consistent with output growing at its potential level and inflation around its target (Laubach and Williams, 2003). Thus, if the MPR is set at a level equal to the neutral interest rate, monetary policy neither stimulates nor restricts economic growth, i.e., it is neither contractionary nor expansionary. On the contrary, if the MPR is above the neutral rate, monetary policy is contractionary, while if it is below, it is expansionary. The neutral interest rate can be decomposed into the sum of its real component and relevant inflation expectations. Its real level depends on structural factors outside the scope of monetary policy, such as long-term economic growth (which depends on productivity and demographics), aggregate savings and investment balances, or agents' levels of risk aversion, among other factors. There are mixed considerations about the current evolution of the real neutral interest rate determinants. On the one hand, demographic factors related to declining population growth and increased life expectancy would suggest a decrease in the neutral interest rate (Ho, 2024), which adds to the slow productivity growth observed in recent years. On the other hand, higher levels of public debt following the pandemic, along with the potential increase in global capital demand due to the accelerated development of artificial intelligence and the need for renewable energy, could suggest imbalances between aggregate savings and investment, generating upward pressure on neutral interest rates not only in Colombia but across much of the Western Hemisphere (Williams, 2024). Since the real neutral interest rate is an unobservable variable, *Banco de la República* has different methodologies for its estimation (see Grajales and Pulido, 2018), which are continuously updated and monitored.

The monetary policy has sought to be contractionary after the post-pandemic inflationary outbreak and this is reflected in the fact that the MPR was above its neutral level. Therefore, the answer to the question regarding the speed and limit of the MPR reduction depends on two different questions: 1) at what pace should the MPR converge to the neutral rate to stop being contractionary? (a process known as monetary policy normalization), and 2) what has happened to the level of the neutral rate?

Firstly, the optimal pace of monetary policy normalization depends on current and expected inflation and growth levels, as well as the consideration of risks that may affect these forecasts. On the first front, although inflation has been significantly reduced,

it remains high (7.2% as of June), compared to the 3.0% target to which the BDBR is committed under its constitutional mandate. This inflation exceeds that of other countries in the region, such as Chile, Peru, Brazil, and Mexico, which have inflation levels below 5.0%. Some of these countries waited for lower inflation levels than Colombia's to begin their normalization phases (see *Banco de la República*, 2024a). There are also upside risks to the still high inflation levels, which, although they have eased in recent months, have not disappeared. Domestically, there is uncertainty regarding the extent of indexation mechanisms, particularly in services prices. The annual variation in service prices has proven to be more rigid than that of other baskets, as many of these prices tend to adjust based on observed inflation and past minimum wage increases, given the labor-intensive nature of services. Additionally, there is uncertainty about the effects of climate phenomena on food and energy prices. Specifically, the annual adjustment in food prices increased from 4.4% to 5.3% between May and June, more than the technical staff had anticipated, due to the price rebound for certain perishable foods affected by the El Niño phenomenon. Externally, the pace of normalization of the US Federal Reserve's interest rate is expected to be gradual. In a context of relatively high Colombian debt risk premiums, it is more likely that if the Colombian MPR declines faster than the US MPR, upward pressures may arise on the exchange rate of the Colombian peso against the dollar. Such depreciation could, in turn, trigger upward pressures on inflation, hindering the convergence towards its target.

Secondly, regarding the neutral interest rate, the technical staff's estimates regarding its real component suggest that the considerations mentioned above about imbalances between savings and investment in a high-debt environment could weight more heavily and exhibit a real neutral interest rate that adjusts slightly upward during the forecast horizon, reaching an average of 2.5% in 2025 (*Banco de la República*, 2024b). As for inflation expectations, according to the July survey of economic analysts, they stand at around 4.2% for short-term horizons (twelve months), a value above the 4.0% tolerance range above the target, while for longer horizons, their level is closer to the inflation target. These expectations are also influenced by the expected pace of MPR adjustments, meaning that the terminal level of the MPR cuts (the nominal neutral interest rate) may depend, in turn, on the speed at which monetary policy normalization occurs.

All these factors suggest that the downward adjustment of the MPR should be carried out gradually. First, considerations regarding the optimal pace of normalization imply that there is a risk that rapid declines in the MPR may have to be reversed if upside inflation risks materialize. Such reversals of the MPR are undesirable, as increased volatility affects agents' expectations, hindering the convergence of inflation towards its target and ultimately resulting in general welfare losses (see, for example, Woodford, 2003). Furthermore, upside inflation risks increase the probability of missing the target, which could erode the credibility of monetary policy and make it less effective. This effect intensifies exponentially if such misses persist over several periods (for a recent quantification of this channel in Colombia, see Grajales et al., 2024). Finally, in an environment of growing macroeconomic imbalances, which exert upward pressures on the real neutral interest rate, a potential de-anchoring of inflation expectations, resulting from faster-than-expected declines in the MPR, would further increase the terminal levels of the MPR, so it is advisable to be cautious in the normalization process.

Thus, although a robust economic recovery is desirable, one that would undoubtedly benefit from a rapid easing of monetary policy, it is even more convenient that the process of monetary policy normalization occurs at a pace consistent with meeting the inflation target and ensuring growth converges toward a sustainable level. International experience exhibits that such normalization processes tend to be non-linear and more gradual as the MPR approaches its terminal point (Romer & Romer, 2024). Ultimately, it is essential that this normalization proceeds at a pace consistent with the considerations outlined here, particularly one that weights the potential materialization of risks to forecasts based on continuous monitoring of the new available information.

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