

## Box 1

## The Role of Credibility in Central Bank Monetary Policy Actions

Monetary policy plays a fundamental role in the pursuit of economic stability and its effectiveness is closely linked to its credibility. In the context of monetary policy, credibility refers to the degree of confidence that economic agents have that the central bank will achieve its objectives of price stability, support for sustained economic growth, and contribution to financial stability while acting consistently and transparently. Credibility is, therefore, a key ingredient for the success of monetary policy since it influences agents' expectations about the future path of inflation. A transparent and credible monetary policy facilitates predictable decision-making by economic agents.

In Colombia, where an inflation targeting regime is in place, the achievement of the inflation target depends to a large extent on the public's confidence in *Banco de la República's* commitment to the inflation target. Greater credibility allows the central bank to achieve its price stability objective more easily while lower credibility implies higher economic and social costs associated with the implementation of monetary policy. High credibility in monetary policy and in the central bank contributes to a stable economic environment and makes it easier for the public to plan future decisions. As Blinder (2000) points out, the monetary authority is credible when people are confident that it will do what it says it will do.

In this Box, the concept of credibility in monetary policy, its determinants and its macroeconomic effects are analyzed. The trends of credibility in Colombia are also briefly analyzed.

### 1. The credibility of monetary policy and its determinants

There is a broad consensus in the economic literature on the importance of the credibility of monetary policy and, by extension, of the authority that implements it. This credibility of the central bank has gained prominence due to economic modeling based on rational expectations. According to this approach, agents make decisions by considering all available information whether past, present, or future and do not commit systematic biases in their forecasting errors. In this context, the credibility of the central bank becomes a crucial factor. If agents are confident that the monetary authority will systematically achieve its policy objectives, their expectations will align with the monetary authority's actions.<sup>1</sup>

Several factors have been identified that contribute to central bank credibility. These include the following:

- **Independence:** the independence of the monetary authority reduces inflationary bias by allowing it to focus on maintaining price stability without outside interference or short-term pressures (Rogoff 1985).
- **History of compliance:** the credibility of the central bank is based on its track record of delivering on its promise to fight inflation. Keeping inflation within the established limits strengthens its credibility.
- **Transparency:** clear communication of the monetary authority's objectives and strategies allows the private sector to infer its intentions. Transparency influences the expectations of economic agents and makes them more sensitive to the central bank's actions (Faust and Svensson 2001).

<sup>1</sup> Even if the assumption of rational expectations is not met, credibility is still relevant because expectations are still a determining factor in consumption and investment decisions. Although agents may not always be correct in their predictions, their decisions are influenced by what they expect from monetary policy.

- **Predefined policy rules:** following a predefined policy rule, such as inflation targeting, enhances credibility. The central bank's objectives should be clearly and consistently stated.
- **Accountability:** explaining decisions and results through reports to the parliament or congress and the public reinforces the credibility of the monetary authority (Walsh 1995).
- **Fiscal discipline:** the credibility of monetary policy is linked to the government's fiscal discipline. To the extent that fiscal policy affects aggregate demand, it may generate inflationary pressures and make it difficult for the central bank to control inflation (Sargent and Wallace 1981, Woodford 1998, Cochrane 2001). It should be noted that fiscal discipline, while affecting credibility, is outside the direct control of monetary policy and the central bank.

Aware of the theoretical determinants of the credibility of monetary policy, *Banco de la República* understands and has stated that, in order to be effective, monetary policy must be based on certain fundamental principles: 1) the establishment of clear and well-defined objectives; 2) operational independence, so that its decisions are consistent with the results of its analyses and projections without outside interference; 3) the adoption of a clear operational framework and an accountability mechanism to ensure that society is aware of the Bank's actions; 4) a medium-term policy horizon in line with the capacity of its instruments to influence economic variables, and 5) a transparent communication policy.

## 2. Effects of Monetary Policy Credibility

The economic literature has identified several positive macroeconomic effects associated with monetary policy credibility.<sup>2</sup> Some of these effects are discussed below:

- **Reducing the cost of disinflation:** the credibility of monetary policy is crucial for the effective control of inflation. According to the models used by central banks and economic theory, inflation is determined not only by factors such as the output gap or the price of crude oil but also by past inflation and inflation expectations. Therefore, credibility makes it possible to reduce inflation by anchoring its expectations without the need for a negative output gap.<sup>3</sup>
- **Maintaining low inflation:** the credibility of the central bank has a direct effect on inflation expectations. When this institution is credible, inflationary shocks have less impact on expectations. This means that temporary fluctuations in inflation do not significantly alter long-term expectations, which helps to keep inflation low and stable.
- **Role of lender of last resort:** during financial crises, a credible central bank can act as a lender of last resort without altering inflation expectations. Although lending in times of crisis can be seen as expansionary monetary policy, credibility helps to keep inflation expectations stable.
- **Honesty and public support:** central banks credibility is fundamental because central bankers are public servants. Society expects them to act honestly and transparently. Credibility also strengthens public support for an independent and accountable institution.

The credibility of monetary policy is not only a theoretical concept but has also been shown to have positive empirical effects. A study by Cepeda, Taboada-Arango, and Villamizar-Villegas (2023) concludes that increased credibility benefits central banks by significantly improving the effectiveness of monetary policy. Their results indicate that transparency

2 The determinants of credibility are based on Blinder's (2000) survey of central bankers and economists.

3 The New-Keynesian Phillips curve is defined by the function  $\pi_t = \pi_t^e + \alpha z_t$  where  $\pi_t$  represents inflation,  $\pi_t^e$  denotes inflation expectations,  $z_t$  reflects the output gap,  $\alpha$  includes other factors, such as oil prices, that may affect inflation, and  $z_t$  represents shocks to inflation. In this version of the Phillips curve, it is possible for inflation to fall in response to falling inflation expectations without changing either the output gap or the factors included in  $z_t$ .

and anchoring inflation expectations in the medium and long term are the strategies that generate the largest credibility benefits. It is important to keep in mind that increasing or maintaining credibility is not always easy. When credibility is linked to the principles of central bank independence or transparency, in particular, the process of enhancing or maintaining credibility can be costly since it often requires institutional changes that take time to implement. In contrast, the anchoring of expectations can be self-reinforcing. As agents become more confident that the monetary authority will achieve the inflation target, their expectations become anchored to the target and credibility, in turn, increases.

In the Colombian context, González and Hamann (2011) find that a lack of credibility is an important source of inflation persistence. When economic agents doubt the central bank’s ability to maintain price stability, inflation tends to persist.

Finally, it is important to remember that credibility is not a permanent and constant asset. It is earned slowly, through coherent and consistent actions. However, it is also fragile and can evaporate suddenly, as Bordo and Siklos (2015) point out.

### 3. The recent Colombian case<sup>4</sup>

As a qualitative concept, credibility is not directly observable. Nevertheless, in the context of inflation targeting, where the central bank sets a numerically clear, measurable and easily observable inflation target, the literature has come to define the credibility of monetary policy in terms of the deviation of inflation expectations from the target. In other words, any deviation of inflation expectations from the target implies a loss of credibility. Actual inflation also has a significant impact on credibility. When inflation deviates from the established target, it can erode confidence in the central bank’s ability to maintain price stability.

The results presented below follow this definition of credibility in inflation targeting and are based on the analysis of Grajales-Olarte et al. (2024) on the recent drivers of credibility in Colombia.

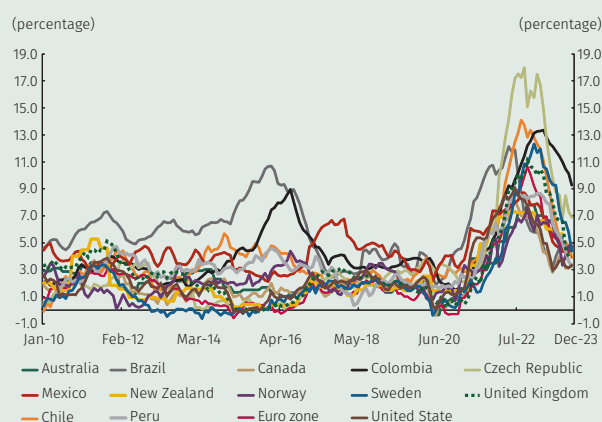
The impact of the covid-19 pandemic on the global economy has renewed interest in the study of the credibility of monetary policy that stems from the notable increase in both actual inflation and inflation expectations around the world in the aftermath of the pandemic. Graph B1.1 shows that, for the group of countries represented, both headline inflation and inflation expectations have reached historically high levels. Although both have increased, inflation expectations have risen less than headline inflation.<sup>5</sup>

Colombia has not been immune to this global trend (Graph B1.2). Inflation in Colombia reached 13.3% in the first quarter of 2023 and above the inflation peaks of 2008 and 2016. Furthermore, both headline inflation and inflation expectations have been above the tolerance band since mid-2021.

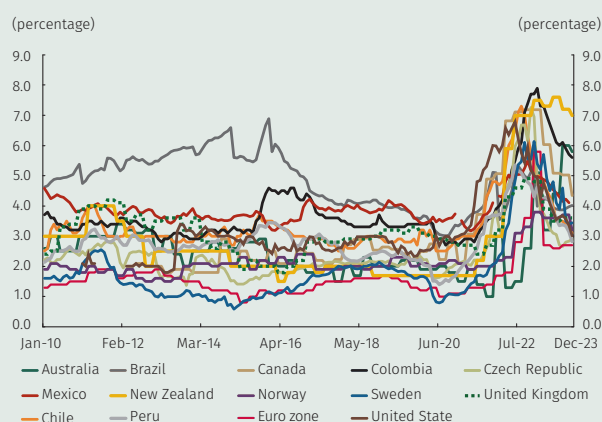
As a result of the monetary policy implemented by *Banco de la República*, both headline inflation and inflation expectations have declined significantly since the first quarter of 2023. However, the

Graph B1.1  
Headline Inflation and Inflation Expectations for a Set of Countries

#### A. Headline Annual Inflation



#### B. Twelve-month total annual inflation expectations

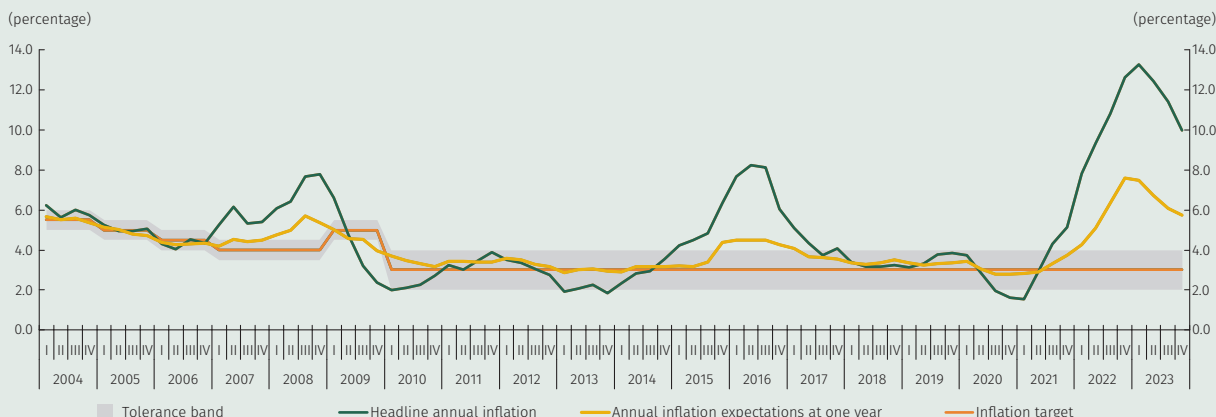


Note: Panel A shows headline annual inflation for the set of countries. Panel B shows annual inflation expectations at twelve months.  
Source: central bank of each country.

4 This section is based on Grajales-Olarte et al. (2024).

5 See, for example, Schmitt-Grohé and Uribe (2022) and Verbrugge and Zaman (2023).

**Graph B1.2**  
Headline inflation, Inflation expectations and Target for Colombia



Note: the green line represents headline annual inflation. The yellow line represents annual inflation expectations at twelve months. The orange line is the inflation target. The gray band represents the tolerance band.  
 Sources: Banco de la República and Monthly Survey of Economic Analysts' Expectations.

recent trend in these variables suggests a reduction in credibility. To accurately assess this decline, a formal measure of the level of credibility is required. Grajales-Olarte et al. (2024) present a credibility measure based on the methodology proposed by Bomfim and Rudebusch (2000) in which a time-varying level of credibility is estimated using information on both inflation expectations and actual inflation.<sup>6</sup>

Graph B1.3 shows the results of the credibility estimate for Colombia for the period 2004–2023. In this measure, one represents perfect credibility and zero represents no credibility. The results show that, as Bordo (2015) found in his study of eleven countries, changes in credibility are frequent and significant as they have been in the Colombian context.

**Graph B1.3**  
Estimate of the Stock of Credibility for Colombia



Note: the green line represents the stock of credibility estimate. The gray band represents the forecast horizon.  
 Source: Calculations based on Grajales-Olarte (2024).

Throughout the study period, credibility in Colombia remained high. With the exception of the recent covid-19 pandemic episode, there were only two notable declines: in 2008 and 2016. In those years, inflation was high due to international food and crude oil prices and the *El Niño* phenomenon respectively. Despite the covid-19 crisis, credibility remained at a relatively high level, even though actual inflation and inflation expectations peaked. Furthermore, on the basis of the most recent inflation forecasts, credibility is expected to continue recovering at a similar pace to that seen after the declines in 2008 and 2016. At the end of the forecast horizon, in 2025, credibility is expected to be very close to its historical average.<sup>7</sup>

6 Inflation expectations at twelve months from now come from the Monthly Survey of Economic Expectations of economic analysts.

7 It is important to recognize that the credibility measures used in the literature have limitations. Although useful for analysis, they always tell an incomplete story because they do not capture all the nuances and factors that influence the perception of credibility. Moreover, credibility measures can be sensitive to the parameterization and estimation methodology used. Therefore, it is essential to interpret these indicators with caution and to consider their context. Finally, as mentioned above, a central bank's credibility may be affected by events beyond its control. The measurement that assesses credibility by deviations from the target is only an approximation. Reality is more complex and dynamic than this measure alone can capture.

#### 4. Conclusions

The credibility in monetary policy is a valuable asset for *Banco de la República*. It allows the objectives of price stability, economic growth, and financial stability to be achieved efficiently and at lower cost. High monetary policy credibility strengthens the confidence of economic agents in the central bank and facilitates the planning of their future consumption and investment decisions.

Credibility is not constant; it is gained slowly through consistent and coherent actions. However, it can also be lost quickly. Therefore, it is crucial for central banks to maintain clear and effective communication with the public and explain their decisions and results.

In Colombia, the central bank's credibility has remained high despite some episodes of high inflation. Although the covid-19 pandemic and its aftermath have been a challenge, credibility is recovering rapidly and is expected to approach its historical average level by the end of the forecast horizon (2025).

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