
MONETARY POLICY REPORT

ISSN - 2711 - 2128



01/
2024



January 2024

MONETARY POLICY **REPORT**

* Presented by the technical staff
to the Board of Directors for its
meeting on 31 January 2024.

Banco de la República
Bogotá, D. C. (Colombia)

ISSN - 2711 - 2128



Office of the Deputy Technical Governor

Hernando Vargas Herrera
Deputy Technical Governor

Office for Monetary Policy and Economic Information (*)

Juan José Ospina Tejeiro
Chief Officer

Programming and Inflation Department

Carlos Huertas Campos
Director

Inflation Section

Adolfo León Cobo Serna
Head

Édgar Caicedo García
Juan Pablo Cote Barón
Nicolás Martínez Cortés
Franky Galeano Ramírez
Karen Pulido Mahecha
Sergio Restrepo Ángel

Macroeconomic Programming Section

Viviana Alfonso Corredor
Head

Luis Hernán Calderón López
Johanna Barbosa Buitrago
Marlon Salazar Silva
Darío Perdomo Sanchez

Forecasting Process Management Section

Celina Gaitán Maldonado
Head

Andrea Salazar Díaz
Nicol Rodríguez Rodríguez
Tatiana Mora Arbeláez

Macroeconomic Modeling Department

Franz Hamann Salcedo
Director

Forecasting Section

Julián Pérez Amaya
Head

Jose Vicente Romero Chamorro
Sebastián García Echeverry
Laura Acevedo Schoenbohm
Juan Andrés Rincón Galvis
Jonathan Muñoz Martínez
Juan Camilo Laborde Vega
Cristian González Téllez

Consultant and Researchers associated with the Macro-Economic Models Department

José David Pulido Pescador
Head

Sara Naranjo Saldarriaga
Anderson Grajales Olarte

(*) Eliana González, head of the Statistics Section; Deicy Cristiano, Julián Cárdenas, Isleny Carranza, and Ramón Hernández, analysts at the Statistics Section; Jesús Bejarano, Director of the Applied Macroeconomic Analysis Department; Andrés Herrera, David López, and Manuela Quintero, analysts of the Fiscal and Sector Analysis Group; Aarón Levi Garavito, senior economist at the Office For Monetary Policy and Economic Information; Juan David Bonilla, Diego Escobar, Juan Felipe Carmona, Joseph Yesid Palomino, Nathaly Vergel, Juan Sebastián Mayorga, and Hugo Daza, student interns, also participated in the making of this Report.

Edited in Bogotá D.C., Colombia

Suggestions and comments: +57 (1) 343 1011 / atencionalciudadano@banrep.gov.co



Monetary Policy in Colombia

Banco de la República (the Central Bank of Colombia) is required by the Constitution to maintain the purchasing power of Colombia's currency in coordination with general economic policy¹. In order to fulfill this mandate, *Banco de la República's* Board of Directors (hereafter BDBR) has adopted a flexible inflation-targeting scheme, by which monetary policy actions (MP) seek to lead inflation to a specific target and achieve maximum levels of sustainable output and employment.

The flexibility of this scheme allows the BDBR to maintain an adequate balance between reaching its inflation target and smoothing output and employment fluctuations around their sustainable growth paths. The BDBR has set a 3.0% inflation target based on annual change in the consumer price index (CPI). In the short term, inflation may be affected by factors outside of monetary policy control, such as changes in food prices due to climate-related phenomena. To factor in this reality, the BDBR has also set a ± 1 percentage point range outside its inflation target (i.e., 3.0 ± 1 pp). This range does not represent a monetary policy target, but rather reflects the fact that inflation can fluctuate around the target and will not always be equal to 3.0%.

The main instrument the BDBR uses to control inflation is the policy interest rate (overnight repo rate, or benchmark interest rate). Given that monetary policy actions take time to fully affect the economy and inflation², the BDBR assesses the inflation forecast and inflation expectations vis-à-vis the inflation target, as well as the current situation and outlook of the economy, in order to determine their value.

The BDBR meets once a month, producing monetary policy decisions in eight of its meetings (January, March, April, June, July, September, October, and December). In principle, no such decisions are made in the BDBR's four remaining meetings (February, May, August, and November)³. At the end of the meetings in which monetary policy decisions are produced, a press release is published, and a press conference is held by the Governor of the Central Bank and the Minister of Finance. The minutes of the meeting describing the positions that led the BDBR to its decision are published on the following business day. Additionally, the Monetary Policy Report (MPR)⁴, produced by the Central Bank's technical staff, is published in January, April, July, and October, together with the minutes. On the Wednesday of the week following the Board meeting, the Governor clarifies concerns about the minutes, and the Bank's Deputy Technical Governor presents the MPR. This dissemination scheme⁵ seeks to deliver relevant and up-to-date information to contribute to better decision-making by the agents of the economy.

1 Political Constitution of Colombia (1991), Article 373 and Decision C-481/99 of the Constitutional Court.

2 For further details, see M. Jalil and L. Mahadeva (2010). "Transmission Mechanisms of Monetary Policy in Colombia", *Universidad Externado de Colombia, School of Finance, Government, and International Relations*, ed. 1, vol. 1, no. 69, October.

3 A Board Member may request an extraordinary meeting at any time to make MP decisions.

4 Formerly known as the Inflation Report.

5 The current communication scheme was approved by the BDBR in its May 2023 meeting.

Contents

1. Summary **9**
 - 1.1 Macroeconomic Summary **9**
 - 1.2 Monetary Policy Decision **12**

2. Macroeconomic Forecasts and Risk Analysis **13**
 - 2.1 International Outlook **13**
 - 2.2 Macroeconomic Projections **18**
 - 2.3 Balance of Macroeconomic Risks **26**

3. Current Economic Situation **29**
 - 3.1 Inflation and Price Behavior **29**
 - 3.2 Growth and Domestic Demand **32**
 - 3.3 Labor Market **34**
 - 3.4 Financial and Monetary Market **36**

Box 1: Regional Economic Pulse: High-Frequency, Short-Lag Indicators to Understand Local Economies **38**

Annex 1 Macroeconomic Projections from Local and Foreign Analysts **45**

Annex 2 Main Macroeconomic Forecast Variables **47**

Annex 3 Predictive Densities for other relevant Macroeconomic Variables **50**

Graphs

- Graph 1.1** Consumer Price Index **9**
- Graph 1.2** CPI excluding food and regulated items **9**
- Graph 1.3** Gross Domestic Product, four quarter accumulation **10**
- Graph 1.4** Output gap **10**
- Graph 1.5** Monetary policy interest rate, interbank rate and BBI **12**

- Graph 2.1** Real GDP, main trade partners **13**
- Graph 2.2** Headline inflation, select main trading partners **14**
- Graph 2.3** Monetary policy interest rate, select main trading partners **14**
- Graph 2.4** Assumed quarterly oil price **14**
- Graph 2.5** Global Supply Chain Pressure Index **15**
- Graph 2.6** Assumed U.S. Federal Reserve quarterly interest rate **16**
- Graph 2.7** Colombia's assumed quarterly risk premium (CDS) **17**
- Graph 2.8** Behavior of nominal exchange rate and risk premium for select Latin American countries **17**
- Graph 2.9** Quarterly RER inflationary gap **18**
- Graph 2.10** Consumer Price Index (CPI) **18**
- Graph 2.11** CPI excluding food and regulated items **19**
- Graph 2.12** CPI for foods **19**
- Graph 2.13** CPI for regulated items **20**
- Graph 2.14** Bank and stockbroker inflation forecast **20**
- Graph 2.15** Economic Tracking Indicator (ISE), and ISE by sectors **21**
- Graph 2.16** Quarterly GDP **21**
- Graph 2.17** Total goods exports (FOB) **22**
- Graph 2.18** Total goods imports (CIF) **22**
- Graph 2.19** GDP, four-quarter cumulative **23**
- Graph 2.20** Output gap **23**
- Graph 2.21** Annual current account **24**
- Graph 2.22** Monetary policy interest rate: average observed quarterly and rate expected by analysts **25**
- Graph 2.23** Consumer price index, predictive density **27**
- Graph 2.24** CPI excluding food and regulated items, predictive density **27**
- Graph 2.25** GDP, four-quarter cumulative, predictive density **28**
- Graph 2.26** Output gap, predictive density **28**

- Graph 3.1** CPI and core inflation indicators **29**
- Graph 3.2** PPI by origin **29**
- Graph 3.3** CPI for goods and services, excluding food and regulated items **29**
- Graph 3.4** CPI for services, excluding food and regulated items and its components **30**
- Graph 3.5** CPI for regulated items and its components **31**
- Graph 3.6** CPI for food and its components **31**
- Graph 3.7** Gross Domestic Product **32**
- Graph 3.8** Contributions to annual change of quarterly GDP **32**
- Graph 3.9** Quarterly gross fixed capital formation **33**
- Graph 3.10** Final household and general government spending **33**
- Graph 3.11** Exports, imports, and trade balance **33**
- Graph 3.12** Sectoral value-added levels in 3Q 2023 relative to 4Q 2019 **34**
- Graph 3.13** Employed population by location **34**
- Graph 3.14** Jobs by type of employment: national total **34**
- Graph 3.15** Unemployment rate by location **35**
- Graph 3.16** Beveridge curve for the seven largest cities **35**
- Graph 3.17** Gross loan portfolio in Colombian pesos **36**
- Graph 3.18** Real loan interest rates **37**
- Graph 3.19** NPL Indicator **37**

- Graph B1.1** Regional Economic Pulse by region and national aggregate **42**
Graph B1.2 Comparisons between the quarterly Regional Economic Pulse by region and the quarterly Indicator of Departmental Economic Activity (Itaed) **43**
Graph B1.3 Quarterly Regional Economic Pulse national aggregate and Pulse GDP activities **44**
- Graph A3.1** Quarterly assumptions of 12-month growth of trading partners based on annual projections, predictive density **50**
Graph A3.2 Quarterly oil price assumption, predictive density **50**
Graph A3.3 U.S. Federal Reserve quarterly interest rate assumption, predictive density **50**
Graph A3.4 Colombia's quarterly risk premium (CDS) assumption, predictive density **50**
Graph A3.5 CPI for foods, predictive density **51**
Graph A3.6 CPI for regulated items, predictive density **51**

Tables

- Table 2.1** Economic growth forecast of main trade partners **13**
- Table 3.1** Average monthly interest rates **36**
- Table B1.1** Monitored Regions and Economic Activities **40**

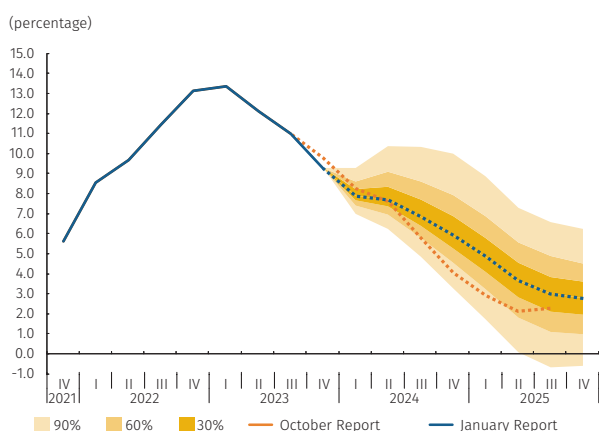
1. Summary

1.1 Macroeconomic Summary

In the fourth quarter of 2023, the decline of headline and core inflation (excluding food and regulated components) exceeded expectations but remained above target. However, cumulative monetary policy actions and the unwinding of some shocks that have affected prices would continue supporting the convergence of inflation towards the 3.0% inflation target. In December 2023, the reduction in headline (9.3%) and core (8.4%) inflation was slightly above that projected in the October Report in the wake of ameliorating pricing behavior in the food and goods baskets. Conversely, the services component continued to register slightly slower declines than anticipated, while the regulated items basket increased more than expected. All groups continued to exhibit year-on-year changes above the 3.0% target. Going forward, an effective inflation convergence towards the target in an environment of tight monetary policy, lower international prices and cost pressures, disinflationary exchange rate pressures, weak demand, lower food price adjustments, and price indexation to lower inflation rates than in 2023 is expected. Nonetheless, the forecast for yearend 2024 was revised upwards within a backdrop of high and persistent fluctuations in the services basket prices, a monetary policy stance consistent with achieving the target in 2025, a higher than-estimated increase in the minimum wage, and upward pressures from the regulated items group, particularly from energy prices. Consequently, for 2024, headline and core inflation would reach 5.9% and 5.4%, respectively, versus the 4.0% and 4.2% projected in the October Report (Graphs 1.1 and 1.2). A high degree of uncertainty and significant upside risks surround this forecast, including a stronger-than-expected effect of the *El Niño* phenomenon on food and energy prices than that foreseen in this Report. Additionally, there continues to be high uncertainty regarding the impact on the regulated items basket associated with possible future fuel price adjustments to moderate fiscal pressures on the Fuel Price Stabilization Fund (*Fondo de Estabilización de los Precios de los Combustibles*, FEPC in Spanish). Likewise, uncertainty surrounding external financial conditions implies a risk regarding the future trajectory of the exchange rate and the prices that depend on it. Should inflationary pressures materialize because of these risks, this may accentuate the effect of indexation mechanisms, thus resulting in more persistent inflation than projected in this Report.

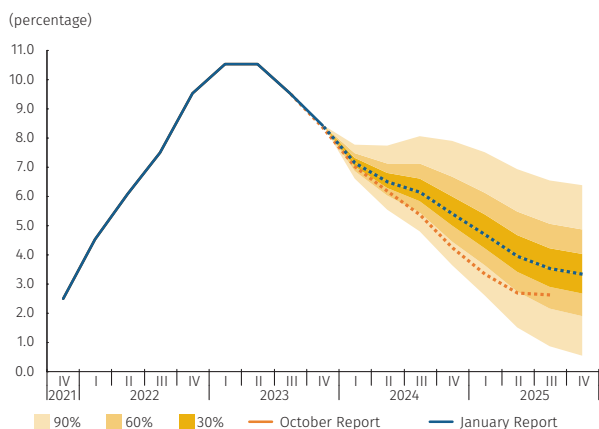
Economic activity in 2023 would have slowed marginally above that projected in the previous Report. In 2024, the economy would continue to record low growth rates but recover to reach an activity level close to its potential towards the

Graph 1.1
Consumer Price Index ^{a/, b/}
(annual change; end-of-period)



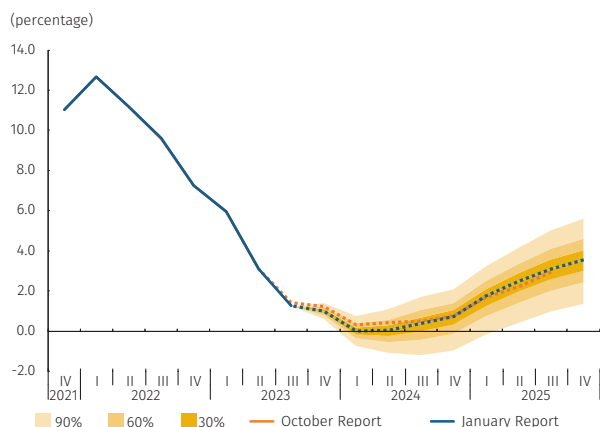
a/ This graph presents the forecast probability distribution on an eight-quarter time horizon. Density characterizes the prospective balance of risks with areas of 30%, 60%, and 90% probability surrounding the central forecast (mode), through a combination of densities from the Patacon and the 4GM monetary policy models. b/ The probability distribution corresponds to the forecast exercise from the January Report. Source: DANE – calculations and projections by Banco de la República.

Graph 1.2
CPI excluding food and regulated items ^{a/, b/}
(annual change; end-of-period)



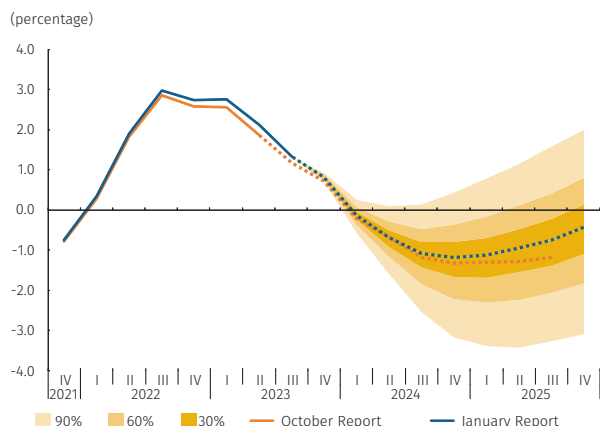
a/ This graph presents the forecast probability distribution on an eight-quarter time horizon. Density characterizes the prospective balance of risks with areas of 30%, 60%, and 90% probability surrounding the central forecast (mode), through a combination of densities from the Patacon and the 4GM monetary policy models. b/ The probability distribution corresponds to the forecast exercise from the January Report. Source: DANE – calculations and projections by Banco de la República.

Graph 1.3
Gross Domestic Product, four quarter accumulation ^{a/, b/, c/}
(annual change)



a/ Seasonally adjusted and corrected for calendar effects.
b/ This graph presents the forecast probability distribution on an eight-quarter time horizon. Density characterizes the prospective balance of risks with areas of 30%, 60%, and 90% probability surrounding the central forecast (mode), through a combination of densities from the Patacon and the 4GM monetary policy models.
c/ The probability distribution corresponds to the forecast exercise from the January Report.
Source: Banco de la República.

Graph 1.4
Output gap ^{a/, b/, c/}
(four-quarter accumulation)



a/ The historical output gap estimate is calculated as the difference between observed GDP (four-quarter accumulation) and potential GDP (trend; four-quarter accumulation) based on the 4GM model.
b/ This graph presents the forecast probability distribution on an eight-quarter time horizon. Density characterizes the prospective balance of risks with areas of 30%, 60%, and 90% probability surrounding the central forecast (mode), through a combination of densities from the Patacon and the 4GM monetary policy models.
c/ The probability distribution corresponds to the forecast exercise from the January Report.
Source: DANE - calculations and projections by Banco de la República.

year's end. This course would be compatible with bringing inflation to target. In the third quarter of 2023, gross domestic product (GDP) registered a lower-than-expected (0.4%) annual variation of -0.3%. Domestic demand continued to fall, mainly because of poor investment performance, reflected in the significant drop in imports and an additional adjustment of the external trade deficit. Available economic indicators suggest a quarterly decline in the fourth quarter, with annual GDP growth of 0.9%. Investment would continue at low levels, while quarterly consumption would have fallen, in line with a contraction in household spending despite a recovery in public consumption. Accordingly, domestic demand would have registered a further annual decline that would have translated into lower imports, which, together with steady export levels, would have resulted in a further reduction of the external trade deficit. All this within a context of low consumer and business confidence levels, lower credit dynamic, and a continued contractionary monetary policy stance. As such, annual GDP growth for 2023 was revised to 1.0% from the 1.2% estimated in October (Figure 1.3). For 2024, the growth forecast remains at 0.8%, with consumption continuing at levels close to those seen in 2023, as the deceleration in private consumption is offset by the increase in public consumption. Investment would maintain low levels but recover in the second half of 2024, supported by a reactivation of civil works and local investment projects. The trade balance deficit would continue to narrow. The preceding would occur against a backdrop of slightly looser external financial conditions and a contractionary monetary policy compatible with achieving target inflation by mid-2025. A GDP growth of 3.5% is expected by 2025 in an environment of improving external demand, looser external and domestic financing conditions, and inflation that would reach its target level. Productive overcapacity in 2024 would continue at similar levels to those projected in October but would mitigate faster in 2025 than expected resulting from the recovery in economic activity (Graph 1.4) and a less restrictive monetary policy stance moving forward. This assessment is subject to a high degree of uncertainty owing to both external factors, global political tensions, and international financial conditions, as well as domestic factors, such as incertitude surrounding the evolution and impact of the reforms submitted to Congress and the response of domestic demand to local financial conditions.

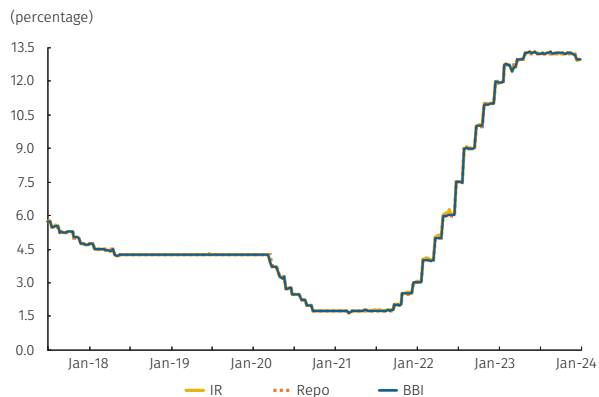
In 2023, the country's external imbalance as a share of GDP (2.8%) would have experienced a significant reduction, maintaining a similar rate through 2024. Lower domestic demand, consistent with long-term sustainable output levels and the convergence of inflation to the target, has contributed to the reduction in the external imbalance and would continue to support its downward trajectory into the forecast horizon.

Consequently, the current account deficit as a share of GDP would decline from 6.2% in 2022 to 2.8% in 2023, reaching 2.9% in 2024. This adjustment mainly reflects a decrease in imports from the high figures recorded in 2022, lower profits remitted abroad by companies with foreign direct investment (FDI), higher income received from remittances, and a rebound in service exports associated with the tourism sector. The year-on-year reduction in the current account deficit improves the country's external position, making the economy less vulnerable to a significant decline in global conditions.

External financial conditions have improved within a context of falling global inflation, albeit at still-high levels, and a less severe slowdown in the world economy than projected. In the United States, the Federal Reserve (Fed) held interest rates steady at a range of between 5.25% and 5.50%, and its new economic forecasts indicate this rate would ease, exhibiting a lower path than that foreseen by the Fed in November. The U.S. economy could slow in 2024 somewhat beyond previous expectations. Long-term interest rates in the United States have declined from the highs reached in October in a setting where private consumption is slowing, and balance is being restored in the labor market. In this framework, Colombia's sovereign risk premium declined to an 18-month low while the peso appreciated. However, the world economy will continue to suffer the effects of elevated global financing costs and the high uncertainty derived partly from geopolitical tensions and conflicts, suggesting a relevant slowdown in external demand for the country in 2023 and 2024. This, together with lower terms of trade, would result in a fall in the national income versus 2022. Uncertainty surrounding external forecasts and their potential impact on the country remains high, given uncertainty over the unfolding of global conflicts (e.g., Ukraine and the Middle East), continuing geopolitical tensions, the evolution of foreign trade, and developments in external financial conditions. This is compounded by uncertainty regarding local economic policy and its possible impact on Colombia's sovereign risk perception.

A contractionary monetary policy stance has positively contributed toward reducing the country's macroeconomic imbalances. Nevertheless, although inflation has fallen, it remains above the 3.0% target, as do most measures of inflation expectations. The macroeconomic situation has been evolving in the anticipated direction, with economic activity adjusting towards levels more compatible with the economy's productive capacity, a more sustainable external position, and declining inflation and inflationary expectations. Credit market activity continues to temper and, although credit risk has increased, the Colombian financial system maintains adequate provisions, solvency, and liquidity levels, which would allow it to face significant macroeconomic declines. Concurrently, the labor market continues to display historically low unemployment rates. Going forward, the outlook is for inflation to continue a downward trajectory, although at a slower pace than anticipated in the October Report, against a backdrop of falling excess productive capacity. The aforementioned is consistent with the announcement by the Board of Directors of *Banco de la República* that seeks to place inflation at close to its 3.0% target, plus or minus one percentage point, by the first half of 2025. This macroeconomic situation, characterized by high inflation, inflation forecasts and expectations above 3.0%, and significant upside price risks, underlines the need to maintain a contractionary monetary policy stance that seeks the convergence of inflation towards its target.

Graph 1.5
 Monetary policy interest rate, interbank rate and BBI^{a/}
 (weekly data)



a/ IR: interbank rate. BBI: benchmark banking indicator.
 Sources: Financial Superintendency of Colombia and Banco de la República.

1.2 Monetary Policy Decision

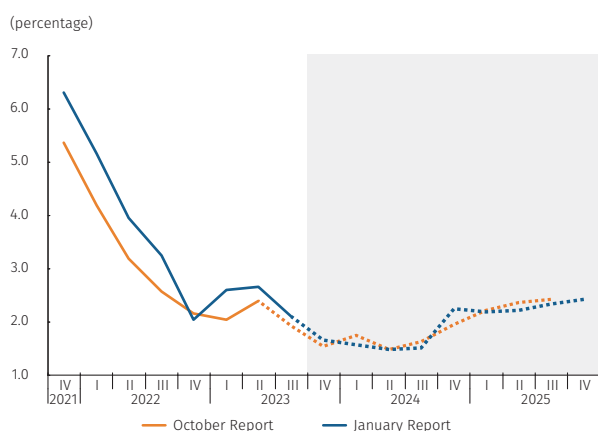
At its December 2023 and January 2024 meetings, the Board of Directors of *Banco de la República* (BDBR) opted by majority vote to reduce the monetary policy interest rate by 25 basis points in each meeting, bringing it to 12.75% (Graph 1.5).

2. Macroeconomic forecasts and risk analysis

2.1 International Outlook

2.1.1 Foreign Demand

Graph 2.1
Real GDP, main trade partners
(annualized change, projections according
to full-year assumption)^{a/}



a/ In December 2023, the Central Bank of Ecuador presented a historical update in the calculation of its national accounts, which implied a revision in the aggregate index of economic activity of Colombia's trading partners.
Sources: Bloomberg, statistics offices and central banks. Calculations, and projections by Banco de la República.

Table 2.1
Economic growth forecast of main trade partners^{a/}

Main Partners	2022 (pre)	2023 (proj)	2024 (proj)	2025 (proj)
United States	1.9	2.5	1.3	1.8
Eurozone	3.4	0.5	0.8	1.7
China	3.0	5.2	4.4	4.3
Ecuador	6.2	2.3	0.9	2.3
Brazil	3.0	3.1	1.6	2.0
Peru	2.7	-0.7	2.2	2.9
Mexico	3.9	3.4	2.2	2.0
Chile	2.4	0.0	1.9	2.4
WA trade partners ^{a/}	3.6	2.2	1.7	2.3

(pre): preliminary, (proj): projected

a/ Weighted average based on trade contribution.

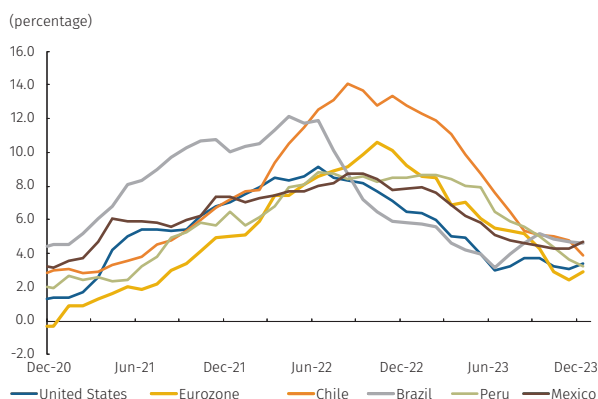
Sources: Bloomberg, Focus Economics, national statistics offices, and central banks (observed data), calculations and projections by Banco de la República.

The country's relevant external demand would slow further in 2024 before recovering in 2025 (Graph 2.1). In 2023, the deceleration in external demand proved to be less pronounced than anticipated in the October Report. This divergence can be attributed to the robust economic performance experienced by key trading partners, including the United States, Mexico, and Brazil¹, notwithstanding the economic downturns experienced in Peru, Chile, and Ecuador² and China's modest economic growth³ (Table 2.1). Looking ahead to 2024, the deceleration in external demand is expected to persist amidst heightened global uncertainty. This phenomenon is underscored by the cumulative impact of contractionary monetary policy measures, sluggish growth in international trade, and the persistence of geopolitical and trade tensions on a global scale. Concurrently, inflation levels are anticipated to linger above the target thresholds set by some central banks in advanced economies (Graph 2.2). Conversely, the trajectory of monetary policy adjustments (Graph 2.3) undertaken by some regional partners, notably Brazil, Chile, and Peru, is expected to continue, driven by the observed moderation in inflation and its expectations. Consequently, the growth forecast for trading partners in 2024 remains at 1.7%, signaling a deceleration compared to the 2.2% estimated for 2023⁴. Looking further into 2025, a rebound in growth to 2.3% is anticipated, albeit still trailing below historical averages. This recovery is contingent upon inflation converging towards target levels and central banks executing measures to normalize monetary policy. However, persisting high uncertainty continues to surround these projections, primarily driven by the effects of restrictive monetary policies on global economic activity, escalating geopolitical tensions, ongoing trade disputes at the international level, enduring structural challenges in China, and the potential disruptions stemming from adverse climatic events.

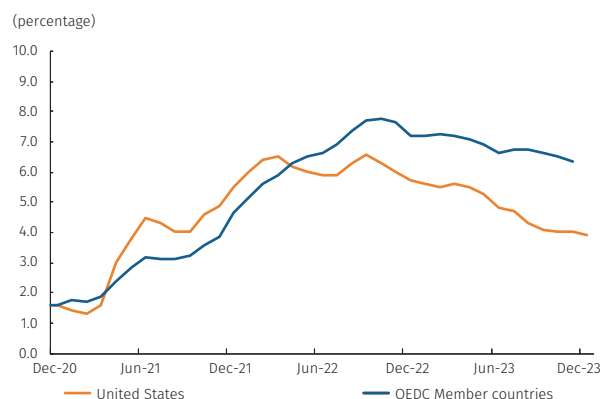
- 1 For the third quarter of 2023, U.S. real GDP grew by 4.9% quarterly annualized (q.a.), and preliminary data indicates that GDP for the fourth quarter increased by 3.3% quarterly annualized. In Mexico, investment has registered significant growth, while in Brazil exports have favored the good performance of its economic activity.
- 2 In December 2023, the Central Bank of Ecuador presented a historical update in the calculation of its national accounts, which implied a revision in the aggregate index of economic activity of Colombia's trading partners.
- 3 In the fourth quarter of 2023, the Chinese economy grew by 5.2% annually, below market expectations (5.3%). For the whole of 2023, growth was 5.2%, higher than the target set by the Chinese government (5.0%) but below its average between 2001 and 2022 (8.4%).
- 4 The October Report forecast a growth of 2.0% for 2023. The historical average annual growth of trading partners between 2001 and 2022 is 2.94%.

Graph 2.2
Inflation, select main trading partners

A. Headline Inflation



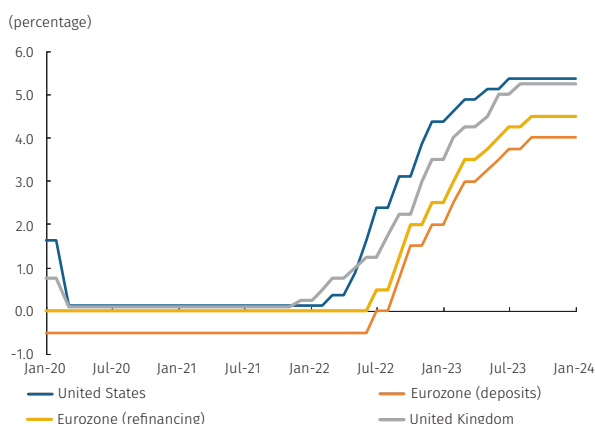
B. Inflation excluding food and energy



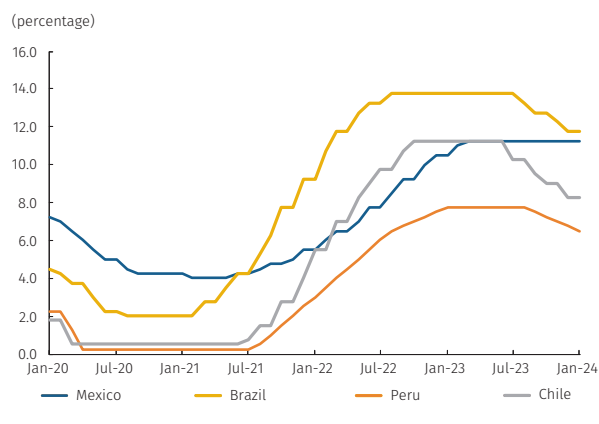
Source: Bloomberg and the Organization for Economic Development and Cooperation (OECD).

Graph 2.3
Monetary policy interest rate, select main trading partners

A. Developed Economies



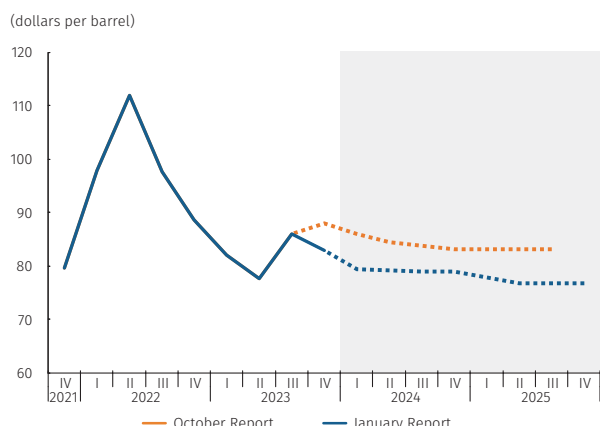
B. Latin America



Note: January 2024 includes data observed on the 24th of said month.
Source: Bloomberg.

2.1.2 International Prices

Graph 2.4
Assumed quarterly oil price



Source: Bloomberg, calculations and projections by Banco de la República.

The forecast horizon has seen a downward revision in oil prices from the previous Report, attributed to increased crude oil supply and moderated demand for certain derivatives (Graph 2.4). In the fourth quarter of 2023, the average Brent crude oil price was close to USD 83 per barrel (bl), marking a decline from the previous quarter. From the beginning of this year to January 24, prices have continued on a downward trajectory, averaging USD 78 bl. This descending trend can be partially attributed to heightened oil production in non-OPEC+ countries, notably the United States⁵. Additionally, improved gas supply in Europe, increased adoption of energy-efficient

5 Also, the observed and expected increase in production in Canada, Norway, Guyana, and Brazil, along with Iran's oil supply, which continues in the market.

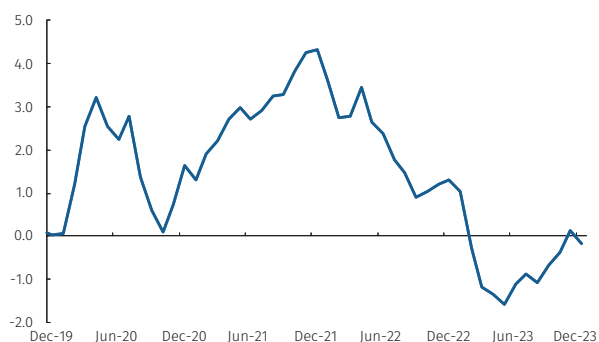
practices, and reduced demand for select derivatives have contributed to the downward adjustments in the international oil price trajectory outlined in this report. Nevertheless, the price decline is expected to be constrained by voluntary extraction cuts imposed by OPEC+ and demand sustained from economic activity in China and India. Accordingly, the projected average price for Brent is set at approximately USD 79 bl in 2024 (down from USD 84 bl in the October Report) and USD 77 bl for 2025. However, uncertainty over the path of oil prices remains high owing to geopolitical tensions and potential future decisions by OPEC+.

In 2024, a reduction in the terms of trade is anticipated, driven by lower prices of exported goods in US dollars. Forecasts indicate a steeper deterioration in Colombia's terms of trade for the current year compared to the previous Report's projections. This can be credited to downward revisions in average international price forecasts for key export commodities, including oil, coal, and coffee. However, this decline is expected to be partially mitigated by decreases in the price of intermediate goods imported by the country in US dollars.

In 2024, global inflation is expected to continue its downward course, albeit persisting above the targets set by some advanced economies' central banks. In November 2023, headline and core inflation rates among members of the Organization for Economic Cooperation and Development (OECD) stood at 5.4% and 6.3%, respectively, following a peak observed in October 2022 (10.7% for headline inflation and 7.8% for core inflation). This decline was primarily driven by reductions in energy and food prices, a deceleration in global demand, and the normalization of global supply chains (Graph 2.5). Conversely, the moderation of core inflation has been more gradual, owing to tight labor markets, wage growth outpacing observed inflation, and persistent pressures in the services sector. In its November report, the OECD forecasted an increase in the average headline inflation rate among G20 countries from 6.2% in 2023 to 5.8% in 2024 (previously projected at 4.8% by 2024⁶). In the United States, annual headline inflation rose from 3.1% in November 2023 to 3.4% in December 2023 due to a lesser decline in energy and the price of goods. Additionally, annual core inflation moderated from 4.0% in November 2023 to 3.9% in December (Graph 2.2). In the Eurozone, headline inflation increased to 2.9% in December 2023, up from 2.4% in the previous month, driven by base effects in the energy component. Core inflation in the Eurozone for the same period tempered to 3.4%, down from 3.6% in the previous month (Graph 2.2). Looking ahead to 2024, headline inflation in these economies is expected to decrease but remain above their respective tar-

Graph 2.5
Global Supply Chain Pressure Index^{a/}

(standard deviations from average value)



a/ For its construction, the authors used international shipping indicators (Baltic Dry Index (BDI), Harpex index, among others) and specific subcomponents of the Purchase Manager Index (PMI) surveys for the Eurozone, China, Japan, South Korea, Taiwan, the UK, and the US.

Sources: Benigno, di Giovanni, Groen, and Noble, "A New Barometer of Global Supply Chain Pressures" Federal Reserve Bank of New York Liberty Street Economics.

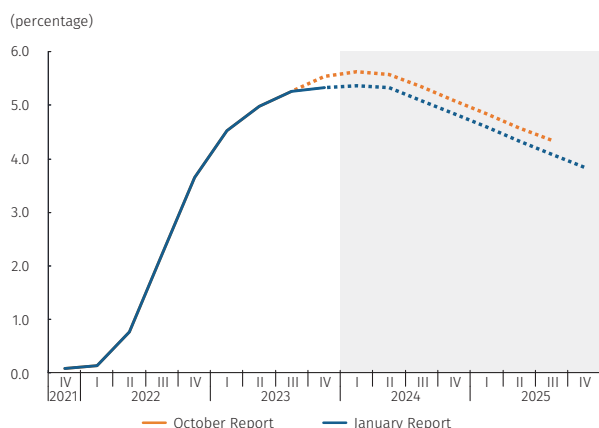
6 The upward revision in the inflation forecast by this organization is due to the expectation that energy and gasoline prices will remain high throughout 2024.

gets⁷; this is anticipated in a context of high uncertainty, with lingering risks of potential increases in international transportation costs stemming from issues in the Panama Canal and Suez Canal, as well as a less significant drop in the prices of goods compared to observed trends.

2.1.3 International Financial Developments

For 2024, it is anticipated that the U.S. monetary policy interest rate reductions will commence towards the latter half of the year. Furthermore, in 2025, this interest rate is expected to continue its decline (Graph 2.6). During its December 2023 meeting, the Federal Open Market Committee (FOMC) opted to maintain its monetary policy interest rate unchanged within a range of 5.25% to 5.50%⁸ for yearend. This decision persisted through the subsequent January 2024 meeting. The median of the latest FOMC projections now indicates a lower interest rate by the end of 2024, projected at 4.6% and 3.6% by the end of 2025 (down from 5.1% and 3.9% in the previous Report, respectively)⁹. These adjustments coincide with improvements in labor market dynamics, alongside mixed signals in recent inflationary trends¹⁰ and a deceleration in economic activity within the country. Moreover, in recent months, futures associated with the policy interest rate suggest an earlier and swifter reduction in this rate¹¹. Consequently, this Report envisages a Federal Reserve interest rate reduction commencing towards the end of the first semester, with an expected range of 4.50% to 4.75% by the end of 2024. In 2025, interest rate reductions are forecasted to persist, with rates expected to range between 3.50% and 3.75% by December of that year, aligning with the convergence of inflation towards its target.

Graph 2.6
Assumed U.S. Federal Reserve quarterly interest rate



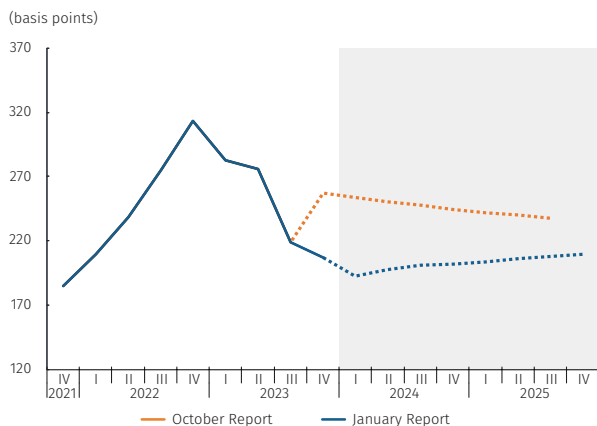
Source: Federal Reserve Bank of Saint Louis, calculations and projections by *Banco de la República*.

- 7 Conversely, in 2023, some countries in the region, such as Brazil, Chile, and Peru, presented significant reductions in their headline inflation levels. In addition, at the end of the year, twelve-month inflation expectations were within their target range.
- 8 At its January 25 meeting, the European Central Bank (ECB) kept its benchmark interest rates stable and the market is now contemplating reductions, which would begin in the first half of 2024.
- 9 Compared to the September Report, the median of the FOMC’s new projections revised downward the estimate of the implicit consumption deflator (PCE) for the end of 2024 and 2025, from 2.5% to 2.4% and from 2.2% to 2.1%, respectively. It also estimates lower real GDP growth for the end of 2024, from 1.5% to 1.4%, versus the previous Report.
- 10 Prior to the December 12-13 meeting in 2023, the FOMC noted a downward surprise in October headline and core inflation (3.2% and 4.0%, respectively) versus market expectations (3.3% for headline and 4.1% for core). However, after the meeting, headline (3.4%) and core (3.9%) inflation for December were above the market consensus (3.2% for headline and 3.8% for core).
- 11 For yearend 2024 and 2025, the futures associated with the monetary policy interest rate, taken on 24 January 2024, are situated at 4.10% and 3.48%, respectively, compared to 4.85% and 4.46% for those taken on 17 October 2023.

This represents a downward adjustment to the Federal Reserve’s interest rate projection for the entire forecast horizon. Uncertainty surrounding this variable remains heightened, driven by several factors, including the recent easing of international financial conditions, persistent apprehensions regarding fiscal sustainability in the United States, the lag effects of monetary policy on U.S. economic activity, and the ongoing geopolitical tensions.

In 2024 and 2025, Colombia’s risk premium is expected to remain above its historical average (Graph 2.7). Throughout the fourth quarter of 2023, major volatility indicators in international markets witnessed a significant moderation, reverting to pre-pandemic levels. This, coupled with the end of the cycle of policy rate hikes in advanced economies, the recent decline in long-term interest rates on debt securities and credit spreads, the improvement in stock indexes, and the alleviation in inflation expectations, among other factors, has resulted in more accommodating international financial conditions. Consequently, the risk premiums of numerous emerging countries experienced substantial declines (Graph 2.8, panel A). For Colombia, the average five-year credit default swap (CDS) decreased from 219 basis points (bp) in the third quarter of 2023 to 208 bp in the fourth quarter, further dropping to 174 bp as of January 24 this year. Similarly, the currencies of regional countries, excluding Chile, appreciated as of January 24 this year relative to their averages during the fourth quarter of 2023 (Graph 2.8, panel B). Aligned with these trends, a lower trajectory for the risk premium is forecasted compared to the October Report, averaging 198 bp in 2024 (down from the 249 bp projected previously) and 207 bp in 2025. This path accounts for local factors such as the reduction of the current deficit, persistent uncertainty surrounding domestic economic policy linked to pending reform bills before Congress, and

Graph 2.7
Colombia's assumed quarterly risk premium (CDS) ^{a/}



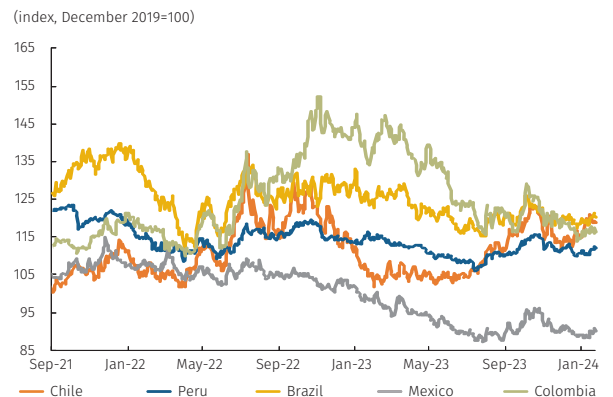
a/ Five-year credit default swaps
Source: Bloomberg, calculations and projections by Banco de la República.

Graph 2.8
Behavior of nominal exchange rate and risk premium for select Latin American countries

A. Five-year credit default swaps



B. Nominal exchange rate



Note: Data to 24 January 2024
Source: Bloomberg, calculations by Banco de la República.

risks associated with the evolution of fiscal accounts and their implications on public debt levels, which are not expected to regain investment grade status or pre-pandemic levels within the next two years. Additionally, the trajectory considers elevated global uncertainty and the presence of geopolitical conflicts on the global stage.

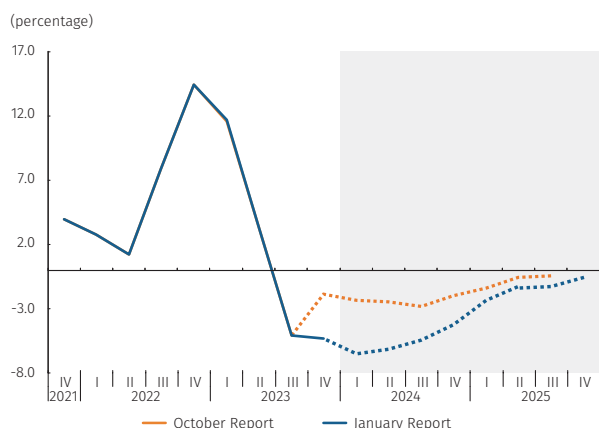
2.2 Macroeconomic Projections¹²

2.2.1 Inflation

Consumer inflation is projected to continue on track toward convergence with the long-term target, albeit more gradually than expected in the previous Report. For the years 2024 and 2025, favorable conditions are expected to facilitate the continued gradual reduction of inflation until it reaches the 3.0% target. These conditions consider the stance of monetary policy, negative output and real exchange rate gaps (Graph 2.9), moderation in inflation expectations, and the complete dissipation of supply shocks. The latter is anticipated due to an expected decline in international commodity prices, including oil and imported manufactured goods. However, owing to the past accumulated price pressures and their resulting inertia on inflation in Colombia, inflation is projected to remain above the target throughout 2024, converging to 3.0% by mid-2025. Compared to the October Report, the delay in convergence is attributed to higher labor costs expected in 2024, sharper increases in electricity tariffs observed towards the end of 2023, and inflation persisting more than anticipated, particularly in the services and regulated item baskets. This is anticipated to result in slower inflationary reductions during 2024. Nevertheless, it is foreseen that the anticipated monetary policy stance would be conducive to achieving the target by 2025. These forecasts also consider the potential impact of an *El Niño* phenomenon, with transitory and moderate effects on inflation, as well as estimated effects of health taxes and observed and anticipated increases in fuel prices. Notably, in the case of diesel (ACPM, for its acronym in Spanish)¹³, these increases are expected to affect both cargo and passenger transportation directly. With these considerations, total annual inflation is forecasted to reach 5.9% and 2.8% by the end of 2024 and 2025, respectively (Graph 2.10).

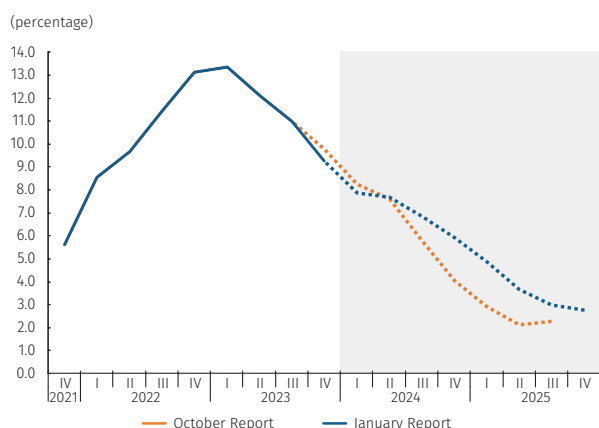
The decline in headline inflation would go hand in hand with a significant moderation in core inflation, which would also converge to 3.0% over the forecast horizon. This is due to a rapid

Graph 2.9
Quarterly RER inflationary gap^{a/}
(annual change, end-of-period)



a/ The real exchange rate (RER) inflationary gap captures inflationary pressures caused by the exchange rate. Positive values imply upward inflation pressures. The gap is calculated as the deviation in the real exchange rate relative to a non-inflationary trend estimate under the 4GM monetary policy model.
Source: Banco de la República.

Graph 2.10
Consumer Price Index (CPI)
(annual change, end-of-period)

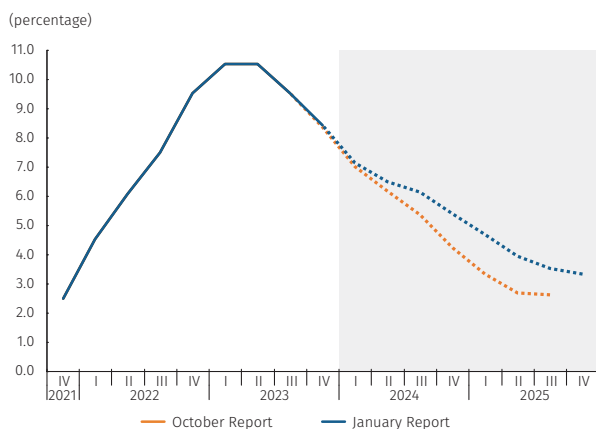


Source: DANE, calculations and projections by Banco de la República.

12 Projections assume active monetary policy wherein Banco de la República's monetary policy interest rate is adjusted to guarantee compliance with the inflation target.

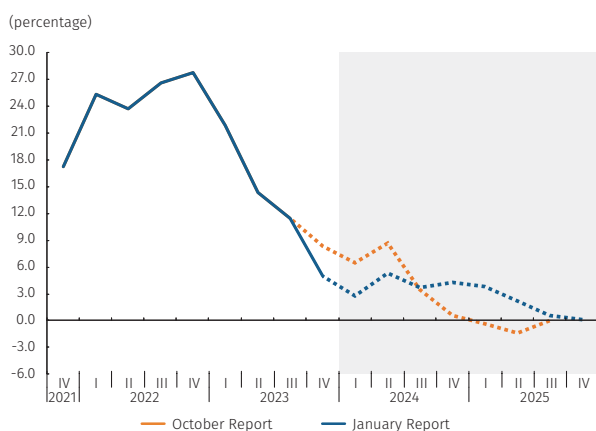
13 The price of ACPM is expected to start increasing at the end of the first quarter of this year and into the beginning of 2025 in order to close the gap with the international price.

Graph 2.11
CPI excluding food and regulated items
(annual change, end-of-period)



Source: DANE, calculations and projections by Banco de la República.

Graph 2.12
CPI for foods
(annual change, end-of-period)



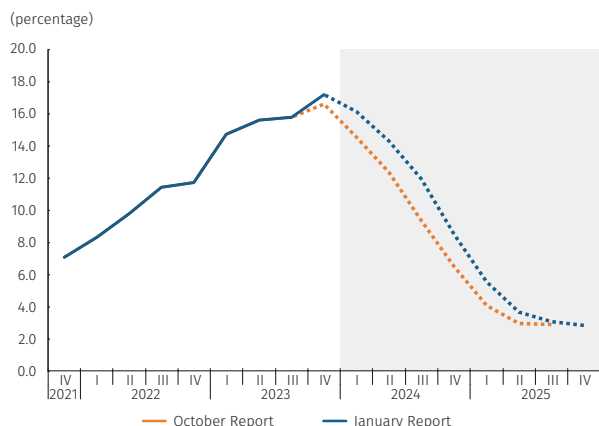
Source: DANE, calculations and projections by Banco de la República.

fall in the annual change in the CPI for goods, which would approach levels close to 3.0% by mid-2024. Compared to the October Report, there have been no significant changes in the anticipated trajectory for the goods basket, which is expected to continue benefiting from reductions in certain international prices, moderation in global inflation, and exchange rate dynamics. However, the annual change in the CPI for services is expected to exhibit a slower decline, with projections suggesting it will continue above 4.0% by the end of 2025. These trends are influenced by various factors outlined earlier, including the impact of price indexation mechanisms and the stickiness observed in significant components such as rents. The upward revision in this basket is also attributed to heightened labor costs linked to a larger-than-anticipated increase in the minimum wage, greater adjustments observed in utilities, evidence of increased inflationary persistence in service prices towards the end of 2023, and a higher inflation forecast for yearend 2024, which would exert upward pressure on 2025 via indexation mechanisms. Consequently, the forecast trajectory for annual core inflation has been adjusted upwards, with estimates now standing at 5.4% at the end of 2024 and 3.3% at the close of 2025 (Graph 2.11).

Food prices are expected to continue contributing to the decline in inflation throughout 2024 and 2025. This trend is underpinned by favorable domestic supply conditions and the absence of significant pressures stemming from input costs and imported agricultural products. However, it is anticipated that the current *El Niño* phenomenon will temporarily disrupt the downward trajectory of the annual variation in the CPI for food at around mid-2024 yet have moderate effects on prices, aided by a low statistical base of comparison. The projected path also accounts for the impacts of health taxes and rising labor and freight costs, the latter due to the announced adjustment in the price of diesel (ACPM). Compared to the previous Report, the forecast for the first half of 2024 has been revised downwards, reflecting sharp price declines observed towards the end of 2023, which suggests more favorable supply conditions than initially anticipated. Conversely, changes in production cycles identified from available information for certain perishable foods have led to an upward adjustment in the forecast path for the end of 2024 and the beginning of 2025. Accordingly, it is expected that the annual change in the CPI for food reach 4.3% and 0.1% by the end of 2024 and 2025, respectively (Graph 2.12).

Changes in the CPI for regulated items are anticipated to continue exerting upward pressure in 2024, although to a lesser extent than in 2023, gradually declining throughout the forecast horizon. The annual variation of the CPI for regulated items is expected to consistently surpass headline inflation figures until mid-2025 when a declining trend would commence. This behavior accounts for the effects of price indexation at still high though slightly lower rates, alongside

Graph 2.13
CPI for regulated items
(annual change, end-of-period)



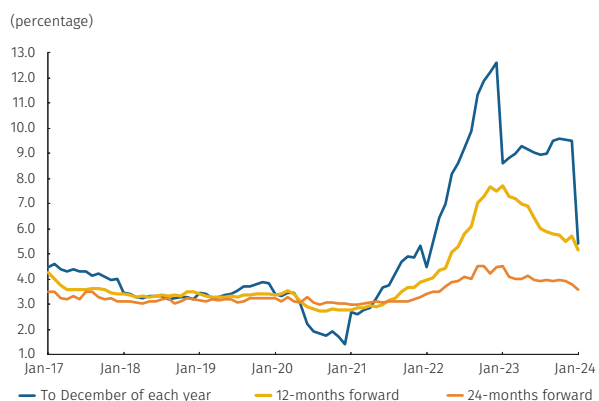
Source: DANE, calculations and projections by Banco de la República.

significant adjustments in items associated with transportation. In forecasting the fuel CPI, consideration was given to the observed closure of the gap between the domestic price of gasoline and its international counterpart, with expectations for this alignment to persist in line with the referenced factors. The forecast path has been revised upwards compared to the October Report, bolstered by higher-than-projected increases in electrical energy prices towards the end of 2023, greater hikes in transportation costs, and a heightened role of indexation in 2025, as a result of a higher anticipated level of inflation by yearend 2024. Consequently, the annual variation of the CPI for regulated items is forecasted to reach 8.5% by the end of 2024 and 2.9% by the end of 2025 (Graph 2.13).

Short-term inflation expectation indicators persist notably above the target yet approach the target in the medium and long terms. Since October, there has been a discernible decline in certain indicators.

The expectations of economic analysts, obtained from the monthly survey conducted by *Banco de la República* between January 11 and 15 (Graph 2.14), suggest a year-end total median inflation expectation excluding food to stand at 5.4% by the end of 2024, mirroring the forecasts from the October survey (5.3% and 5.4%, respectively). By the end of 2025, these projections fall to 3.8% and 3.7%, respectively. Two- and five-year ahead inflation expectations reflect median expectations of 3.6% (compared to 4.0% in October) and 3.0% (unchanged from October), respectively. Furthermore, as of January 25, estimates derived from public debt bond data, adjusted for inflation and liquidity risk premiums (break-even inflation: BEI), indicate lower inflation expectations. The two, three, and five-year ahead expectations are recorded at 5.2%, 4.8%, and 4.4%, respectively, as compared to figures from October (6.0%, 5.6%, and 4.9%, respectively).

Graph 2.14
Bank and stockbroker inflation forecast ^{a/}



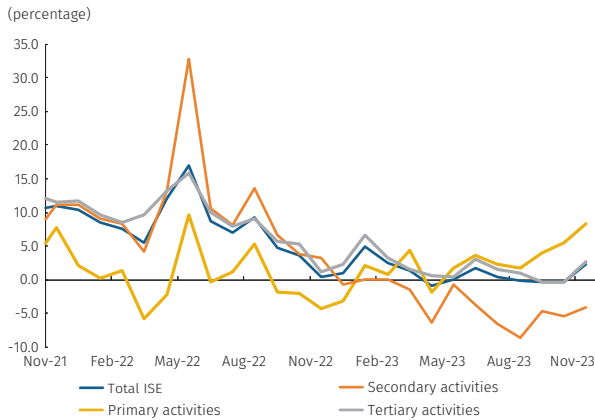
^{a/} Corresponds to the median response of the *Monthly survey of economic analyst expectations* conducted by Banco de la República.
Source: DANE, calculations and projections by Banco de la República.

2.2.2 Economic Activity

During the final months of 2023, economic activity would have exhibited lower-than-anticipated levels, prompting a downward revision in growth forecasts for the fourth quarter and the year as a whole.

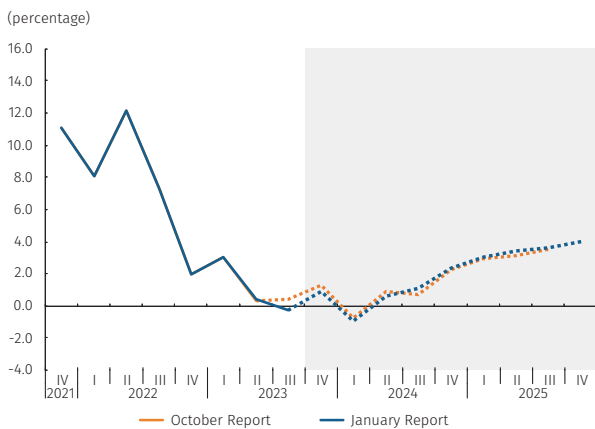
Available indicators, notably the Economic Tracking Indicator (ISE; Graph 2.15) to November and a few indicators to December, such as energy demand, the movement of solid bulk cargo along Colombian roads, and commercial bank transactions, suggest a marginal decrease in economic activity compared to the preceding quarter. This would translate to an annual growth rate of approximately 0.9% for the fourth quarter, down from the previous Report's 1.2%, although remaining positive due to the comparably weak performance observed a year earlier (Graph 2.16). On the supply side, secondary sectors, particularly manufacturing and construction, continue to display restrained performance, marked by consecutive declines in manufacturing activity and very low levels of construction dynamics, both in built-

Graph 2.15
Economic Tracking Indicator (ISE), and ISE by sectors ^{a/, b/}
(annual change)



a/ Seasonally adjusted and corrected for calendar effects
b/ Primary activities: agriculture, hunting, forestry and fishing, mine and quarry exploitation. Secondary activities: manufacturing industries and construction. Tertiary activities: electricity, gas, and water supply; commerce, repairs, transportation, and lodging; information and communications, financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support services; public administration and defense, education and health; arts and entertainment.
Source: DANE, calculations and projections by Banco de la República.

Graph 2.16
Quarterly GDP ^{a/}
(annual change)



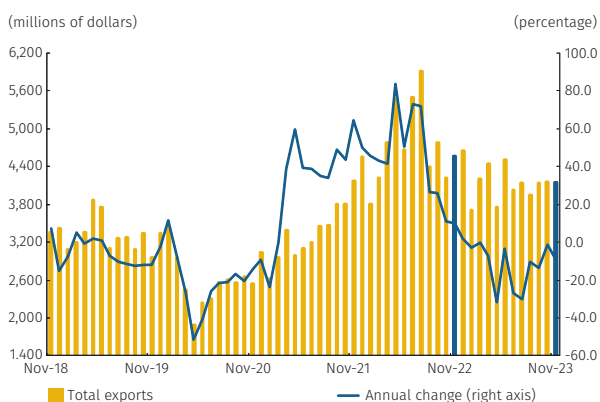
a/ Seasonally adjusted and corrected for calendar effects.
Source: DANE, calculations and projections by Banco de la República.

dings and civil works. Conversely, primary and tertiary sectors are anticipated to record positive annual growth, buoyed by increased activity in agricultural production, including coffee and livestock, as well as potential stimulus from large-scale concerts and events, such as the Bogota Automobile Show, that drive the commercial services, lodging, and cultural and entertainment sectors. Considering the aforementioned factors, the Colombian economy is expected to register a modest annual growth of 1.0% throughout 2023, slightly below the 1.2% projection in the previous Report.

The continued downturn in economic activity can largely be attributed to a significant deterioration in investment dynamics. Throughout the fourth quarter, gross fixed capital formation would have recorded the largest annual and quarterly decrease. The decline in this segment would have been concentrated in the transportation equipment category. It is worth noting that investment in machinery and equipment had reached historically high levels in 2022, and despite the reduction observed in 2023, including the fourth quarter, its levels remain elevated compared to pre-pandemic levels. Construction investment is also expected to exhibit lackluster performance by yearend, with subdued annual growth in the housing sector and continued annual contraction in civil works and other infrastructure projects, maintaining levels significantly below those before the pandemic. Furthermore, for the fourth quarter, a significant annual decline in gross capital formation is expected, notably larger than that of fixed investment, primarily driven by recent trends in the inventory variation component, alongside its associated statistical discrepancy. Consequently, this component is anticipated to be the primary driver of the annual decline in domestic demand.

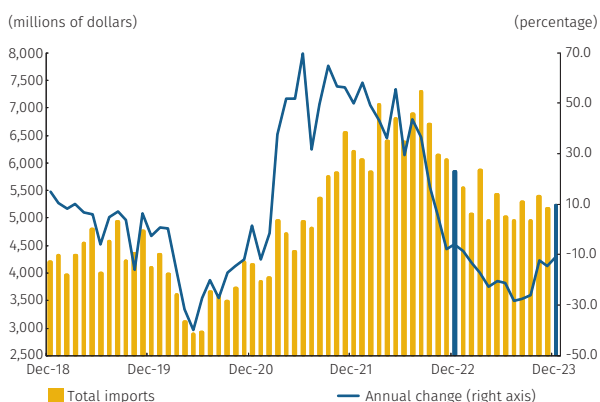
Private consumption is expected to continue its gradual slow-down in the fourth quarter, a trend likely offset by improved performance in public consumption. For this quarter, a nearly zero annual variation and a marginal decline in private consumption levels are expected, as indicated by various available metrics, including the tertiary Economic Tracking Indicator (ISE), retail sales, transaction data from select commercial banks, consumer credit disbursements, and imports of durable consumer goods. It is noteworthy that the restraint in private consumption has persisted against a backdrop of limiting financial conditions, with a more pronounced impact on goods consumption compared to services. The latter has remained robust, buoyed by high levels of entertainment-related activities occurring in the latter part of the year. Despite these trends, private consumption is expected to remain substantially elevated, approximately 18% higher than pre-pandemic levels. Public consumption is expected to witness a slight quarterly uptick, partially attributed to expenditures associated with regional and local elections held in October. The annual acceleration of this component, largely attributed to a low base of comparison, is expected to offset the moderation

Graph 2.17
Total goods exports (FOB)
(monthly)



Source: DANE, calculations by Banco de la República.

Graph 2.18
Total goods imports (CIF)
(monthly)



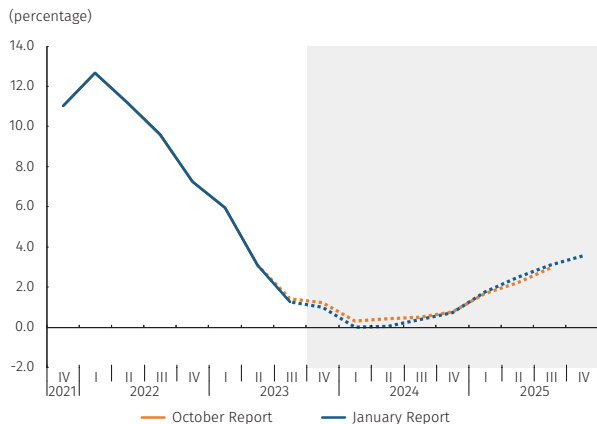
Source: DANE and DIAN (preliminary foreign trade data); calculations by Banco de la República.

in private consumption, thereby sustaining total consumption growth at levels similar to those observed in the preceding two quarters.

It is anticipated that net external demand will continue contributing positively to annual GDP growth. By the fourth quarter of 2023, exports in constant pesos are estimated to have stabilized at levels similar to the previous quarter, facilitating annual growth (Graph 2.17). Both exports of goods and services are expected to remain relatively steady at the margin. Notably, the latter is expected to benefit from continued inbound tourism, as indicated by data on arrivals to the country. Conversely, preliminary figures from the National Tax and Customs Authority (DIAN) as of December (Graph 2.18) suggest that imports would have registered levels akin to the third quarter, albeit with a significant annual decline due to a high base of comparison. In the fourth quarter, purchases of durable consumer and capital goods are projected to decrease compared to the previous quarter, while imports of intermediate goods are anticipated to increase over the same period. As a result, the trade deficit in constant pesos is expected to remain at levels similar to the third quarter, which, in any case, are lower than those observed in 2022 and even pre-pandemic levels.

In 2024, the economy is expected to maintain a sluggish growth pace, consistent with previous forecasts, and see a projected recovery in 2025, in line with the convergence of inflation towards the 3.0% target and GDP towards its potential level. The central scenario envisages a gradual reduction in external interest rates, a contractionary domestic monetary policy for a significant portion of the forecast period, and persistently low confidence indices among consumers and business owners. These factors collectively suggest that economic activity will sustain a modest growth trajectory throughout 2024. However, as inflation approaches the target, domestic financing conditions are anticipated to ease, fostering a rebound in the growth rate. This recovery is expected to be more pronounced in 2025, bolstered by growing external demand. Against this backdrop, total consumption in early 2024 is projected to remain stable compared to 2023 levels, with the public sector contributing more to growth than the private sector. As the year progresses, total consumption is forecasted to resume growth, driven by a resurgence in private consumption alongside continued expansion in public expenditure. Regarding investment, the subdued activity observed in 2023 is anticipated to persist at least during the initial half of the year, primarily attributed to reduced investment in housing and machinery and equipment. However, a gradual positive trajectory is envisaged for the latter half of 2024, buoyed by the reactivation of civil works, advancements in 5G infrastructure projects, and local investment initiatives such as the Bogota subway project, among others. Nonetheless, investment levels in civil works are expected to remain relatively low. In 2024, the contribution of net external demand to GDP

Graph 2.19
GDP, four-quarter cumulative a/
(annual change)

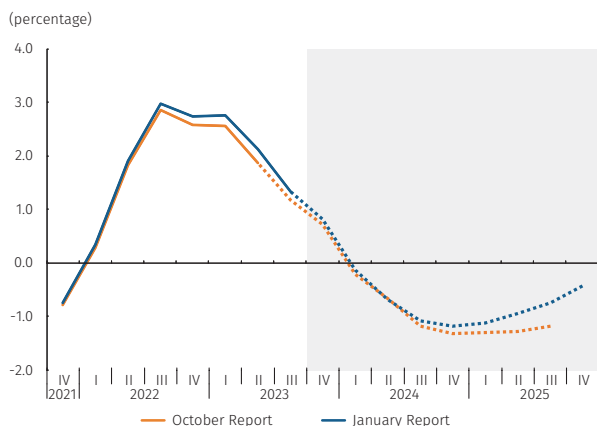


a/ Seasonally adjusted and corrected for calendar effects.
Source: DANE, calculations and projections by Banco de la República.

growth is expected to diminish significantly compared to previous years, owing to moderate export growth and no further declines in imports. Accordingly, the Colombian economy is forecasted to expand by 0.8% throughout 2024 (Graph 2.19), mirroring the projections of the previous Report, with output levels forecast to remain below potential GDP. Looking ahead to 2025, the economy is poised to enter a more pronounced recovery phase, driven by reduced domestic financing costs and heightened dynamism in domestic demand and exports, paving the way for an anticipated annual growth rate of 3.5%.

In 2024, the unemployment rate (UR) is anticipated to rise in line with the economic slowdown. The information available as of November from the Integrated Household Survey (GEIH for its Spanish acronym) indicates a labor market experiencing a fall in employment, primarily driven by the non-salaried segment. Moreover, recent months have seen an increase in the inactive population, leading to a decrease in the global labor force participation rate (GPR) to 63.9%. Consequently, despite a reduction in labor supply, the national UR for the rolling quarter ending in November rose compared to October, reaching 10.0%¹⁴. Given the recent labor market dynamics and the economic activity projections in this Report, the seasonally adjusted national UR is expected to increase in 2024, averaging between 9.3% and 12.4%, with 10.8% being the most likely value. For the urban area, the unemployment rate is expected to rise throughout 2024, with 10.5% as the most likely value (between 9.0% and 12.1%). These projections signify an upward revision compared to the October forecast, attributable to the deteriorating labor market conditions observed in the final quarter of 2023. Given these developments, estimates of a UR consistent with stable inflation (Nairu: non-accelerating inflation rate of unemployment) suggest a convergence towards its long-term value over the forecast horizon. This would serve to mitigate inflationary pressures linked to wage costs from labor market dynamics, although regulatory pressures, particularly due to minimum wage adjustments, would persist.

Graph 2.20
Output gap a/
(four-quarter cumulative)

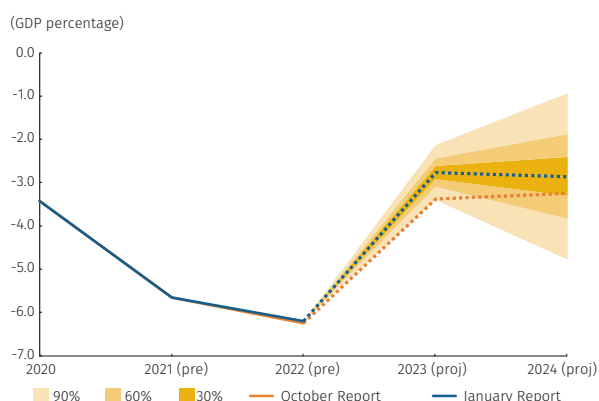


a/ The historical estimate of the output gap is calculated as the difference between observed GDP (four-quarter cumulative) and potential GDP (trend; four-quarter cumulative) from the 4GM model; for the forecast, it is calculated as the difference between the technical staff's GDP estimate (four-quarter cumulative) and potential GDP (trend; four-quarter cumulative) from the 4GM model.
Source: DANE, calculations and projections by Banco de la República.

The moderation in economic growth throughout 2023 facilitated a significant reduction in the economy's excess demand, a process anticipated to conclude by early 2024. Accordingly, the output gap is forecasted to shift into negative territory during this period, with the excess productive capacity nearing dissolution by the end of 2025, aligning with heightened economic activity. In the fourth quarter of 2023, the annual output gap continued narrowing, driven by adjustments in domestic demand and amid persistently tight domestic financial conditions. The central scenario foresees an annual output gap by the end of 2023, similar to that of the previous Report, standing at 0.8% (Graph 2.20). Subsequently, from the second quarter of 2024 onwards, the gap is expected to transition

14 See Chapter 3 of this Report for additional information.

Graph 2.21
Annual current account ^{a/, b/}
(four-quarter cumulative)



(pre): preliminary, (proj): projected
 a/ The graph displays the probability distribution and its most likely path for 2023 and 2024. Densities characterize the balance of potential risks with areas of 30%, 60%, and 90% probability around the central forecast (mode), using primarily as a reference the densities from the Patacon model.
 b/ The probability distribution is derived from the forecasting exercise of the January Report.
 Source: Banco de la República.

into negative territory and is projected to reach approximately 1.2% by the year’s end. Looking ahead to 2025, the output gap is anticipated to diminish faster than expected, nearing dissolution by the year’s end, primarily attributed to a less restrictive monetary policy stance. These estimates also incorporate potential growth (reflected in four-quarter cumulative GDP) akin to that outlined in the preceding Report across the forecast horizon, standing at 2.8% for both 2024 and 2025. It’s important to note that the uncertainty surrounding these estimates remains high due to internal and external risks, as mentioned in other sections of this Report.

2.2.3 Balance of Payments

In 2023, the current account deficit is projected to have contracted to 2.8% of GDP, marking a significant correction compared to the 6.2% of GDP recorded in 2022 (Graph 2.21)¹⁵. This adjustment underscores the moderation of domestic demand and reduces the economy’s susceptibility to external shocks. The adjustment of the trade deficit is expected to be the primary driver in this reduction in external disparity in 2023. Specifically, this involves a decline in imports within the context of an economic slowdown, low investment levels, and a moderation in domestic demand. Additionally, the normalization of international prices for raw materials further reinforced this trend. Specifically, imports experienced a more significant reduction than exports, driven by lower traditional export goods prices¹⁶. Moreover, the correction of the services deficit also played a role in rebalancing the current account in 2023. The export of services benefited from the robust performance of the tourism sector, which surpassed pre-pandemic levels. Conversely, imports of services declined due to lower international freight costs. The lower factor income deficit is also instrumental in closing the external disparity, driven by elevated yields on international reserves and reduced profits remitted abroad by companies with foreign direct investment (FDI), which offset higher interest payments on external debt. Lastly, increased workers’ remittances bolstered the surplus in current transfers, resulting in a substantial surplus¹⁷ in this category.

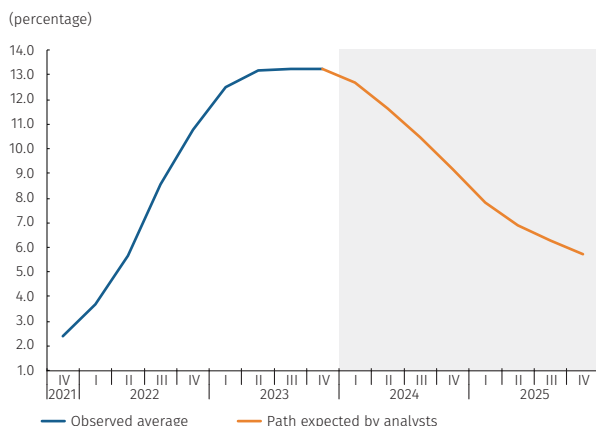
A current account deficit of 2.9% of GDP is anticipated for 2024. The marginal widening of the deficit primarily stems

15 For the fourth quarter of 2023, a current account deficit of close to 2.9% of GDP is expected, lower than the 5.8% of GDP observed in the same period of 2022. Year-end figures would be mainly explained by the lower deficit forecast for factor income and the reduction in the services deficit.
 16 Special aircraft re-export operations limited a further decline in export revenues.
 17 Workers’ remittances are expected to increase in 2024 due to high levels of Colombian migration abroad observed in 2022 and 2023, as well as tight labor markets in several countries where Colombian migrants reside.

from a more significant trade imbalance in goods, influenced by further declines in international prices of essential commodities such as coal, oil, and coffee¹⁸. Although imports are expected to continue decreasing, albeit at a slower pace due to subdued economic growth and lower global commodity prices. The increase in the current account deficit is anticipated to be restrained by continued robust growth in tourism exports, normalization of freight costs, lower profits for select foreign direct investment (FDI) companies, and high levels of workers' remittances. Regarding savings and investment aggregates, the deficit correction observed in 2023 aligns with reductions in the public sector imbalance and adjustments in investment patterns alongside the deceleration of private sector consumption. However, for 2024, the expected widening of the external imbalance is mainly explained by the slight recovery of private investment. It is worth noting that uncertainty surrounding current account forecasts is linked to variables such as the future evolution of international commodity prices, international financial conditions, the cost of external financing, and the degree of adjustment in domestic demand, among other factors.

Similar to 2023, in 2024, Foreign Direct Investment (FDI) would remain the primary source of external financing, albeit with a declining trend. Throughout 2023, the nation sustained access to external resources, with FDI maintaining its pivotal role in financing. This was facilitated by reduced financing requirements in the public sector owing to fiscal adjustments, while the private sector accumulated assets abroad. Moving into 2024, FDI is expected to persist as the principal financing source, yet at reduced levels compared to the previous year, reflecting a backdrop of subdued growth and lower international commodity prices. Access to external resources in both years occurs in an environment of higher long-term interest rates in the United States compared to pre-pandemic levels, alongside a Colombian risk premium remaining above historical averages.

Graph 2.22
Monetary policy interest rate: average observed quarterly and rate expected by analysts ^{a/}



a/ These projections are calculated considering the quarterly average of the current rate according to the median response of the *Monthly survey of economic analyst expectations* conducted by Banco de la República for January 2024. Source: Banco de la República.

2.2.4 Monetary Policy and Interest Rates Expected by Analysts

The median analyst expectation for the first-quarter policy interest rate is 12.7% for 2024 and would reach an average of 9.2% for the fourth quarter of the year (Graph 2.22). The median response to Banco de la República's monthly survey of analyst expectations, conducted at the beginning of January, indicates that the policy interest rate during the first quarter of 2024 is expected to stand at 12.7% and to gradually decrease throughout 2024, reaching 9.2% in the fourth quarter of that year. Looking ahead, at the end of the two-year horizon, analysts foresee the prevailing policy rate to stand

18 In addition to this, there will be no one-off operations such as aircraft re-exports in 2023.

at 5.8%¹⁹. The policy interest rate path outlined in the Bank's technical staff forecast, as presented in this Report, is consistent with the announcement made by the Board of Directors in November 2024, wherein inflation is anticipated to stand around 3.0%, within a range of plus or minus one percentage point over a twelve to eighteen-month horizon. This trajectory, on average, is higher than that predicted by the market's expectations over the forecast horizon, according to the January 2024 survey. It is worth noting that, by yearend 2024, analysts anticipate higher inflation and growth rates relative to the figures projected by the Bank's technical staff.

2.3 Balance of Macroeconomic Risks

The current risk balance is characterized by elevated levels of uncertainty, particularly regarding inflation, which maintains an upward bias. The predictive densities (PD) exercise²⁰, designed to evaluate the risk balance across multiple variables within the macroeconomic forecast, continues to reflect a heightened state of uncertainty concerning the various elements influencing economic behavior and shaping the macroeconomic scenario. On the external front, this Report continues to outline high levels of uncertainty concerning oil prices, external financial conditions, the economic activity dynamics among trading partners, and global food prices, in a context of armed conflicts, escalating trade tensions, and persistent uncertainty regarding local economic policies and their impact on the country's risk perception. On the domestic front, risks are skewed towards the upside regarding the impact of climatic shocks on inflation and the level of persistence of inflation in some baskets, notably in services. Additionally, the risk balance on economic activity growth has a downward bias, largely due to the potential for an extended restrictive policy stance given the lingering upside risks on inflation, alongside uncertainty surrounding the evolution of local economic policies.

Externally, notable risk factors include geopolitical conflicts, the fracturing of international trade, and potential increases in the cost of external financing. The PD exercise incorporates a moderate downside risk to global growth and a moderate upside risk to Colombia's sovereign risk premium. Geopolitical tensions, ongoing trade fragmentation, and a subdued economic outlook in China explain the former, while the latter stems from indirect effects of geopolitical tensions, heightened uncertainty regarding fiscal policies and public debt dynamics, and recent announcements affecting rating agencies' outlooks. Oil prices, the Federal Reserve's interest rate, and external inflation are deemed as balanced risks. Upside risk factors for oil prices, such as escalated war conflicts, are counterbalanced by downsides linked to the termination of OPEC+ production agreements and potential economic slowdown in China. Similarly, while transport costs and a higher neutral rate pose upside risks to the Fed interest rate, potential slowdowns in U.S. economic growth or financial stability issues present downside risks. External inflation confronts upside risks from trade fragmentation and an escalation of

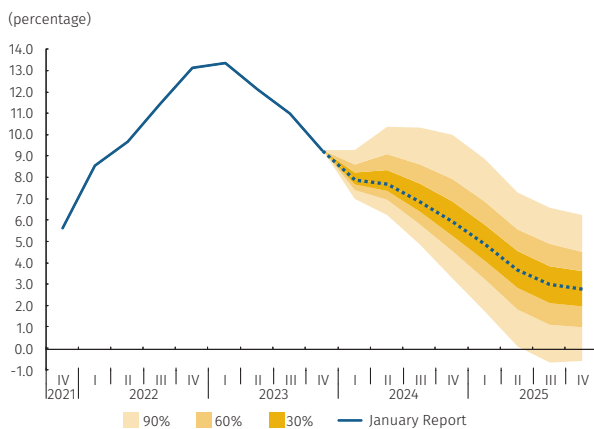
19 Corresponds to the current monetary policy interest rate expected by the median of analysts for the average of the fourth quarter of 2025.

20 Technical details on the construction of the risk balance through the predictive density exercise can be found in the paper "*Caracterización y comunicación del balance de riesgos de los pronósticos macroeconómicos: un enfoque de densidad predictiva para Colombia*" (Méndez-Vizcaíno et al., 2021) and in Box 1 of the July 2021 Monetary Policy Report.

geopolitical tensions, mitigated by potential greater-than-estimated slowdowns in global growth.

Trajectories for both headline and core inflation are predominantly influenced by upside risks, primarily associated with the impact of climatic shocks on inflation and the level of persistence of inflation in the services basket (Graphs 2.23 and 2.24). The predictive densities (PD) exercise on prices involves the amalgamation of factors contributing to upside risks in inflation, with their relevance varying across different baskets. Specifically, the potential for the *El Niño* phenomenon to have more pronounced effects than initially envisioned introduces upside risks in food, regulated items, and services inflation, mainly through food away from home. These risks are anticipated to persist until the second half of 2024, after which they are expected to diminish. On the other hand, upward pressures stemming from more substantial increases in labor costs, resulting from a greater pass-through of minimum wage adjustments to other wages beyond what is envisaged in the central path, introduce upward risks across most baskets, notably in services. Moreover, services inflation faces the risk of heightened persistence in elevated adjustments, fueled by increased indexation mechanisms amidst high inflation and robust activity levels in the services sector.

Graph 2.23
Consumer price index, predictive density ^{a/, b/}
(annual change, end-of-period)



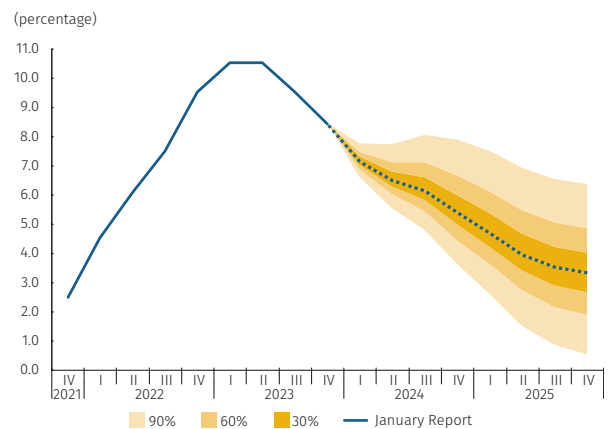
	4Q 2024	2Q 2025	4Q 2025
Mode	5.9	3.7	2.8
< Mode	39%	50%	51%
Intervals			
<2	0.8%	22.5%	36.0%
2 to 4	9.6%	33.8%	36.5%
>4	89.6%	43.7%	27.5%

a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60%, and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models.

b/ The probability distribution is derived from the forecasting exercise of the January Report.

Source: DANE; calculations and projections by Banco de la República.

Graph 2.24
CPI excluding food and regulated items, predictive density ^{a/, b/}
(annual change, end-of-period)



	4Q 2024	2Q 2025	4Q 2025
Mode	5.4	3.9	3.3
< Mode	40%	45%	48%
Intervals			
<2	0.2%	8.7%	20.8%
2 to 4	8.8%	37.0%	41.8%
>4	91.0%	54.2%	37.3%

a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60%, and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models.

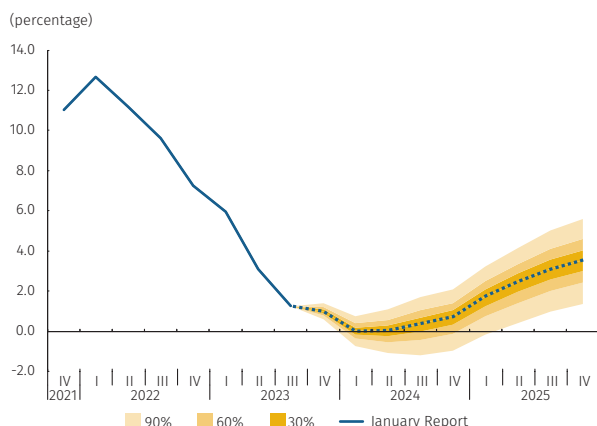
b/ The probability distribution is derived from the forecasting exercise of the January Report.

Source: DANE; calculations and projections by Banco de la República.

The GDP growth trajectory exhibits a downward bias across the forecast horizon (Graph 2.25). This inclination primarily stems from upside biases on inflation, which pose the risk of necessitating a more extended period of tight monetary policy to ensure convergence of inflation to the target. It is worth highlighting that upside risks to both domestic and external financing conditions contribute to a downward bias on investment. Subdued levels of observed and projected investment represent a downside risk to the economy’s growth trend. Consequently, the growth trajectory and the output gap manifest downside risks throughout the forecast horizon (Graph 2.26).

In summary, the risk balance maintains relatively high levels of uncertainty, characterized by an upward bias for inflation and a downward bias for growth across the forecast horizon. In this context, there is a 90% probability that headline inflation will fall between 3.2% and 10% by the end of 2024 and between -0.6% and 6.2% by the end of 2025. Similarly, with the same degree of certainty, core inflation would fall between 3.6% and 7.9% at the end of 2024 and between 0.6% and 6.4% for the fourth quarter of 2025. The probabilities that headline and core inflation will be below 4.0% by the fourth quarter of 2024 stand at 10% and 9.0%, respectively, increasing to 73% and 63% by the end of 2025. Regarding economic activity, with a 90% probability, annual GDP growth is estimated to fall between -1.0% and 2.0% for 2024 and between 1.4% and 5.6% for 2025.

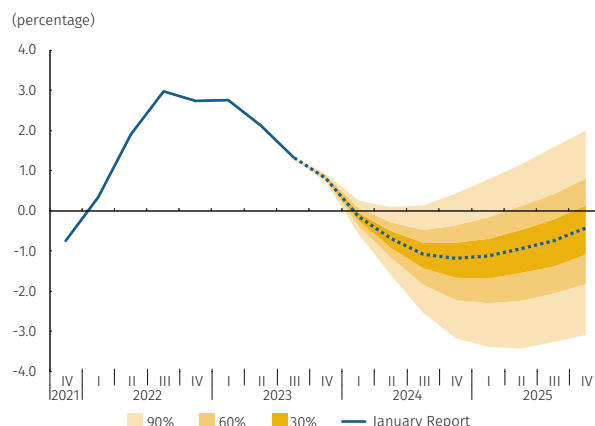
Graph 2.25
GDP, four-quarter cumulative, predictive density^{a/, b/, c/}
(annual change)



	4Q 2024	4Q 2025
Mode	0.8	3.5
< Mode	58%	53%
Intervals		
<0	27.4%	0.2%
0 to 2	66.4%	11.9%
2 to 3,5	6.1%	39.0%
>3,5	0.1%	48.8%

a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60%, and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models.
b/ The probability distribution is derived from the forecasting exercise of the January Report.
Source: DANE, calculations and projections by Banco de la República.

Graph 2.26
Output gap, predictive density^{a/, b/, c/}
(four-quarter cumulative)

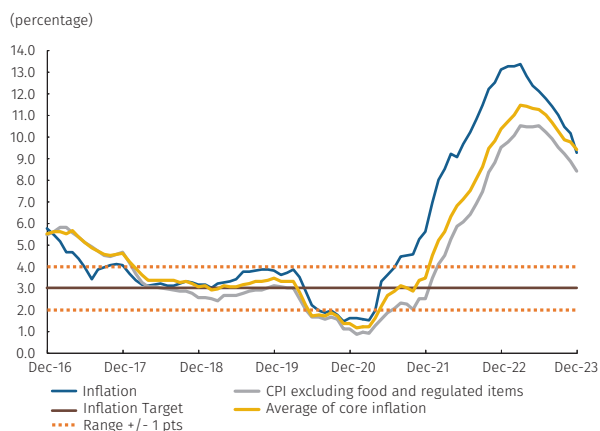


	4Q 2024	4Q 2025
Mode	-1.2	-0.4
< Mode	57%	54%
Intervals		
< -3	6.5%	5.7%
-3 to 0	83.2%	59.1%
0 to 2	10.1%	30.2%
>2	0.1%	5.0%

a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60%, and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models.
b/ The probability distribution is derived from the forecasting exercise of the January Report.
Source: DANE, calculations and projections by Banco de la República.

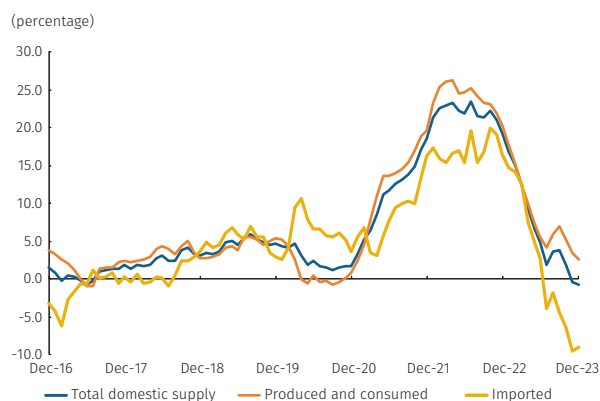
3. Current Economic Situation

Graph 3.1
CPI and core inflation indicators
(annual change)



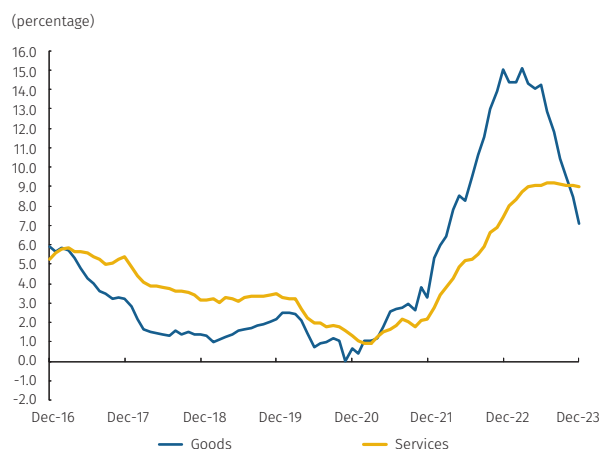
Sources: DANE and Banco de la República.

Graph 3.2
PPI by origin
(annual change)



Sources: DANE, calculations by Banco de la República.

Graph 3.3
CPI for goods and services, excluding food and regulated items
(annual change)



Sources: DANE, calculations by Banco de la República.

3.1 Inflation and price behavior

By December 2023, annual consumer inflation had been declining for three consecutive quarters yet continued well above the 3.0% target. The year-over-year change in the consumer price index (CPI) for December closed in the single digits (9.28%), lower than the September (10.99%) and June (12.13%) figures (Graph 3.1). Core inflation (excluding food and regulated items), which ended close to 10.5% in the second quarter, fell in September (9.51%) and December (8.42%).

The simultaneous reduction in annual and core inflation is partly explained by the decrease in excess productive capacity, the regularization of supply chains and global logistics costs, lesser exchange rate pressures, a favorable production cycle of certain crops, along with annual downside nonlabor costs adjustments, among other factors. The latter is consistent with the decline (-0.72%) recorded in December in the annual producer price index (PPI) representative of internal supply and its year-on-year adjustment in both its local (2.62%) and imported (-8.90%) components (Graph 3.2)¹. Despite the observed inflation reduction, its level remains far removed from the 3.0% target due to idiosyncratic factors such as the price indexation of services and some regulated items to the higher inflation rates and the upward pressures generated by the compulsory increases in gasoline prices, which resulted in a sharper rise in the transportation CPI. Inflation was also affected by heightened labor costs driven by an increase in the minimum wage, above the 2022 inflation rate, and the imposition of a health tax on ultra-processed and sugary foods, among other factors.

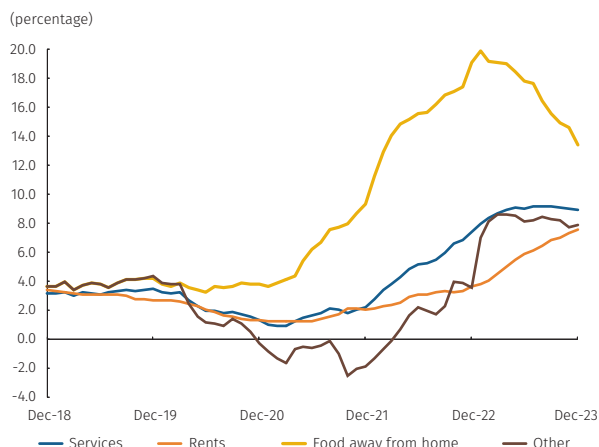
The CPI for goods continued to decelerate, driven predominantly by weak demand, lower exchange rate pressures, and a favorable statistical basis for comparison. The annual adjustment of commodity prices has been slowly ebbing since mid-2023, standing at 14.26% in June and ending the year at 7.11%.

(Graph 3.3.) By July, the increasing pressure that this segment's imported component was exerting on the CPI had subsided due to a stable exchange rate. Excess production capacity also fell, lessening the upward pressure on prices as demand weakened. This was further enhanced by the high comparison base resulting from the VAT being reinstated in certain cleaning and medical products during the second half of 2022, which caused more noticeable declines in the goods CPI² annual adjustments during the second half of 2023. However, this segment continues to exhibit steep price increases asso-

1 December's IPC data is provisional.

2 The VAT was reinstated on several cleaning and medical goods when the end of the sanitary emergency was decreed as of 30 June 2023.

Graph 3.4
CPI for services, excluding food and regulated items and its components (annual change)



Sources: DANE, calculations by Banco de la República.

ciated with inflationary pressures attributable to higher labor costs³ and some significant adjustments in the prices of cleaning products, stationery, beer, and cigarettes, with annual variations surpassing 12% in December.

The persistence of inflation has been particularly apparent in the services CPI, a segment highly indexed to past inflation and minimum wage adjustments.

The annual change in the services CPI stabilized as of April 2023 at around 9.0%, ending the year at 8.96%. The rent CPI exerted the primary upside pressure on services during the second half of 2023, whose annual change rose from 5.9% in June to 7.6% in December (Graph 3.4). The price dynamic of this segment was mainly rooted in the indexing of contracts to 2022 inflation and, to some extent, by the slowdown in home purchases⁴. In contrast, annual price variations for food away from home (FAH) continued to ease throughout the fourth quarter, closing December at 13.4% versus the 15.6% recorded in September. Despite this slowdown, FAH continues to display high corrections caused by increased utility rates, labor costs, and rents. Similarly, the remaining⁵ items in the services basket contributed to reducing the inflationary momentum of this basket, from 8.3% registered in September to 7.9% observed in December. Nevertheless, these adjustments continue on the high side, driven by elevated demand for some recreational, educational, and personal services and the reinstatement of the VAT on airline tickets and holiday packages in early 2023.

In the fourth quarter of 2023, the regulated services basket witnessed an upsurge, mainly from the compulsory increase in gasoline prices.

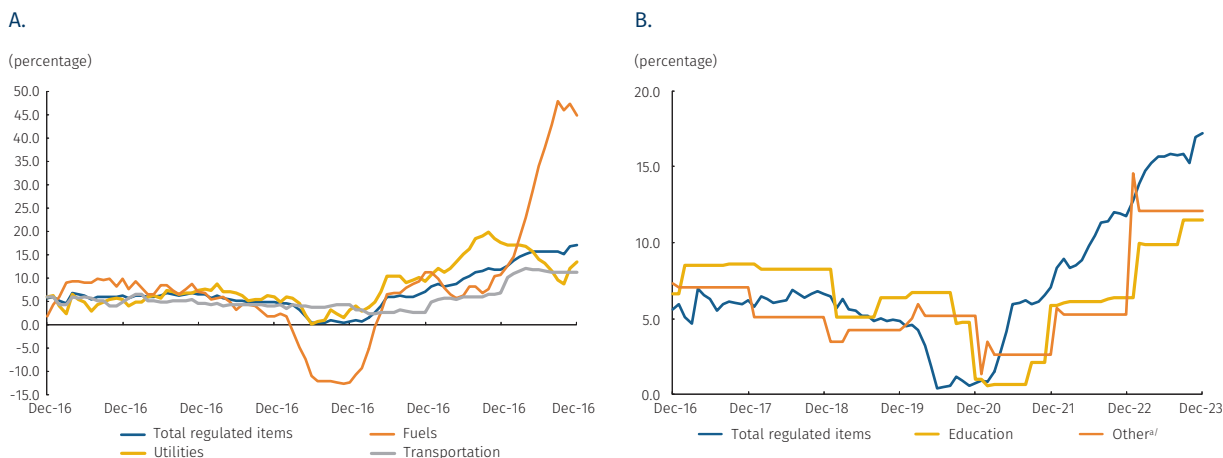
The annual change in this component increased during the last quarter of 2023, from 15.81% in September to 17.24% in December (Graph 3.5, Panel A). This momentum was explained by the necessary increase in domestic fuel prices that have taken place since October 2022 to correct the deficit of the Fuel Price Stabilization Fund (*Fondo de Estabilización de los Precios de los Combustibles*, FEPC), with a resulting increase in the fuels CPI of 44.8% in 2023 and significant yearly raises in regulated transportation rates (11.2%). The annual change in utility rates also registered a sizable rise between September (9.7%) and December (13.6%) with the reintroduction of the rate increases that had been sus-

3 Law 2101 of 2021 reduced the workday to 47 hours as of 16 July 2023, with further anticipated decreases to 46 hours in 2024, 44 hours in 2025, and 42 hours in 2026.

4 Lower demand for new home purchases translates to upward pressure on rents as households that need housing but cannot easily access the new housing market move or remain in the rental market.

5 This group primarily consists of the following items: communications, recreation, and cultural services; education (non-regulated); miscellaneous services (beauty salon services, daycare, financial services, etc.); transportation; co-ownership/property management services; domestic services; nightclubs and hotels; healthcare services; and laundry/dry cleaning services.

Graph 3.5
CPI for regulated items and its components
(annual change)



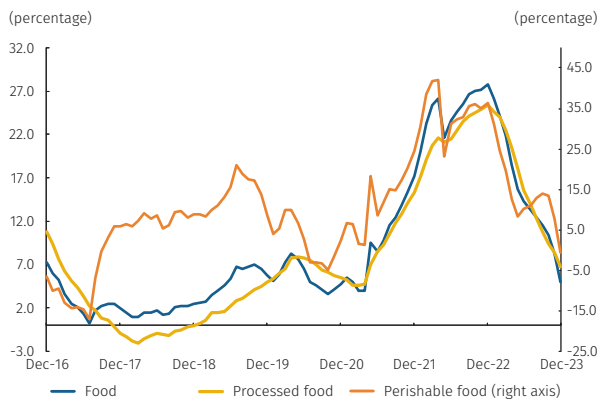
a/ Includes EPS affiliate copayments, administrative certificates and documents, and professional fee payments
Sources: DANE, calculations by Banco de la República.

pended during the pandemic and reactivated last November with the implementation of the “*opción tarifaria*” or deferred payment plan, which mostly affected on the upside the Caribbean coastal cities. Even though the main inflationary driver in this basket was electric energy services, there was a significant across-the-board increase in all utilities, excluding gas, during 2023. During the fourth quarter, regulated education, indexed to past annual inflation, continued to exhibit annual upward adjustments, approaching 11.5% (Graph 3.5, Panel B).

The annual change in the food CPI continued to fall in the last quarter of the year because of lower non-labor costs, elevated supply, and a high statistical base of comparison.

The annual change in food prices has been moderating from yearend 2022 levels of close to 28% to 11.47% in September and 5.0% recorded by yearend 2023 (Graph 3.6). This significant reduction noted in the last quarter can be explained by historically high food supply, a relatively stable exchange rate, and the elevated statistical comparison base, given the significantly elevated prices seen at the end of 2022. Although these lower price adjustments have been generalized, they are more noticeable in perishable foods, whose annual change fell markedly from the 13.9% levels seen in September to -0.5% in December owing to fewer road closings, the increased market availability of certain crops and an *El Niño* phenomenon that thus far has not significantly affected agricultural production. Likewise, the behavior of processed food prices also contributed to reducing the annual variation in the food basket, although to a lesser extent, from the 10.7% level noted in September to 6.7% in December. This group was favored by the fall in international food and raw material prices, the stabilization of logistics and transportation costs, and the recent relative stability of the exchange rate. This has occurred despite the

Graph 3.6
CPI for food and its components
(annual change)



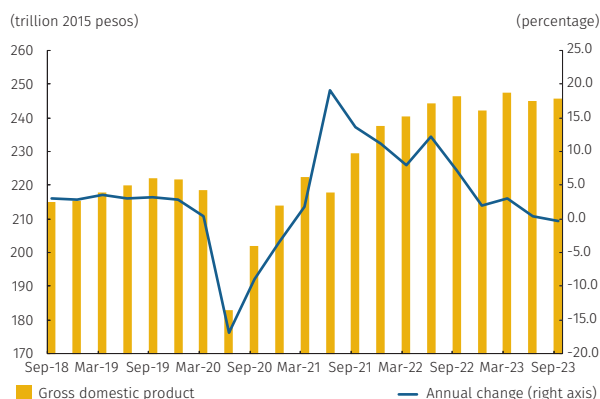
Sources: DANE, calculations by Banco de la República.

persistence of international military conflicts and the new health tax on ultra-processed and sugary foods, levied since November 2023⁶.

3.2 Growth and domestic demand

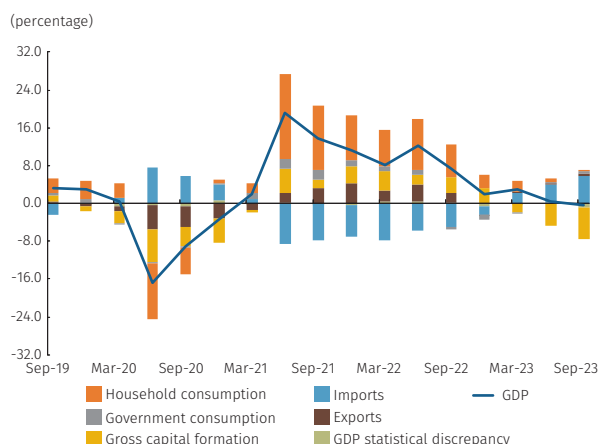
In the third quarter, GDP declined annually but remained at similar levels to those seen since the beginning of 2023. During this period, the Colombian economy continued its gradual adjustment course and recorded an annual contraction of 0.3% (lower than the 0.4% forecast in the October Report). According to seasonally adjusted figures corrected for calendar effects, this result denoted an annualized quarterly expansion of 1.0% and economic activity levels that would basically remain unchanged for the whole of the year (Graph 3.7). The slight economic decline during the third quarter was once more accompanied by an annual and quarterly drop in domestic demand in the wake of low investment activity. The aforementioned occurred in the context of still-high inflation at above-target levels, a monetary policy in contractionary territory, and low levels of business and consumer confidence indicators. On the supply side, the secondary branches including industry and construction, and commerce, transportation, and lodging were the sectors that experienced the most significant annual declines. At the same time, public administration services, health and education, and artistic and entertainment activities were the sectors with the highest annual growth rates.

Graph 3.7
Gross Domestic Product ^{a/}
(quarterly and annual change)



^{a/} Seasonally adjusted and corrected for calendar effects
Sources: DANE, calculations by Banco de la República.

Graph 3.8
Contributions to annual change of quarterly GDP ^{a/}
(annual change, contribution)

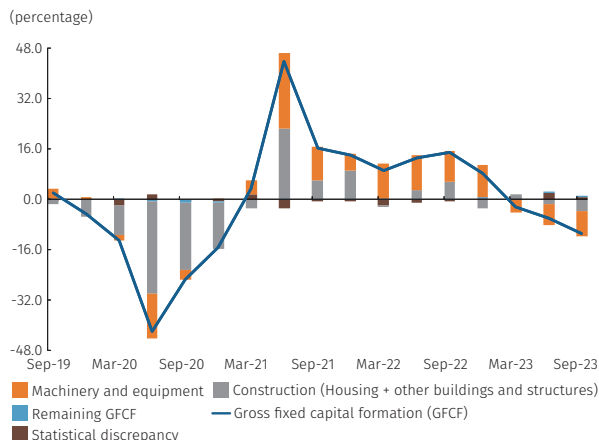


^{a/} Seasonally adjusted and corrected for calendar effects
Sources: DANE, calculations by Banco de la República.

The low economic activity continued due to a significant adjustment in domestic demand, mainly in investment. In the third quarter, domestic absorption fell for the fourth consecutive quarter, resulting in a yearly drop (-6.8%) and a negative contribution of this aggregate to annual GDP growth (Graph 3.8). Within the domestic demand components, gross capital formation presented the most extensive annual reduction (-32.6%) after reaching historic high values in 2022. Investment in fixed capital, which excludes changes in inventories and the statistical discrepancy, also fell in annual terms (-10.7%), with investment in machinery and equipment, which fell 15.9% annually, contributing most to this decline (Graph 3.9). Investment in construction also recorded a weak performance. On the one hand, the other buildings and structures component failed to show signs of recovery, falling in both quarterly and annual terms, primarily due to weakness in the civil works constituent. On the other hand, although housing investment expanded compared to the previous quarter, it did not grow in annual terms.

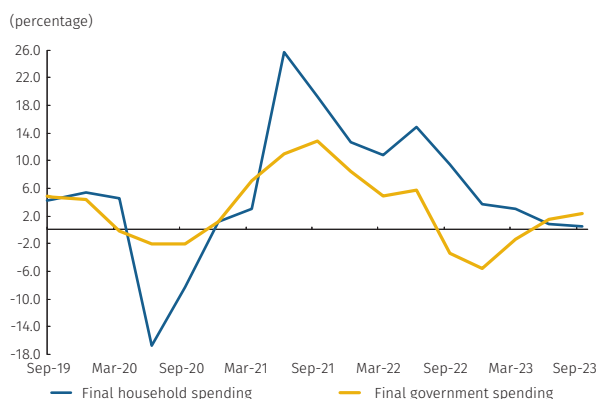
6 See Law 2277 of 13 December 2022, Title X (Tax Reform).

Graph 3.9
Quarterly gross fixed capital formation ^{a/}
(annual change, contributions)



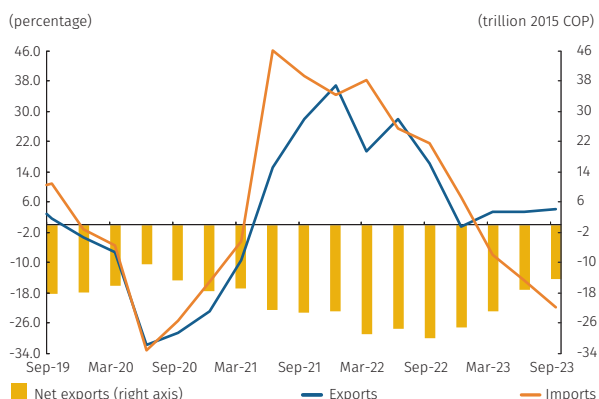
a/ Seasonally adjusted and corrected for calendar effects
Sources: DANE, calculations by Banco de la República.

Graph 3.10
Final household and general government spending ^{a/}
(annual change)



a/ Seasonally adjusted and corrected for calendar effects
Sources: DANE; calculations by Banco de la República.

Graph 3.11
Exports, imports, and trade balance ^{a/}
(annual change and trillion 2015 COP)



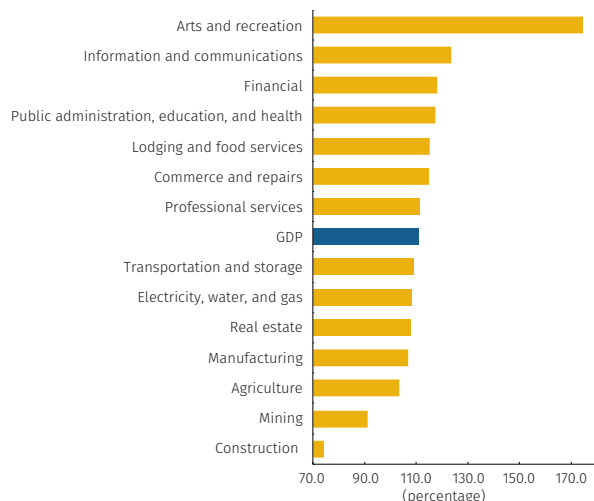
a/ Seasonally adjusted and corrected for calendar effects
Sources: DANE, calculations by Banco de la República.

Total consumption registered a positive but low annual expansion rate in the third quarter, with a moderation in public and private consumption. The annual growth of total consumption during this period was 1.0%, lower than the mean observed for the first half of 2023 (1.8%). When assessing each component, private consumption continued to slow, registering an annual growth of 0.4% in the period versus the 0.8% growth recorded in the previous quarter (Graph 3.10); however, it grew by 0.4% versus the second quarter, reaching its highest level in history. Non-durable goods and services consumption continued to show marginal growth, remaining at high levels and with modest annual increases. In contrast, durable and semi-durable goods consumption fell both in annual and quarterly terms after achieving historic highs in 2022. The slowdown in private consumption in the third quarter continued amid a contractionary monetary policy, low levels of consumer confidence, high uncertainty, and a deceleration in household credit. Furthermore, public consumption fell back (-5.4%) compared to the second quarter, although it grew annually (2.4%) thanks to a low comparison base. The quarterly decrease would be mainly associated with the retroactive salary increase for public employees, mostly paid out in June, which bolstered this component only during the second quarter, not the third.

The external imbalance measured in constant pesos continued to narrow, primarily because of the continued fall of imports, together with a growth of exports. The moderation in domestic demand was reflected in new annual (-21.7%) and quarterly (-3.7%) declines in imports. The most significant contributor to this decline would have been the purchases of intermediate goods. In contrast, exports in real pesos grew in both annual (4.1%) and quarterly (2.4%) terms, driven mainly by external sales of some agricultural goods and services, which recorded an outstanding performance, growing by 21.4% versus the second quarter and 23.5% year-on-year. Consequently, the trade deficit in constant pesos continued to shrink in the third quarter and reached lower levels than those recorded in the fourth quarter of 2019 (Graph 3.11).

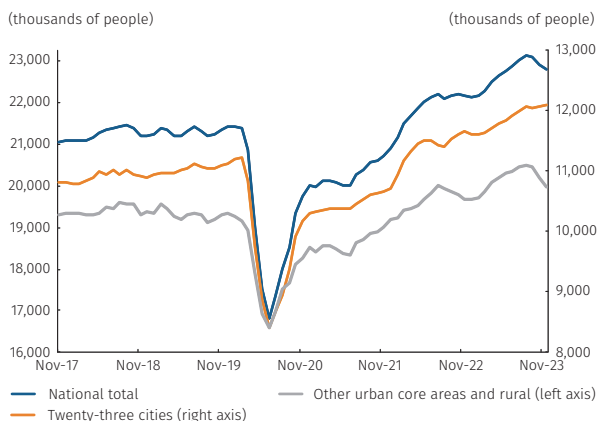
On the supply side, the economy's adjustment continued to concentrate on the manufacturing, construction, and commerce sectors, which once again recorded annual declines. During the third quarter, the secondary branches contributed most to the negative annual GDP variation (-0.3%), which fell year-on-year by 6.7%. This result is consistent with the slowdown in the manufacturing industry, mostly concentrated in the non-oil refining segment, as well as the low growth levels that continue to be seen in the construction sector, both in terms of buildings and civil works (Graph 3.12). In contrast, dynamism continued in tertiary activities, growing annually by 1.1%, given the continued positive performance by public administration, health, and education services (5.9%), and

Graph 3.12
Sectoral value-added levels in 3Q 2023 relative to 4Q 2019^{a/}
(4Q 2019 = 100%)



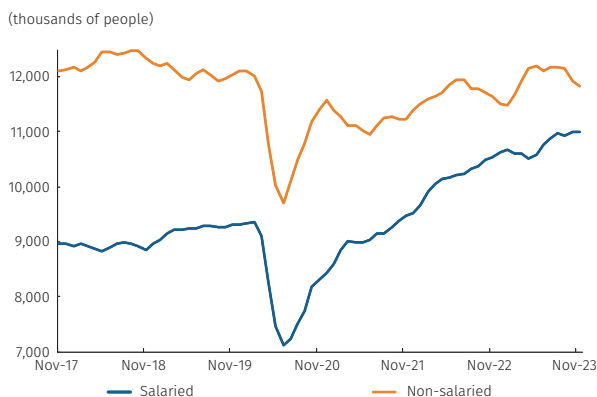
a/ Seasonally adjusted and corrected for calendar effects
Sources: DANE, calculations by Banco de la República.

Graph 3.13
Employed population by location



Note: corresponds to rolling quarterly seasonally adjusted data
Sources: DANE (GEIH), calculations by Banco de la República.

Graph 3.14
Jobs by type of employment: national total



Note: corresponds to rolling quarterly seasonally adjusted data
Sources: DANE (GEIH), calculations by Banco de la República.

artistic and entertainment activities (5.1%). The latter was positively affected by the high demand for services related to concerts, online games, and sports betting. Nevertheless, the performance of the tertiary branches was partially offset by the negative behavior of trade, transport, and accommodation services that, except for air transport, fell across the board. Annual declines were also observed in information and communication services and professional, scientific, and technical activities. Finally, primary activities grew by 2.5% annually, led by the increase in oil and coal extraction, as well as a recovery in the production of crops other than coffee.

3.3 Labor Market⁷

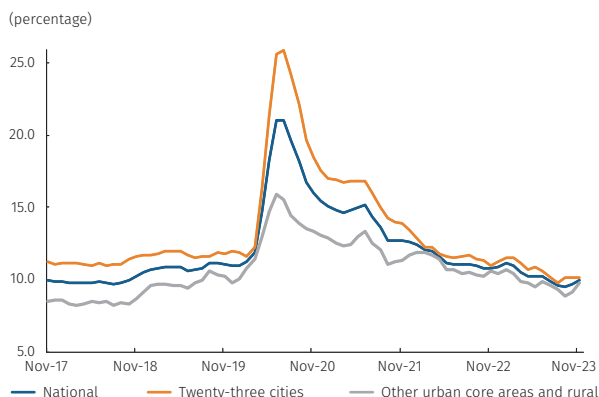
National aggregate employment fell in the rolling quarter ending in November, explained by the mirrored behavior of employment in rural areas. During this period, the Integrated Household Survey (GEIH for its acronym in Spanish) results showed stable urban levels with a drop in rural employment, leading to a national aggregate employment decline⁸ (Graph 3.13). Differentiating by sector, results for the rolling quarter ending in November show quarterly drops in employment across most economic sectors, with manufacturing, commerce and lodging, and construction as those sectors most affected by quarterly employment declines. Despite the above, employment increased in annual terms by 2.8%, which equals 600,000 new jobs. The annual change in the employment rate in urban and rural areas was 3.7% and 1.9%, respectively.

During these past months, salaried employment levels have been relatively stable, while the non-salaried segment weakened, consistent with the decreased activity noted in rural areas. Salaried employment has stagnated (Graph 3.14), consistent with observations from other sources of information on formal salaried employment, such as pension contributions to the Comprehensive Contribution Settlement System (PILA for its Spanish acronym) and the records of affiliates to family compensation funds (CCF for its Spanish acronym). Furthermore, the non-salaried employment segment experienced a quarterly decrease, although it continued to exhibit positive annual growth (1.5%). In November, the quarterly variation in non-salaried employment was -3.0%, consistent with lower employment activity in other urban core and rural areas. The stability of salaried employment associated with formal employment and the recent decline in non-salaried employment allowed the national aggregate informal employment

7 For a more detailed analysis of the labor market, we invite you to consult Banco de la República's Labor Market Report, available only in Spanish at <https://www.banrep.gov.co/es/reporte-mercado-laboral>

8 Consistent with employment behavior, the national aggregate employment rate has decreased at the margin to 57.6%. In annual terms, employment gains of 0.8 pts were recorded.

Graph 3.15
Unemployment rate by location

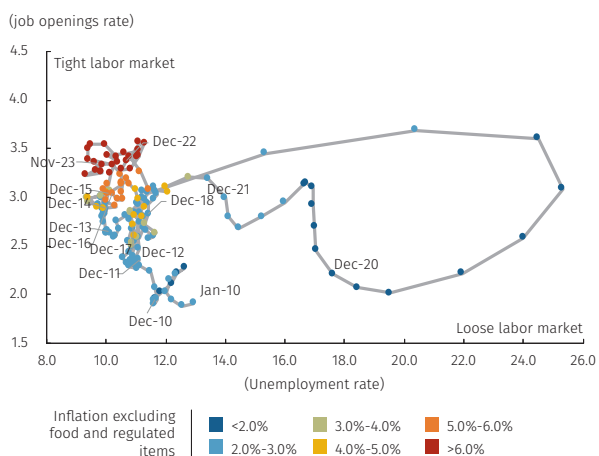


Note: corresponds to rolling quarter seasonally adjusted data
Sources: DANE (GEIH), calculations by Banco de la República.

rate to continue falling to historic low levels, reaching 55.3% in November. In annual terms with three-month data to November, national aggregate employment grew, headed by the salaried segment, particularly in the private sector.

In November, the national aggregate unemployment rate increased versus the previous month, although it remains at historically low levels. In November, the seasonally adjusted national rolling quarter unemployment rate stood at 10.0%, higher than the total for October. There were mixed results by geography, as the urban unemployment rate registered a monthly drop while other core urban areas rebounded to 10.1% and rural areas exhibited a 9.8% recovery (Graph 3.15). The strong heterogeneity of the unemployment rate noted among the twenty-three main cities is noteworthy, with Quibdó experiencing the highest level of unemployment (23.8%) and Bucaramanga the lowest (6.6%). Compared to the previous year, the unemployment rate fell in the country’s main cities, with Valledupar (-3.9 pts), Riohacha (-2.9 pts), Bucaramanga (-2.4 pts), and Ibagué (-2.3 pts) registering the most significant drops. In contrast, a year-on-year increase was noted in Villavicencio (1.6 pts) and Cartagena (0.6 pts). As for unemployment by gender, the positive dynamic in women’s employment has allowed the employment gender gap to remain consistently narrow at low levels (4.5 pts in November).

Graph 3.16
Beveridge curve for the seven largest cities



Notes: rolling quarter seasonally adjusted data. GEIH Vacancy rate is estimated based on hires according to Morales, Hermida, and Dávalos methodology (2019).
Sources: DANE (GEIH), calculations by Banco de la República.

Other formal labor demand indicators have stabilized, with hiring expectations in negative territory for the first time since the pandemic-generated crisis. These signs suggest an easing of the tight labor market conditions in the coming months. The job vacancies index to November obtained from the Public Employment Service (SPE for its Spanish acronym), classified ads, and implicit GEIH hiring figures to October remained relatively stable, consistent with the salaried and formal employment behavior. The steadiness of the job vacancy rates and hiring expectations derived from *Banco de la República’s* quarterly Survey of Economic Expectations (EMEE for its Spanish acronym), which recorded negative results⁹ for the first time since the COVID-19 pandemic, suggest a less active formal employment sector in the near future. The behavior of the employment rate in urban areas and the vacancy rates as a function of the Beveridge curve¹⁰ (Graph 3.16) suggests that tight labor market conditions continue. However, negative hiring expectations and the general economic slowdown would indicate that this tightness is beginning to ease. Lastly, as of October, job income information from the household survey shows that nominal income indices continue to be on an annual upward adjustment path for the national aggregate.

9 As of the third quarter of 2023, economic expectations were -4.7 pts lower than in the previous quarter, in the trade-off between those with plans to increase or decrease their workforce in the short term.

10 The Beveridge curve is a graphical representation of the relationship between unemployment and the job vacancy rate.

Table 3.1
Average monthly interest rates
(percentage)

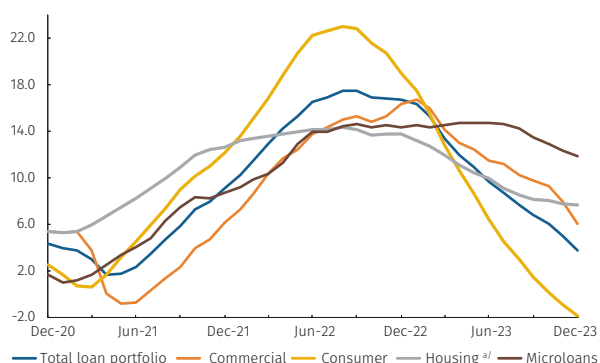
	Dec-21	Dec-22	Jun-23	Sep-23	Dec-23
Interbank					
Interbank policy rate	2.70	11.42	13.25	13.25	13.18
interbank overnight	2.73	11.41	13.28	13.25	13.13
BBI overnight	2.72	11.41	13.28	13.25	13.13
BBI 1-month	2.96	11.80	13.25	13.23	13.10
BBI 3-months	3.36	12.08	13.25	13.11	12.81
BBI 6-months	3.97	12.31	13.03	12.71	12.35
BBI 12-months	-	-	11.99	11.59	11.17
Deposits					
Savings	1.20	5.87	6.22	6.42	6.18
DTF 90-days	3.08	13.42	13.02	13.07	12.63
CDT* 180-days	3.71	15.58	13.30	13.49	13.07
CDT 360-days	5.10	17.08	14.17	13.78	13.63
CDT > 360-days	7.14	19.15	14.44	13.62	13.54
Credit					
Preferential	6.00	18.57	17.65	17.30	17.05
Ordinary	8.18	19.27	19.20	19.04	17.93
Non-public housing purchases	9.40	17.22	17.97	17.44	17.06
Public housing purchases	11.55	17.00	16.41	16.12	15.41
Personal loan consumption	17.51	31.23	31.65	29.74	28.16
Payroll loan consumption	11.65	19.45	19.82	19.55	19.83
Credit card	24.47	39.01	39.58	37.60	34.70

*CDT (term deposit certificates)

Sources: Financial Superintendency of Colombia, calculations by Banco de la República.

Graph 3.17
Gross loan portfolio in Colombian pesos
(annual change, monthly averages)

(percentages)



a/ Adjusted housing: bank loan portfolio plus securitizations

Sources: Financial Superintendency of Colombia, calculations by Banco de la República.

In real terms, the average income of the salaried segment grew in annual terms by 6.3% and 5.0% for the non-salaried segment in a receding headline inflation environment.

3.4 Financial and Monetary Market

In the fourth quarter, loan activity continued decelerating while interest rates on deposits and loans decreased slightly.

This behavior transpired in an environment of lower economic activity, with expectations that the cycle of monetary policy interest rate (MPR) reductions would begin, albeit with sustained high real interest rates, an upward trend in the Non-Performing Loans indicator (NPL), and tighter credit conditions observed by financial entities.

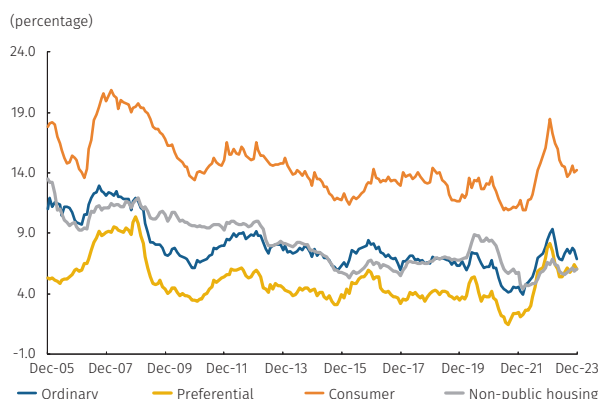
The interbank, deposit, and credit interest rates fell slightly, although still high in real terms (Table 3.1).

During the fourth quarter of 2023, the financial market saw lower interest rates for all maturities, which was most notable for maturities exceeding three months, reflecting the expectation of future reductions in the MPR. These expectations, along with the reduced funding requirements of credit institutions resulting from a lower dynamic in their loan portfolios, would largely explain the lower deposit rates. During the same period, lending rates for all types of loans (except payroll loans) fell at a faster pace despite the increase in portfolio delinquency indicators and a lower willingness to grant loans on the part of credit institutions. This behavior of the lending interest rates could be associated with a greater emphasis on selecting borrowers with lower risk profiles and/or smaller loan demands. In real terms, all rates remain high versus the mean over the past ten years. Finally, the Board of Directors of Banco de la República (BDBR) at its December 19 meeting voted to reduce the MPR by 25 basis points (bps) to 13%, a decision that was mirrored by a similar reduction in overnight money market interest rates.

The loan portfolio growth rate for all types of loans continued to fall in a setting of stricter lending requirements, elevated real interest rates, and lower loan demand (Graph 3.17).

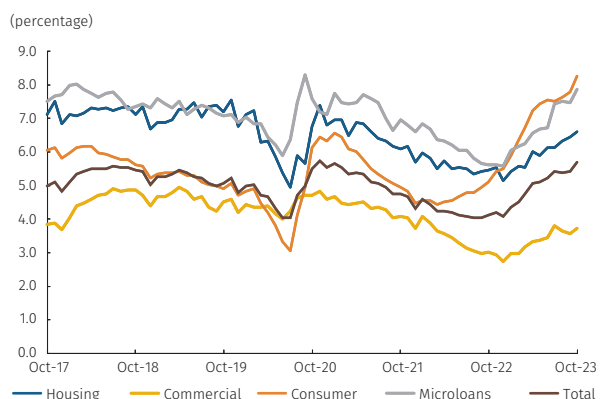
During the fourth quarter, the demand for local currency loans continued to slow, translating to an annual variation as of December of 3.8%, or -7.0% in real terms, which is 5.8 pts and 13.0 pts less than that recorded in June 2023 and December 2022, respectively. This slowdown registered in the loan portfolio is across the board for all types of loans, although more prevalent in the consumer loans segment, which went from a yearly growth rate of 19.0% in December 2022 to registering an annual drop of 1.8% in December 2023. The commercial loan portfolio saw a year-on-year variation from the 16.4% growth level recorded in December 2022 to 6.1% a year later. The housing loan portfolio grew by 7.8% annually in December 2023,

Graph 3.18
Real loan interest rates
(monthly average data deflated
by the CPI excluding food)



Sources: Financial Superintendency of Colombia, calculations by Banco de la República.

Graph 3.19
NPL Indicator
(past due loan portfolio/ total loan portfolio)



Sources: Financial Superintendency of Colombia, calculations by Banco de la República.

remaining relatively stable in recent months. In real terms, the issuance rates for all loan types have fallen year-on-year since the high levels observed in 2022 (Graph 3.18). The slowdown in the economy, high real lending interest rates, and the current levels of household indebtedness, among others, would have contributed to a slowdown in credit demand. In parallel, according to data from the Quarterly Survey of Credit Institutions in Colombia for the third quarter of 2023, credit establishments have placed greater restrictions on granting consumer and commercial loans.

Credit institutions maintain adequate solvency levels well above the regulatory minimums, while profits continue to weaken. In October 2023, credit institutions recorded twelve-month cumulative profits of COP 7.8 trillion, a COP 8.5 trillion decrease versus the profits recorded in December 2022. This drop is mainly explained by a higher-than-required provision expense in an environment where the non-performing loan indicator is deteriorating for all types of loans, especially the consumer loan portfolio (Graph 3.19). Meanwhile, with data as of October, the total (17.5%) and basic (14.1%) solvency ratios of credit institutions remain stable and well above the regulatory minimums (9.0% and 4.5%, respectively).

Box 1

Regional Economic Pulse: High-Frequency, Short-Lag Indicators to Understand Local Economies

Dora Alicia Mora Pérez
Diana María Cortázar Gómez
Carolina Ramírez Rodríguez
Antonio José Orozco Gallo*

Banco de la República made public the Regional Economic Pulse series (PER for its Spanish acronym)¹ on its website in December 2023. The technical staff of the Bank created this new economic indicator, which is released once a month, includes national and regional series, and its lag is approximately twenty days after the measurement month. The PER includes a set of short-term indicators that measure the economic performance of seven domestic regions, the national aggregate, and six economic activities. This indicator is constructed based on perception surveys carried out among leaders of companies, trade guilds, and institutions operating in the country. This information is complemented with geographically disaggregated statistics that are available timely to calculate the indicators.

Although Colombia has regional statistical information for some sectors or aggregates, in most cases, the time lag of these series exceeds forty-five days, or they are low-frequency indicators, which prevents knowing in real time what is happening in the economy. The PER differs because of its short time lag and the regional disaggregation, thus providing a timely measure of the country's economic activity based on segmented information from various regions of Colombia. In this way, the PER provides valuable information for decision-making by economic policymakers and enriches the knowledge and comprehension of the country's economy, having been sourced through first-hand contact with business leaders in the regions.

1. Background

Banco de la República, in its mission to preserve the purchasing value of the currency in coordination with general economic policy, also has unique functions, such as generating knowledge and information that contribute to decision-making. In a country with such diverse regions as Colombia, increasing the monitoring and timely analysis of local economies is deemed highly relevant for monitoring the national economy.

The PER began from the notion of adapting the *Beige Book* of the U.S. Federal Reserve, a qualitative report on current economic conditions across the twelve Federal Reserve Districts, to the Colombian situation. The *Beige Book Report* is published eight times a year and presented before each Federal Open Market Committee (FOMC)² meeting, where economic policy decisions are made. These documents are constructed from various relevant sources, including local interviews with business and financial leaders, economists, and market

* The authors are members of the Regional Branches for Economic Studies area of the Technical and Economic Information Department of *Banco de la República*. The views and opinions expressed herein do not necessarily reflect those of the Bank or its Board of Directors.

1. Available in Spanish only at: <https://www.banrep.gov.co/es/estadisticas-economicas/pulso-economico-regional>

2. Federal Reserve Board. Frequently Asked Questions

experts, among others, which are collected by each district through formal and informal methods. The sources are carefully selected to receive accurate and objective information on various economic activities.

From this perspective, in 2010, *Banco de la República* began collecting information on the economic activity of various areas in the country, a task carried out by the seven regional economic research centers the entity has nationwide. Utilizing a format like the *Beige Book*, perception surveys were conducted with the most influential regional business leaders, who are aware in real time of the productive performance of the firm they represent, the conditions of their environment at a moment in time, and the origins of the behaviors they reference. The first pilot reports were generated for some areas of the country where it was feasible to conduct these interviews with the necessary periodicity and timeliness. Additionally, the activities, regions, and follow-up variables were defined, considering previous studies on the economic makeup of each region³ and the feasibility of contacting several leaders in each region.

Subsequently, given the need to create economic indicators that could provide a timely measurement of economic activity, a new numerical indicator was constructed and calculated based on the information collected. Hence, at the end of 2012, the monthly economic activity indicator called the Regional Economic Pulse (PER for its Spanish acronym) was created and gradually implemented for different regions of the country⁴.

2. Methodology

The indicator is constructed with two kinds of information: 1) qualitative, which comprises most sources and is gathered through perception surveys, and 2) quantitative, gathered from public and private data disaggregated by region and available with short lag. Given that the PER seeks to measure short-term fluctuations, the questions in the perception surveys are directed to obtaining information on the annual change of the tracked variables, and the regional statistics correspond to the annual variation of the series consulted.

The information sources are leaders of the principal companies, establishments, trade guilds, and institutions that carry out one of the six economic activities monitored in the country's regions (Table R1.1). The design used is a non-probability judgment sampling, meaning that the sample is selected according to the knowledge, experience, and judgment of the PER researcher. In recent years, the indicators have been constructed with a monthly average of 1100 qualitative and quantitative sources. In addition, the disaggregation of the data allows for a theme-based regional, national, and economic activity scope (Table R1.1).

The qualitative information is gathered based on perception questions asked, such as: How did the production volume behave in the month under consideration versus the same month of the previous year? The answer options to the perception survey questions are: increased, fell, or remained stable (no change). In turn, the first two answers include further classification as: slight, moderate, significant, or very significant. To calculate this indicator, a value between -1 and 1 is assigned to each of these ratings, with a differential of 0.25.

Quantitative information is normalized to bring annual variations to the interval [-1,1] using scaling method techniques (Shushny and Soto, 2009) or Box-Cox transformations (Box and Cox, 1964), according to the characteristics of each series. For example, during and after the COVID-19 pandemic, some series used in the PER recorded recurrent extreme annual variations, causing the typical rescaled values to fall within a very narrow range. Following the recommendations of Shushny and Soto (2009), a specific methodology was developed that integrates the Box-Cox (1964) procedure and an adapted version of the logarithmic transformation to adjust the outliers and bring them to the range of -1 and 1.

3 Essay on the Regional Economy (ESER for its Spanish acronym), available in Spanish only on *Banco de la República's* website at banrep.gov.co

4 *Banco de la República's* Regional Branches for Economic Studies area groups the country into seven regions: Antioquia, Southwest, Caribbean, Northeast, Central Coffee, Llanos Orientales, and Bogotá. This grouping considers the similarities in the economic makeup and the geographic proximity of the constituent departments.

Table B.1
Monitored Regions and Economic Activities

A. Monitored Regions	
Regions	Departments included
Antioquia	Antioquia
Southwest	Valle del Cauca, Cauca, and Nariño
Caribbean	Atlántico, Bolívar, Magdalena, Córdoba, Cesar, Sucre, La Guajira, and San Andrés
Northeast	Santander, Norte de Santander and Boyacá
Central Coffee	Caldas, Quindío, Risaralda, Tolima, Huila and Caquetá
Llanos Orientales	Meta and Casanare
Bogotá	Bogotá and Cundinamarca
National aggregate	All monitored regions
B. Tracking Economic Activities	
Economic activity	Annual change in the tracked variables
Trade	Retail sales volume (including vehicles) and hotel occupancy rate
Industry	Volume of industrial production
Transport	Number of departing passengers and volume of cargo moved by land or air
Agriculture	Volume of agricultural production
Financial	Loan disbursement amounts
Housing	New housing sales in units and number of real estate housing transactions

Source: Created by the authors.

Thus, the PER level ranges from -1 to 1, where values below zero represent a negative annual change, above zero a positive annual change, and values equal to zero indicate no year-on-year change. The extreme value -1 is considered an atypical negative annual change, and the extreme value 1 a historically high positive change. The PER levels do not correspond to percentage changes, given the nature of the indicator (combination of perceptions and quantitative information).

After assigning values to the perception surveys and normalizing the annual variations, the responses are weighted to obtain the result for each economic activity in each region⁵. Accordingly, the result of economic activity j in region i in month t (x_{jit}) is calculated as a weighted sum of the responses, considering the participation of the company or establishment in the economic activity and region in which it operates. Once the computation for activity j in region i is completed, the PER for each geographic area is the sum of the tracking activities weighted by their weight in the aggregate value of the regional GDP:

$$PER_{it} = \sum_{j=1}^6 x_{jit} * w_{jit} \quad (1)$$

Where PER_{it} is the result of the region's indicator i in period t , x_{jit} is the result of activity j of region i in period t , and w_{jit} is the weighting of activity j within the productive structure of region i , with $\sum_{j=1}^6 w_{jit} = 1$.

The national aggregate indicators and its economic activities are based on regional results. Their calculation employs the share of each region's productive structure in the aggregate national GDP. Thus, the PER of the national aggregate (PER_t) is equal to the weighted sum of the regional indicators:

$$PER_t = \sum_{i=1}^7 PER_{it} * z_{it} \quad (2)$$

⁵ All PER weights were calculated considering the business and productive structure of each region in 2013 (the reference base year). In addition, only the responses received for each month are weighted.

Where PER_t is the result of the national aggregate indicator in month t , PER_{it} is the indicator of region i in period t , and z_{it} is the weighting of region i in period t , where $\sum_{i=1}^7 z_{it} = 1$.

The aggregate indicators for each activity are constructed similarly for the national total. The indicator for each national economic activity is the weighted sum of x_{jit} , according to the share of activity j of region i in the national aggregate of activity j :

$$PER_{jt} = \sum_{i=1}^7 x_{jit} * \alpha_{jit} \quad (3)$$

Where PER_{jt} equals the result of activity indicator j for the total of the seven regions in period t ; x_{jit} is the result of activity indicator j of region i in period t , and α_{jit} is the weighting of activity j of region i in period t , with $\sum_{i=1}^7 \alpha_{jit} = 1$.

As such, the PER is not intended for estimating or forecasting the GDP because of its methodology, geographic coverage, and the specific economic activities it monitors; also, because it does not measure the magnitude or value-added created in the production of goods or services. Nevertheless, it is an indicator that allows us to identify acceleration or deceleration trends in economic activity. In addition, the PER indicator is constantly evolving and may change due to adjustments to sources of information, coverage, calculation techniques, and modifying the base year of the weights, among other factors.

3. Results⁶

The PER statistical series allows us to identify the trends and cyclical fluctuations that characterize each regional economy and the national economy. An analysis of the historic behavior of the PER shows that the indicator registered a period of economic deceleration across all regions during 2016 and 2017 (Graph B1.1). The Antioquia, Northeast, and Central Coffee regions registered the most significant fall in the indicators during this period. These results were affected by the 2016 trucking strike that strongly impacted the transport of passengers and cargo on roadways, which in turn, upset industry through disruptions in the supply of raw materials and hurt commerce due to the limited availability of goods. The negative results were even more pronounced in the Northeast region where, in addition to its affectation by the limited mobility, trade declined further in this region because of the border closure with Venezuela in early 2016. In 2017, regional indicators continued their lackluster performance, impacted by the implementation of the tax reform and its consequent impact on consumption. In this timeframe, the Llanos Orientales region delivered the worst results owing to constant closures on the access road to/from Bogotá.

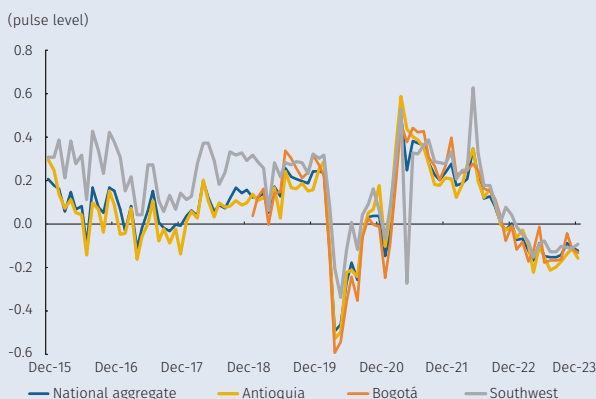
Throughout 2018 and up to the first months of 2020, the Antioquia, Northeast, Caribbean, and Central Coffee regions underscored the positive trend seen in the overall national result. In general, consumer confidence and access to credit propelled domestic demand during 2018 and 2019. They also fueled the Southwestern region, whose results exceeded the national aggregate, driven by industry activity (Graph B1.1, Panels A and B). Conversely, despite showing a similar positive outlook, the indicator for the Central Coffee Region fell below the national result because the *El Niño* phenomenon negatively affected agricultural activity (Graph B1.1, Panel C). Weather conditions also hampered agricultural and livestock production in the Antioquia, Llanos Orientales, and Caribbean regions, particularly in the first half of 2019. The Bogotá region showed positive growth rate in the same year – coinciding with the launch of this region's indicator - primarily due to heightened commercial activity and loan placements.

Since March 2020, mitigation measures to curtail the COVID-19 pandemic, such as operational restrictions in several sectors, mandatory precautionary isolation, and mobility limitations, caused a drastic drop in the indicator throughout all regions. The high and unexpected demand for pharmaceuticals, healthcare, cleaning and disinfection, and personal hygiene products helped the Southwest region halt this decline as the national leader in their production. By October 2020, all regions began a gradual recovery process. Likewise, a rebound was seen in March and April of 2021, given the low comparison base effect, the gradual relaxation of the pandemic-related quarantine, the start of the vaccination process, and the introduction of specific tax incentives (VAT-free days, reduction of the sales tax on airline tickets, and tax exemptions on hotel services). The latter incentives

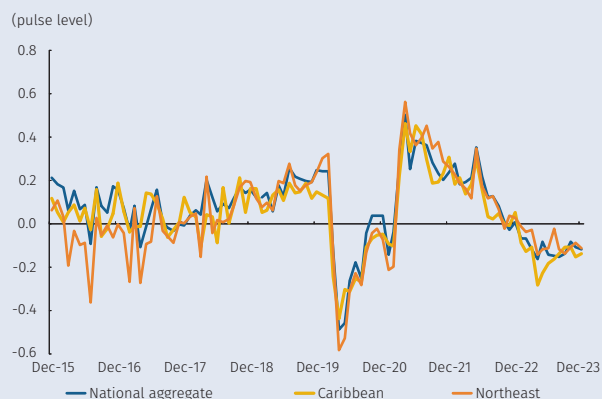
6 The comments of the PER sources explain the behaviors described in this section.

Graph B.11
Regional Economic Pulse by region and national aggregate

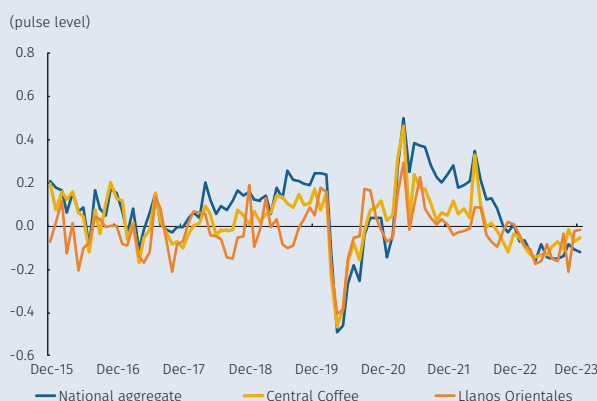
A. Regional Economic Pulse of Antioquia, Southwest, and Bogota Regions



B. Regional Economic Pulse of the Caribbean and Northeastern Region



C. Regional Economic Pulse of the Central Coffee and Llanos Orientales Region



Source: Banco de la República.

were primarily reflected in the positive results of the Caribbean region, which relies heavily on tourism.

In May 2021, the road blockades connected to the national strike undoubtedly interrupted economic growth in the Southwest, Central Coffee, and Llanos Orientales regions, heavily limiting the transport of cargo and the supply of raw materials, with the most affected area being the Southwest. Subsequently, economic activity began to return to normal in 2022, accompanied by the reactivation of mass entertainment activities, especially favoring the results of the Bogotá and Antioquia regions.

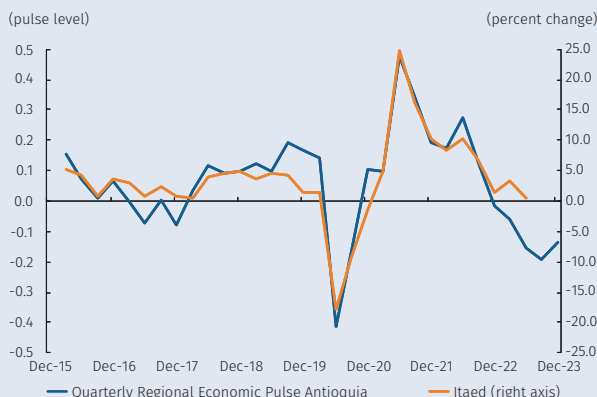
Throughout 2023, the indicators for all PER regions fell to negative territory in an environment of high inflation, elevated interest rates, weakening demand, and changes in the housing subsidy policy. The Caribbean and Central Coffee regions suffered substantially from the closing down of operations by two airlines in 2023, and the Llanos Orientales regions from the multiple blockades of the access road to the capital. Even though it was still in negative territory, Antioquia stood out in 2023 for its slower rate of decline. This was due to both improved milk production, a crucial product of the region's livestock activity, brought on by ideal rainfall conditions, and the increased tourist influx and its parallel impact on commerce.

Finally, although the PER indicators do not pretend to estimate or forecast GDP because of their characteristic methodology, measurement, and coverage, their results have demonstrated some similarities to those of the regional statistics produced by DANE, such as the Quarterly Indicator of Departmental Economic Activity, available for the departments of Antioquia, Atlántico, Valle del Cauca, Santander and Bogotá, as well as with the aggregate

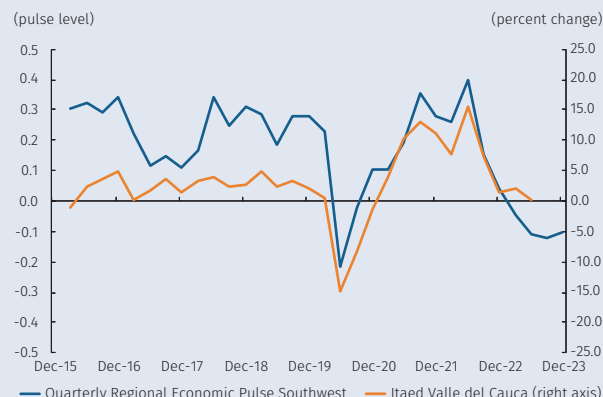
national quarterly GDP for the activities included in the PER⁷ (Graph B1.2), demonstrating statistically significant correlations.

Graph B.1.2
Comparisons between the quarterly Regional Economic Pulse by region and the quarterly Indicator of Departmental Economic Activity (Itaed)

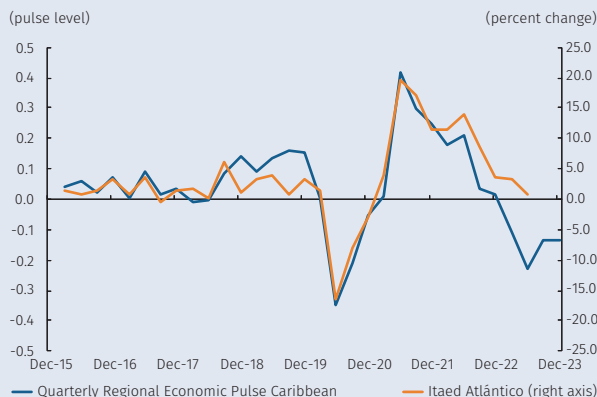
A. Quarterly Regional Economic Pulse and Itaed of Antioquia



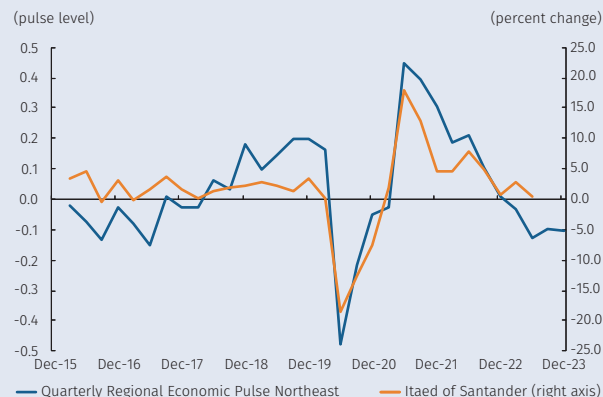
B. Quarterly Regional Economic Pulse of the Southwest and Itaed of Valle del Cauca



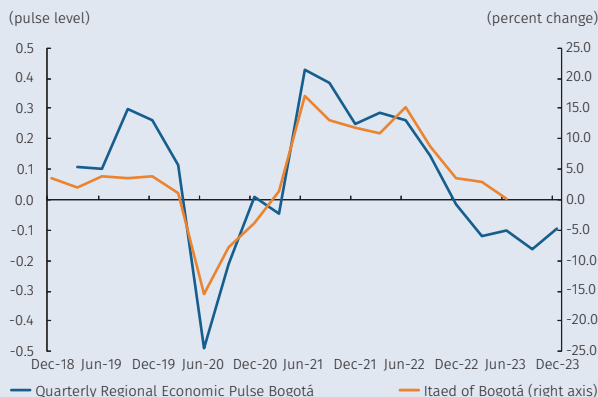
C. Quarterly Regional Economic Pulse of the Caribbean and Itaed of Atlántico



D. Quarterly Regional Economic Pulse of the Northeast and Itaed of Santander



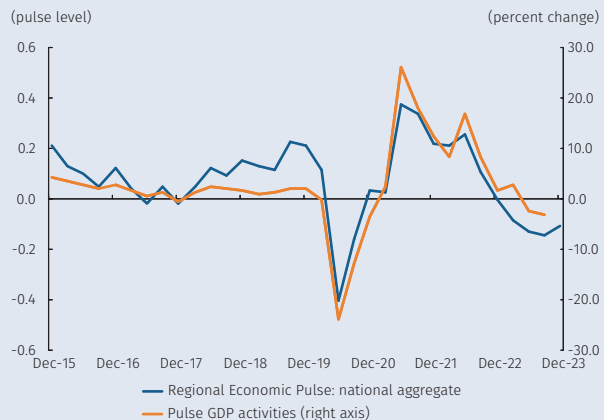
E. Quarterly Regional Economic Pulse and Itaed of Bogotá



Sources: *Banco de la República* and DANE.

7 A comparable national quarterly GDP is constructed, covering the economic activities tracked by the PER. Thus, the national quarterly GDP of PER activities is the sum of the industry value added (excluding the refining industry), commerce, lodging, agriculture, livestock, air and land transportation, building construction and financial activities.

Graph B.1.3
Quarterly Regional Economic Pulse national aggregate and Pulse GDP activities



Sources: Banco de la República and DANE; calculations by Banco de la República.

Likewise, inferential tests⁸ carried out on the PER and DANE⁹ series concluded that they share comovements, demonstrating that the PER can capture the economic activity trends of the regions, the national aggregate, and the tracked economic activities (Graph B1.3).

References

Box, G. E. P., and D. R. Cox. "An Analysis of Transformations." *Journal of the Royal Statistical Society. Series B (Methodological)* 26, no. 2 (1964): 211–52. <http://www.jstor.org/stable/2984418>.

Federal Reserve Board. *The Beige Book Summary of Commentary on Current Economic Conditions by Federal Reserve District*. 17 January 2024. <https://www.federalreserve.gov/monetarypolicy/publications/beige-book-default.htm>

Shuschny, A. and Soto, H. "Guía metodológica. Diseño de indicadores compuestos de desarrollo sostenible". *Colección de Documentos de proyectos*, CEPAL. (2009) <https://hdl.handle.net/11362/3661>.

8 Granger test (causality), Engle-Granger test (cointegration) and Pearson test (correlation).

9 The PER indicators were compared with the economy monitoring indicator, real sales by department from the Monthly Trade Survey and real production from DANE's Monthly Manufacturing Survey with a Territorial Approach.

Appendix 1

Macroeconomic Forecasts by local and Foreign Analysts^{a/, b/}

	Unit	Jan-24	Dec-24	Jan-25	Dec-25	Jan-26
Headline CPI	Monthly variation (average)	0.93	n. a.	n. a.	n. a.	n. a.
CPI excluding food	Monthly variation (average)	0.96	n. a.	n. a.	n. a.	n. a.
Headline CPI	Annual variation (average), end of period	8.36 ^{c/}	5.50	5.13	3.85	3.71
CPI excluding food	Annual variation (average), end of period	9.63 ^{c/}	5.35	4.87	3.70	3.48
Nominal exchange rate	COP per USD, end of period	3,920	4,031	4,037	3,997	4,000
Monetary policy rate	Percentage, end of period	12.63	8.25	7.75	5.50	5.38

	Unit	IV-2023	2023	I-2024	II-2024	III-2024	IV-2024	2024	I-2025	II-2025	III-2025	IV-2025
GDP	Annual change, original series	0.6	1.0	0.3	1.3	1.7	2.0	1.5	2.5	2.6	2.7	n. a.
Unemployment	Thirteen cities, quarterly average	9.4	n. a.	11.3	10.9	10.7	10.0	n. a.	11.2	10.6	10.5	n. a.
IBR (90 days)	Effective annual rate, end of period	n. r.	n. a.	11.5	10.4	9.2	7.8	n. a.	6.7	6.1	5.7	5.5
Fiscal Deficit (GNC) ^{d/}	Share of GDP	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	4.4	n. a.	n. a.	n. a.	n. a.
Direct Account Deficit ^{d/}	Share of GDP	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	3.3	n. a.	n. a.	n. a.	n. a.

n.a.: Not available.

n.r.: Not relevant, given that the data has already been observed.

a/ The survey excluded the question related to the DTF starting with the April 2023 *Banco de la República's* Monthly Survey of Economic Analyst Expectations.

Expectations (EME for its Spanish acronym) conducted by *Banco de la República*.

b/ Is the response median to *Banco de la República's* Monthly Survey of Economic Analyst Expectations, except for the CPI and CPI excluding food, which are the response average.

c/ Data calculated based on the results of *Banco de la República's* Monthly Survey of Economic Analyst Expectations (EME).

d/ Positive values represent deficit and negative values represent surplus.

Sources: *Banco de la República* Monthly Survey of Economic Analyst Expectations, conducted in January 2024.

Appendix 2

Main Macroeconomic Forecasting Variables

		Years										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Exogenous variables												
External ^{a/}												
GDP of trading partners ^{b/}	Percentage, annual var., seasonally adjusted	2.0	1.6	3.2	2.5	1.5	-6.6	8.2	3.6	2.2	1.7	2.3
Oil price (Brent benchmark)	Dollars per barrel, average of the period	54	45	55	72	64	43	71	99	82	79	77
Federal funds effective rate (Fed)	Percentage, average for the period	0.13	0.39	1.00	1.83	2.16	0.37	0.08	1.68	5.03	5.16	4.22
5-year Credit Default Swap for Colombia	Basis points, average for the period	184	212	129	114	99	142	142	259	246	198	207
Internal												
Neutral real interest rate for Colombia	Percentage, average for the period	1.5	1.6	1.3	1.3	1.2	1.3	1.5	2.0	2.2	2.4	2.4
Potential GDP for Colombia (trend)	Percentage, annual change	3.3	2.7	2.4	2.3	2.4	0.0	4.0	3.7	2.9	2.8	2.8
Endogenous variables												
Prices												
Total CPI ^{c/}	Percentage, annual change, end of period	6.77	5.75	4.09	3.18	3.80	1.61	5.62	13.12	9.28	5.90	2.76
CPI excluding food ^{d/}	Percentage, annual change, end of period	5.25	5.51	5.03	3.51	3.45	1.03	3.44	9.99	10.33	.	.
CPI for goods (excluding food and regulated items)	Percentage, annual change, end of period	7.27	5.91	3.24	1.40	2.18	0.63	3.31	15.04	7.11	.	.
CPI for services (excluding food and regulated items)	Percentage, annual change, end of period	4.64	5.26	5.38	3.13	3.45	1.29	2.18	7.41	8.96	.	.
CPI for regulated items	Percentage, annual change, end of period	4.43	5.63	6.26	6.65	4.81	0.73	7.10	11.77	17.24	8.50	2.90
CPI for food ^{e/}	Percentage, annual change, end of period	13.08	6.65	0.48	1.87	5.80	4.80	17.23	27.81	5.00	4.26	0.15
CPI for perishable food	Percentage, annual change, end of period	26.03	-6.63	5.84	8.88	8.66	2.49	24.42	36.44	-0.47	.	.
CPI for processed food	Percentage, annual change, end of period	9.62	10.74	-0.91	-0.08	5.04	5.43	15.32	25.33	6.71	.	.
Core inflation indicators ^{f/}												
CPI excluding food	Percentage, annual change, end of period	5.25	5.51	5.03	3.51	3.45	1.03	3.44	9.99	10.33	.	.
Core CPI 15	Percentage, annual change, end of period	5.59	5.98	4.21	3.22	3.78	1.88	4.42	11.55	9.46	.	.
CPI excluding food and regulated items	Percentage, annual change, end of period	5.50	5.48	4.67	2.57	3.10	1.11	2.49	9.51	8.42	5.39	3.32
Average of all core inflation indicators	Percentage, annual change, end of period	5.44	5.66	4.64	3.10	3.44	1.34	3.45	10.35	9.41	.	.
Representative market exchange rate	Pesos per dollar, average for the period	2.746	3.053	2.951	2.957	3.282	3.691	3.747	4.257	4.330	.	.
Real exchange rate Inflationary gap	Percentage, average for the period	9.5	2.5	-1.7	-0.7	3.6	6.5	2.5	6.5	1.1	-5.6	-1.4
Economic activity												
Gross domestic product (sats)*	Percentage, annual change, sats	3.0	2.1	1.4	2.6	3.2	-7.3	11.0	7.3	1.0	0.8	3.5
Final consumption expense	Percentage, annual change, sats	3.4	1.6	2.3	4.0	4.3	-4.1	13.6	7.9	1.4	.	.
Household final consumption expenditure	Percentage, annual change, sats	3.1	1.6	2.1	3.2	4.1	-4.9	14.5	9.5	1.0	.	.
General government final consumption expenditure	Percentage, annual change, sats	4.9	1.8	3.6	7.4	5.3	-0.8	9.8	0.3	2.1	.	.
Gross capital formation	Percentage, annual change, sats	-1.2	-0.2	-3.2	1.5	3.0	-2.1	12.6	16.8	-22.1	.	.
Gross fixed capital formation	Percentage, annual change, sats	2.8	-2.9	1.9	1.0	2.2	-24.0	17.3	11.4	-7.0	.	.
Housing	Percentage, annual change, sats	9.5	-0.2	-1.9	-0.4	-8.9	-32.7	40.2	4.5	2.0	.	.
Other buildings and structures	Percentage, annual change, sats	10.2	0.0	4.6	-3.5	1.1	-31.6	1.0	0.4	-6.7	.	.
Machinery and equipment	Percentage, annual change, sats	-9.3	-7.9	1.4	8.6	12.3	-13.3	24.2	24.5	-13.5	.	.
Cultivated biological resources	Percentage, annual change, sats	2.3	13.1	0.3	-3.1	7.9	-1.8	-0.9	-6.8	4.4	.	.
Intellectual property products	Percentage, annual change, sats	1.3	-12.0	1.2	1.5	-0.7	-10.8	6.4	12.4	1.4	.	.
Domestic demand	Percentage, annual change, sats	2.4	1.2	1.1	3.5	4.0	-7.5	13.4	9.4	-4.3	.	.
Exports	Percentage, annual change, sats	1.7	-0.2	2.6	0.6	3.1	-22.7	15.9	14.8	4.9	.	.
Imports	Percentage, annual change, sats	-1.1	-3.5	1.0	5.8	7.3	-19.9	26.7	22.3	-15.4	.	.
Product gap ^{g/}	Percentage	0.9	0.3	-0.8	-0.5	0.3	-7.2	-0.7	2.7	0.8	-1.2	-0.4
Short-term indicators												
Real production of manufacturing industry	Percentage, annual change, seasonally adjusted	2.1	3.5	0.0	2.9	1.3	-8.1	16.2	10.5	.	.	.
Retail trade sales, excluding fuels or vehicles	Percentage, annual change, seasonally adjusted	6.4	2.0	-0.1	5.4	8.1	-1.5	12.3	9.1	.	.	.
Coffee production	Percentage, annual change, cum. for period	16.8	0.4	-0.3	-4.5	8.8	-5.8	-9.5	-11.9	2.4	.	.
Oil production	Percentage, annual change, period average	1.5	-11.9	-3.6	1.3	2.4	-11.8	-5.8	2.4	3.0	.	.
Labor market ^{h/}												
Total national												
Unemployment rate	Percentage, annual change, period average	9.2	9.5	9.7	10.0	10.9	16.7	13.8	11.2	10.1	10.8	.
Occupancy Rate	Percentage, annual change, period average	61.3	60.5	60.0	59.1	57.7	50.4	53.1	56.5	.	.	.
Overall participation rate	Percentage, annual change, period average	67.5	66.9	66.4	65.7	64.8	60.4	61.5	63.6	.	.	.
Thirteen cities and metropolitan areas												
Unemployment rate	Percentage, annual change, period average	10.1	10.3	11.0	11.1	11.5	19.1	15.2	11.4	10.3	10.5	.
Occupancy Rate	Percentage, annual change, period average	62.6	61.7	60.5	59.6	58.8	50.8	53.8	58.1	.	.	.
Overall participation rate	Percentage, annual change, period average	69.6	68.8	67.9	67.1	66.4	62.7	63.5	65.5	.	.	.
Balance of payments ^{i/ j/}												
Current account (A + B + C)	Millions of dollars	-18,702	-12,587	-9,924	-14,041	-14,810	-9,267	-17,951	-21,333	-10,072	-11,702	.
Percentage of GDP	Percentage, nominal terms	-6.3	-4.4	-3.2	-4.2	-4.6	-3.4	-5.6	-6.2	-2.8	-2.9	.
A. Goods and services	Millions of dollars	-19,004	-13,451	-8,762	-10,556	-14,148	-13,105	-20,002	-16,585	-8,832	-11,396	.
B. Primary income (factor income)	Millions of dollars	-5,450	-5,312	-8,046	-11,442	-9,717	-4,950	-8,723	-17,057	-13,964	-13,110	.
C. Secondary income (current transfers)	Millions of dollars	5,752	6,177	6,883	7,957	9,055	8,788	10,775	12,308	12,724	12,803	.
Financial account (A + B + C + D)	Millions of dollars	-18,060	-12,339	-9,625	-12,954	-13,298	-8,113	-16,693	-20,466	.	.	.
Percentage of GDP	Percentage, nominal terms	-6.1	-4.4	-3.1	-3.9	-4.1	-3.0	-5.3	-5.9	.	.	.
A. Foreign investment (ii - i)	Millions of dollars	-7,403	-9,341	-10,011	-6,172	-10,836	-5,725	-6,381	-13,799	.	.	.
i. Foreign Investment in Colombia (FDI)	Millions of dollars	11,621	13,858	13,701	11,299	13,989	7,459	9,561	17,183	.	.	.
ii. Colombian abroad	Millions of dollars	4,218	4,517	3,690	5,126	3,153	1,733	3,181	3,383	.	.	.
B. Portfolio investment	Millions of dollars	-9,091	-4,945	-1,800	862	24	-1,768	-4,595	427	.	.	.
C. Other investment (loans, other credits, and derivatives)	Millions of dollars	-1,981	1,781	1,641	-8,831	-5,820	-4,949	-6,371	-7,665	.	.	.
D. Reserve assets	Millions of dollars	415	165	545	1,187	3,333	4,328	654	571	.	.	.
Errors and omissions (E&O)	Millions of dollars	642	247	299	1,087	1,511	1,153	1,258	867	.	.	.
Interest rates												
Policy interest rate ^{k/}	Percentage, period average	4.67	7.10	6.10	4.35	4.25	2.87	1.91	7.22	13.04	.	.
Policy rate expected by analysts ^{l/}	Percentage, period average										11.01	6.69
IBR overnight	Percentage, period average	4.7	7.1	6.1	4.3	4.3	2.9	1.9	7.2	13.0	.	.
Commercial interest rate ^{m/}	Percentage, period average	9.4	12.8	11.1	9.3	8.8	7.4	6.2	13.3	18.7	.	.
Consumer interest rate ^{n/}	Percentage, period average	17.2	19.2	19.4	17.9	16.5	15.0	14.3	21.1	27.9	.	.
Mortgage interest rate ^{o/}	Percentage, period average	11.0	12.4	11.6	10.6	10.4	10.1	9.1	12.9	17.7	.	.

Note: values in bold are forecasts or assumptions.

sats: seasonally adjusted time series, modified to eliminate the effect of seasonal and calendar influences.

a/ Quarterly data in bold are assumptions based on the annual forecast of each variable.

b/ Calculated with the main trading partners (excluding Venezuela) weighted by their share of trade.

c/ The medium term forecast corresponds to the average of the estimates obtained from the technical staff's central models (4GM and PATACON).

d/ Calculations by *Banco de la República*; excluding the CPI item weight for food and non-alcoholic beverages. Consult González, E.; Hernández, R.; Caicedo, E.; Martínez-Cortés, N.; Grajales, A.; Romero, J. (2020). "Nueva clasificación del Banrep de la canasta del IPC y revisión de las medidas de inflación básica en Colombia", *Borradores de Economía*, No. 122, *Banco de la República*, available at: <https://investiga.banrep.gov.co/es/be-1122>.

e/ Calculations by *Banco de la República*; equal to the CPI item weight of Food and non-alcoholic beverages produced by DANE (does not include the subclasses corresponding to meals outside the home). See González, E.; Hernández, R. et al, *Ibid*.

f/ Calculations by *Banco de la República*. See González, E.; Hernández, R. et al, *Ibid*.

g/ The historical gap estimate is calculated based on the difference between observed GDP (cumulative 4 quarters) and potential GDP (trend; cumulative 4 quarters) resulting from the 4GM model; in the forecast it is calculated from the difference between the technical staff's estimate of GDP (cumulative 4 quarters) and potential GDP (trend; cumulative 4 quarters) resulting from the 4GM model. For 2023, the change in the gap estimate is explained, in part, by an upward revision of the output gap in 2022, which in turn is due to the revisions of quarterly GDP growth by the DANE in its publication of November 2023.

h/ Rates are calculated based on seasonally adjusted annual populations.

i/ The results presented follow the recommendations of the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6). See additional information and method changes at <http://www.banrep.gov.co/balance-payments>.

j/ Results for 2021 and 2022 are preliminary.

k/ Corresponds to the average annual monetary policy interest rate calculated with the working days of the series.

l/ These projections are calculated as the average of the interest rate that would be in effect in each year according to the median of the monthly responses to the Monthly Survey of Economic Analyst Expectations (EME) conducted by *Banco de la República* in January 2024.

m/ Weighted average of interest rates on ordinary, treasury and preferential loans.

n/ Does not include loans granted through credit cards.

o/ Corresponds to the weighted average of interest rate of the disbursements in COP and UVR (real value unit for its Spanish acronym) for the acquisition of NON-VIS housing (housing that is not social interest housing).

Appendix 2 (continuation)

Main Macroeconomic Forecasting Variables

		2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Variables exógenas									
External ^{a/}									
GDP of trading partners ^{b/}	Percentage, annual var., seasonally adjusted	3.8	2.5	0.6	0.4	1.4	3.8	1.3	-0.6
Oil price (Brent benchmark)	Dollars per barrel, average of the period	67	75	76	69	64	68	62	62
Federal funds effective rate (Fed)	Percentage, average for the period	1.45	1.74	1.92	2.22	2.40	2.40	2.20	1.65
5-year Credit Default Swap for Colombia	Basis points, average for the period	99	113	110	132	121	104	90	83
Internal									
Neutral real interest rate for Colombia	Percentage, average for the period								
Potential GDP for Colombia (trend)	Percentage, annual change								
Endogenous variables									
Prices									
Total CPI ^{c/}	Percentage, annual change, end of period	3.14	3.20	3.23	3.18	3.21	3.43	3.82	3.80
CPI excluding food ^{d/}	Percentage, annual change, end of period	3.97	3.73	3.67	3.51	3.27	3.22	3.37	3.45
CPI for goods (excluding food and regulated items)	Percentage, annual change, end of period	1.67	1.39	1.39	1.40	1.09	1.60	1.83	2.18
CPI for services (excluding food and regulated items)	Percentage, annual change, end of period	4.99	3.79	3.60	3.13	3.01	3.10	3.37	3.45
CPI excluding food	Percentage, annual change, end of period	6.28	6.21	6.35	6.65	6.33	5.24	5.03	4.81
CPI for food ^{e/}	Percentage, annual change, end of period	-0.06	1.11	1.47	1.87	3.24	4.96	6.49	5.80
CPI for perishable food	Percentage, annual change, end of period	7.13	8.47	9.51	8.88	9.98	15.46	17.50	8.66
CPI for processed food	Percentage, annual change, end of period	-2.01	-0.91	-0.72	-0.08	1.43	2.18	3.57	5.04
Core inflation indicators ^{f/}									
CPI excluding food	Percentage, annual change, end of period	3.97	3.73	3.67	3.51	3.27	3.22	3.37	3.45
Core CPI 15	Percentage, annual change, end of period	3.45	3.24	3.19	3.22	3.24	3.34	3.66	3.78
CPI excluding food and regulated items	Percentage, annual change, end of period	3.28	2.99	2.87	2.57	2.41	2.65	2.92	3.10
Average of all core inflation indicators	Percentage, annual change, end of period	3.57	3.32	3.24	3.10	2.97	3.07	3.32	3.44
Representative market exchange rate	Pesos per dollar, average for the period	2,861	2,838	2,960	3,161	3,135	3,240	3,338	3,412
Real exchange rate Inflationary gap	Percentage, average for the period	-3.3	-3.8	-0.4	4.5	2.3	3.2	4.0	4.8
Economic activity									
Gross domestic product (sats) ^{g/}	Percentage, annual change, sats	1.7	2.8	3.0	2.8	3.6	3.1	3.2	2.9
Final consumption expense	Percentage, annual change, sats	3.8	4.0	4.0	4.1	3.4	4.0	4.7	5.0
Household final consumption expenditure	Percentage, annual change, sats	3.4	3.4	3.2	2.9	2.9	3.6	4.4	5.4
General government final consumption expenditure	Percentage, annual change, sats	6.7	6.9	7.8	8.0	6.5	5.5	4.8	4.4
Formación bruta de capital	Percentage, annual change, sats	-6.5	1.0	0.4	12.0	8.6	3.5	5.2	-4.8
Gross capital formation	Percentage, annual change, sats	-1.5	2.4	1.4	1.8	7.3	4.3	1.9	-4.3
Housing	Percentage, annual change, sats	-9.3	0.1	6.1	2.9	-6.7	-7.9	-7.9	-13.1
Other buildings and structures	Percentage, annual change, sats	-6.7	-1.3	-4.8	-1.3	12.7	-1.0	0.7	-6.4
Machinery and equipment	Percentage, annual change, sats	12.0	13.1	6.9	3.4	14.2	22.4	10.2	2.7
Cultivated biological resources	Percentage, annual change, sats	-10.8	-6.6	3.7	2.2	5.6	9.8	14.7	1.7
Intellectual property products	Percentage, annual change, sats	2.3	2.6	0.5	0.7	-0.7	-1.1	-1.4	0.5
Domestic demand	Percentage, annual change, sats	1.6	3.6	3.7	5.0	4.5	3.9	4.7	2.9
Exports	Percentage, annual change, sats	0.3	-2.2	1.5	2.9	5.0	9.1	1.8	-3.2
Imports	Percentage, annual change, sats	-1.6	4.7	5.3	15.2	11.5	8.9	10.9	-1.0
Product gap ^{h/}	Percentage	-0.9	-0.8	-0.7	-0.5	-0.2	-0.1	0.1	0.3
Short-term indicators									
Real production of manufacturing industry	Percentage, annual change, seasonally adjusted	2.5	2.7	3.7	2.8	1.1	2.4	0.7	1.0
Retail trade sales, excluding fuels or vehicles	Percentage, annual change, seasonally adjusted	4.7	5.8	5.1	6.2	6.3	7.3	9.6	9.1
Coffee production	Percentage, annual change, cum. for period	-5.8	13.1	-13.8	-6.6	-1.9	6.6	4.9	24.1
Oil production	Percentage, annual change, period average	0.4	1.0	1.1	2.6	5.4	3.2	1.4	-0.2
Labor market ^{h/}									
Total national									
Unemployment rate	Percentage, annual change, period average	9.7	9.8	9.8	10.5	10.8	10.6	11.1	11.0
Occupancy rate	Percentage, annual change, period average	59.2	59.4	59.5	58.4	58.4	57.7	57.2	57.5
Overall participation rate	Percentage, annual change, period average	65.6	65.9	65.9	65.3	65.5	64.6	64.4	64.6
Thirteen cities and metropolitan areas									
Unemployment rate	Percentage, annual change, period average	11.1	11.0	10.8	11.5	11.8	11.4	11.3	11.6
Occupancy rate	Percentage, annual change, period average	59.6	59.9	60.1	58.9	58.7	58.8	58.7	58.7
Overall participation rate	Percentage, annual change, period average	67.1	67.3	67.3	66.6	66.6	66.4	66.2	66.4
Balance of payments ^{h/ i/}									
Current account (A + B + C)	Millions of dollars	-3,023	-3,471	-3,406	-4,141	-3,821	-3,219	-4,303	-3,467
Percentage of GDP	Percentage, nominal terms	-3.7	-4.2	-4.0	-5.0	-4.8	-4.1	-5.3	-4.2
A. Goods and services	Millions of dollars	-1,840	-2,557	-2,672	-3,487	-3,138	-2,998	-4,406	-3,607
B. Primary income (factor income)	Millions of dollars	-2,922	-2,784	-2,769	-2,967	-2,616	-2,502	-2,301	-2,298
C. Secondary income (current transfers)	Millions of dollars	1,739	1,870	2,035	2,313	1,932	2,281	2,404	2,438
Financial account (A + B + C + D)	Millions of dollars	-2,876	-2,719	-3,487	-3,872	-3,520	-3,333	-3,740	-2,706
Percentage of GDP	Percentage, nominal terms	-3.5	-3.3	-4.1	-4.7	-4.4	-4.2	-4.6	-3.3
A. Foreign investment (ii - i)	Millions of dollars	-910	-2,273	-2,375	-615	-2,652	-3,626	-1,678	-2,880
i. Foreign Investment in Colombia (FDI)	Millions of dollars	1,982	3,773	2,704	2,839	3,394	4,090	3,163	3,342
ii. Colombian abroad	Millions of dollars	1,072	1,500	330	2,224	741	465	1,485	462
B. Portfolio investment	Millions of dollars	1,715	350	482	-1,684	-1,382	-282	137	1,551
C. Other investment (loans, other credits and derivatives)	Millions of dollars	-3,817	-945	-1,763	-2,305	-1,836	48	-2,453	-1,579
D. Reserve assets	Millions of dollars	137	150	169	732	2,351	526	254	202
Errors and omissions (E&O)	Millions of dollars	146	752	-81	270	302	-114	563	761
Interest rates									
Policy interest rate ^{h/}	Percentage, period average	4.58	4.33	4.25	4.25	4.25	4.25	4.25	4.25
Policy rate expected by analysts ^{h/}	Percentage, period average								
IBR overnight	Percentage, period average	4.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Commercial interest rate ^{m/}	Percentage, period average	9.4	9.4	9.3	9.0	9.1	9.0	8.9	8.5
Consumer interest rate ^{n/}	Percentage, period average	18.7	17.9	18.0	17.3	18.0	17.2	16.0	15.5
Mortgage interest rate ^{o/}	Percentage, period average	10.8	10.6	10.5	10.4	10.4	10.5	10.4	10.4

Note: values in bold are forecasts or assumptions.

sats: seasonally adjusted time series, modified to eliminate the effect of seasonal and calendar influences.

a/ Quarterly data in bold are assumptions based on the annual forecast of each variable.

b/ Calculated with the main trading partners (excluding Venezuela) weighted by their share of trade.

c/ The medium term forecast corresponds to the average of the estimates obtained from the technical staff's central models (4GM and PATACON).

d/ Calculations by *Banco de la República*, excluding the CPI item weight for food and non-alcoholic beverages. Consult González, E.; Hernández, R.; Caicedo, E.; Martínez-Cortés, N.; Grajales, A.; Romero, J. (2020). "Nueva clasificación del Banrep de la canasta del IPC y revisión de las medidas de inflación básica en Colombia", *Borradores de Economía*, No. 122, *Banco de la República*, available at: <https://investiga.banrep.gov.co/es/be-1122>.

e/ Calculations by *Banco de la República*; equal to the CPI item weight of Food and non-alcoholic beverages produced by DANE (does not include the subclasses corresponding to meals outside the home). See González, E.; Hernández, R. et al, *Ibid*.

f/ Calculations by *Banco de la República*. See González, E.; Hernández, R. et al, *Ibid*.

g/ The historical gap estimate is calculated based on the difference between observed GDP (cumulative 4 quarters) and potential GDP (trend; cumulative 4 quarters) resulting from the 4GM model; in the forecast it is calculated from the difference between the technical staff's estimate of GDP (cumulative 4 quarters) and potential GDP (trend; cumulative 4 quarters) resulting from the 4GM model. For 2023, the change in the gap estimate is explained, in part, by an upward revision of the output gap in 2022, which in turn is due to the revisions of quarterly GDP growth by the DANE in its publication of November 2023.

h/ Rates are calculated based on seasonally adjusted annual populations.

i/ The results presented follow the recommendations of the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6). See additional information and method changes at <http://www.banrep.gov.co/balance-payments>.

j/ Results for 2021 and 2022 are preliminary.

k/ Corresponds to the average annual monetary policy interest rate calculated with the working days of the series.

l/ These projections are calculated as the average of the interest rate that would be in effect in each year according to the median of the monthly responses to the Monthly Survey of Economic Analyst Expectations (EME) conducted by *Banco de la República* in January 2024.

m/ Weighted average of interest rates on ordinary, treasury and preferential loans.

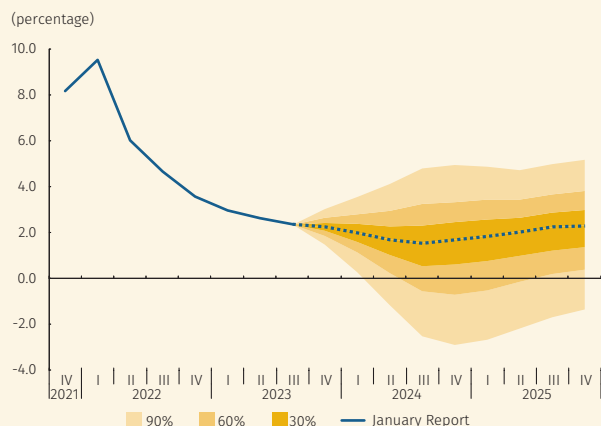
n/ Does not include loans granted through credit cards.

o/ Corresponds to the weighted average of interest rate of the disbursements in COP and UVR (real value unit for its Spanish acronym) for the acquisition of NON-VIS housing (housing that is not social interest housing).

2020				2021				2022				2023				2024				2025			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
-7.0	-46.8	53.8	16.0	5.4	7.1	7.2	5.6	0.8	2.3	4.3	0.7	3.0	2.6	2.0	-1.0	2.7	2.3	2.0	2.0	2.4	2.4	2.4	2.4
51	33	43	45	61	69	73	80	98	112	98	89	82	86	83	80	80	79	79	79	78	77	77	77
1.23	0.06	0.09	0.09	0.08	0.07	0.09	0.08	0.12	0.76	2.20	3.65	4.52	4.99	5.26	5.33	5.38	5.33	5.09	4.84	4.60	4.33	4.09	3.84
125	206	132	104	110	131	143	185	209	238	275	314	283	275	219	207	193	198	201	202	204	206	208	210
3.86	2.19	1.97	1.61	1.51	3.63	4.51	5.62	8.53	9.67	11.44	13.12	13.34	12.13	10.99	9.28	7.87	7.69	6.84	5.90	4.86	3.65	3.00	2.76
3.26	1.40	1.57	1.03	1.06	2.70	3.03	3.44	5.31	6.84	8.33	9.99	11.42	11.62	10.88	10.33	.	.	.	.	.	.	.	.
2.41	0.73	1.15	0.63	1.05	2.57	2.97	3.31	6.41	8.30	11.57	15.04	15.08	14.26	10.44	7.11	.	.	.	.	.	.	.	.
3.22	2.00	1.86	1.29	0.89	1.61	2.01	2.18	3.79	5.21	5.93	7.41	8.73	9.04	9.14	8.96	.	.	.	.	.	.	.	.
4.27	0.44	1.19	0.73	1.52	5.93	5.94	7.10	8.32	9.80	11.46	11.77	14.72	15.64	15.81	17.24	16.14	14.33	12.00	8.50	5.59	3.73	3.09	2.90
7.19	6.55	4.13	4.80	3.92	8.52	12.40	17.23	25.37	23.65	26.62	27.81	21.81	14.31	11.47	5.00	2.78	5.33	3.65	4.26	3.86	2.25	0.62	0.15
9.79	2.52	-3.42	2.49	1.58	8.69	14.82	24.42	41.87	31.21	35.50	36.44	19.66	10.06	13.93	-0.47	.	.	.	.	.	.	.	.
6.46	7.75	6.40	5.43	4.60	8.47	11.74	15.32	20.69	21.50	24.14	25.33	15.62	10.72	7.71	6.71	.	.	.	.	.	.	.	.
3.26	1.40	1.57	1.03	1.06	2.70	3.03	3.44	5.31	6.84	8.33	9.99	11.42	11.62	10.88	10.33	.	.	.	.	.	.	.	.
3.64	2.17	2.33	1.88	1.67	3.36	3.79	4.42	6.93	8.41	10.04	11.55	12.41	11.62	10.34	9.46	.	.	.	.	.	.	.	.
2.99	1.65	1.67	1.11	0.94	1.87	2.28	2.49	4.51	6.06	7.49	9.51	10.51	10.51	9.51	8.42	7.15	6.50	6.12	5.39	4.68	3.95	3.52	3.32
3.30	1.74	1.86	1.34	1.22	2.64	3.03	3.45	5.58	7.10	8.62	10.35	11.45	11.25	10.24	9.40	.	.	.	.	.	.	.	.
3,540	3,850	3,731	3,662	3,559	3,695	3,847	3,882	3,910	3,919	4,384	4,812	4,758	4,424	4,044	4,074	.	.	.	.	.	.	.	.
5.5	11.5	6.1	2.7	-0.7	2.6	4.2	3.9	2.8	1.1	7.8	14.4	11.6	3.3	-5.1	-5.4	-6.5	-6.2	-5.5	-4.3	-2.4	-1.3	-1.3	-0.6
0.4	-16.8	-9.0	-3.5	1.8	19.0	13.7	11.1	8.0	12.1	7.3	2.0	3.0	0.4	-0.3	0.9	-1.0	0.6	1.1	2.3	3.0	3.5	3.7	4.0
3.8	-14.2	-6.9	0.9	3.2	22.9	18.6	11.5	10.0	13.1	7.5	1.4	2.6	1.0	1.0	1.0	.	.	.	.	.	.	.	.
4.5	-16.8	-8.3	1.1	3.1	25.7	19.2	12.7	10.8	14.8	9.4	3.7	3.1	0.8	0.4	-0.1	.	.	.	.	.	.	.	.
-0.1	-2.1	-2.0	1.2	7.0	11.0	12.9	8.4	4.9	5.7	-3.3	-5.6	-1.4	1.6	2.4	6.0	.	.	.	.	.	.	.	.
-10.9	-31.4	-18.6	-23.6	-2.9	29.1	8.5	20.5	21.5	10.3	17.7	17.8	-7.8	-25.0	-32.6	-23.5	.	.	.	.	.	.	.	.
-12.8	-42.0	-25.5	-15.0	3.3	43.8	16.3	14.2	9.2	13.2	14.9	8.4	-2.2	-5.7	-10.7	-9.3	.	.	.	.	.	.	.	.
-26.1	-48.1	-30.1	-25.1	24.8	66.5	31.3	44.9	1.8	6.4	9.9	0.4	11.3	-0.9	-3.4	1.5	.	.	.	.	.	.	.	.
-11.1	-50.5	-39.0	-24.6	-17.4	31.1	-0.7	4.0	-3.2	4.0	11.7	-8.8	-2.7	-4.5	-11.5	-8.0	.	.	.	.	.	.	.	.
-5.0	-37.4	-9.1	1.2	11.6	57.9	24.8	12.2	27.1	25.1	20.7	25.2	-8.2	-13.7	-15.9	-16.0	.	.	.	.	.	.	.	.
2.8	2.0	-8.0	-3.4	4.6	0.0	-4.0	-4.5	-11.9	-10.7	-4.8	0.8	2.2	6.1	6.3	3.3	.	.	.	.	.	.	.	.
-0.5	-17.5	-13.5	-11.6	-6.4	10.4	12.9	10.8	15.1	16.7	14.9	3.6	0.0	1.9	-2.2	6.2	.	.	.	.	.	.	.	.
0.5	-18.0	-9.8	-2.9	1.7	24.9	16.7	12.7	12.4	13.0	9.2	3.6	0.0	-4.2	-6.8	-6.0	.	.	.	.	.	.	.	.
-7.2	-31.8	-28.7	-22.8	-9.4	15.3	28.0	36.7	19.3	28.0	16.1	-0.6	3.3	3.4	4.1	8.9	.	.	.	.	.	.	.	.
-5.4	-33.2	-25.3	-15.2	-4.4	46.1	39.5	34.2	38.4	25.4	21.6	7.4	-7.9	-14.8	-21.7	-16.9	.	.	.	.	.	.	.	.
-0.3	-3.8	-6.0	-7.2	-7.1	-4.4	-4.1	-2.5	-0.7	0.3	1.9	3.0	2.7	2.1	1.3	0.8	-0.1	-0.7	-1.1	-1.2	-1.1	-1.0	-0.7	-0.4
-1.5	-23.5	-7.3	0.0	6.7	27.7	20.2	13	11.9	20.9	7.0	3.7	-1.0	-4.5	-7.1	.	.	.	.	.	.	.	.	.
6.5	-14.7	-3.4	5.6	4.5	19.3	15.9	10.8	12.5	21.7	5.6	-1.4	-1.7	-5.5	-4.8	.	.	.	.	.	.	.	.	.
-13.8	-1.9	-3.6	-4.6	13.3	-24.7	-1.9	-18.8	-16.3	-9.7	-17.0	-17.0	-0.7	-14.3	-2.1	24.9	.	.	.	.	.	.	.	.
-2.1	-15.7	-15.4	-14.1	-14.6	-5.1	-0.1	-1.7	-0.1	5.1	1.3	3.6	3.2	3.7	3.7	1.5	.	.	.	.	.	.	.	.
11.9	21.1	18.3	15.5	14.7	15.2	12.7	12.6	12.0	11.1	10.9	10.8	10.5	10.2	9.5	10.2	10.8	10.7	10.8	10.9	.	.	.	.
55.6	44.5	49	52.7	52.7	52.0	53.4	54.1	55.9	56.7	56.8	56.6	57.2	57.8	58.4	.	.	.	.	.	.	.	.	.
63.1	56.3	59.9	62.3	61.7	61.3	61.2	61.9	63.5	63.8	63.8	63.4	63.9	64.4	64.6	.	.	.	.	.	.	.	.	.
12.0	25.1	21.8	17.3	16.9	16.7	14.0	13.1	12.3	11.3	11.0	10.9	11.1	10.4	9.8	9.9	10.5	10.4	10.5	10.6	.	.	.	.
56.8	44.1	49.0	53.4	53.3	53.1	54.0	54.5	57.3	58.0	58.5	58.5	58.5	59.2	60.3	.	.	.	.	.	.	.	.	.
64.5	58.9	62.6	64.5	64.1	63.8	63.3	62.7	65.3	65.3	65.7	65.6	65.8	66.1	66.8	.	.	.	.	.	.	.	.	.
-2,295	-1,962	-2,013	-2,997	-3,108	-4,052	-4,834	-5,958	-5,531	-4,889	-6,194	-4,720	-3,067	-2,345	-1,680	.	.	.	.	.	.	.	.	.
-3.1	-3.6	-3.0	-4.0	-4.0	-5.5	-6.0	-6.9	-6.4	-5.4	-7.1	-5.8	-3.8	-2.7	-1.7	.	.	.	.	.	.	.	.	.
-3,098	-2,651	-3,263	-4,092	-3,691	-5,026	-5,258	-6,028	-5,101	-3,194	-4,513	-3,778	-2,342	-2,202	-1,471	.	.	.	.	.	.	.	.	.
-1,369	-1,029	-1,172	-1,380	-1,867	-1,652	-2,339	-2,865	-3,607	-4,525	-4,787	-4,137	-3,823	-3,175	-3,567	.	.	.	.	.	.	.	.	.
2,173	1,718	2,422	2,475	2,450	2,627	2,763	2,935	3,177	2,830	3,106	3,195	3,097	3,033	3,358	.	.	.	.	.	.	.	.	.
-1,735	-1,938	-1,857	-2,584	-2,789	-3,761	-4,504	-5,640	-5,037	-4,952	-5,736	-4,741	-2,759	-2,654	-1,387	.	.	.	.	.	.	.	.	.
-2.3	-3.5	-2.8	-3.4	-3.6	-5.1	-5.6	-6.5	-5.8	-5.5	-6.6	-5.9	-3.4	-3.1	-1.4	.	.	.	.	.	.	.	.	.
-1,924	-1,725	-258	-1,818	-1,438	-1,013	-2,528	-1,402	-3,651	-3,661	-2,959	-3,529	-3,763	-5,483	-2,979	.	.	.	.	.	.	.	.	.
3,175	1,371	844	2,069	2,307	1,997	2,707	2,550	4,934	5,043	3,113	4,092	4,197	5,231	3,368	.	.	.	.	.	.	.	.	.
1,251	-353	586	251	869	984	179	1,149	1,284	1,382	154	563	434	-252	390	.	.	.	.	.	.	.	.	.
-168	-3,429	323	1,506	1,319	-6,089	851	-675	1,866	-759	-233	-447	1,103	1,545	4,504	.	.	.	.	.	.	.	.	.
528	627	-2,127	-3,976	-2,860	3,167	-2,981	-3,697	-606	-2,703	-976	-464	884	-3,369	.	.	.	.	.	.	.	.	.	.
-171	2,590	205	1,705	190	174	154	135	127	74	159	210	366	399	457	.	.	.	.	.	.	.	.	.
560	25	155	413	319	291	330	318	494	-63	458	-22	308	-310	293	.	.	.	.	.	.	.	.	.
4.23	3.26	2.24	1.75	1.75	1.75	2.40	3.81	5.68	8.56	10.81	12.53	13.17	13.25	13.23	.	.	.	.	.	.	.	.	.
4.2	3.2	2.2	1.7	1.7	1.7	1.8	2.4	3.8	5.7	8.6	10.8	12.5	13.2	13.3	13.2	12.71	11.67	10.50	9.17	7.83	6.92	6.25	5.75
8.4	8.3	7.0	6.2	6.0	5.7	6.0	6.9	8.6	10.8	14.2	17.8	19.9	18.6	18.0	.	.	.	.	.	.	.	.	.

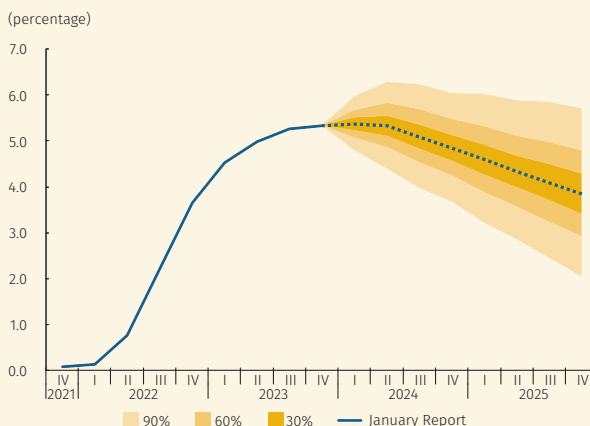
Appendix 3 Predictive Densities for other relevant Macroeconomic Forecasting Variables

Graph A3.1
Quarterly assumptions of 12-month growth of trading partners based on annual projections, predictive density^{a/}



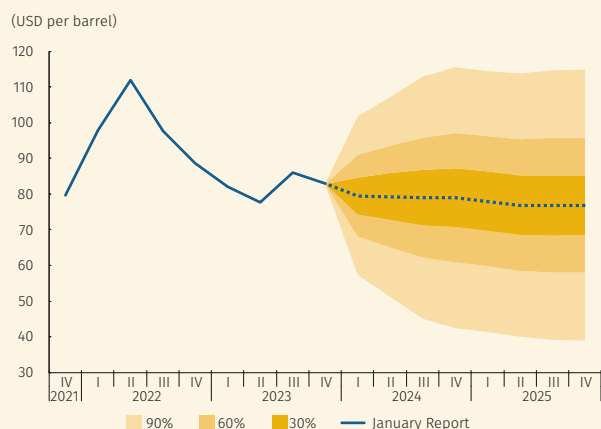
a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode).
Sources: Bloomberg, statistics bureaus, central banks; Calculations and projections by Banco de la República.

Graph A3.3
U.S. Federal Reserve quarterly interest rate assumption, predictive density^{a/}



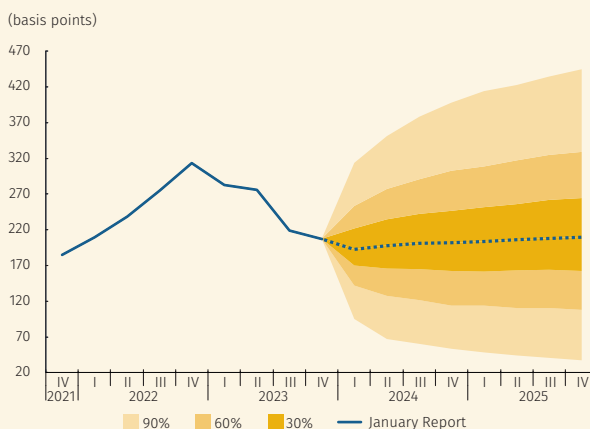
a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode).
Source: Federal Reserve Bank of Louis, calculations and projections by Banco de la República.

Graph A3.2
Quarterly oil price assumption, predictive density^{a/}



a/ The graph displays the probability distribution and its most likely path on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode).
Source: Bloomberg, calculations and projections by Banco de la República.

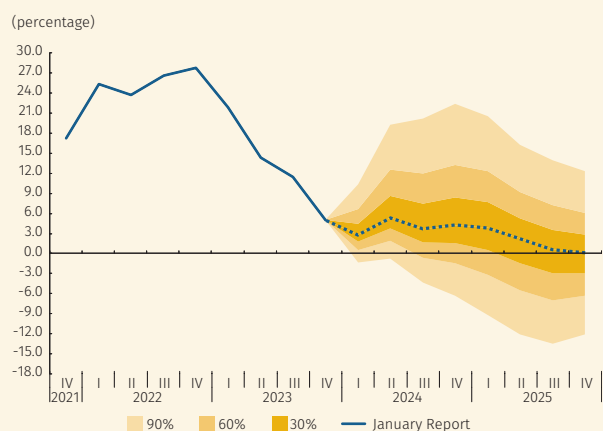
Graph A3.4
Colombia's quarterly risk premium (CDS) assumption, predictive density^{a/,b/}



a/ Five-year credit default swaps
b/ The graph displays the probability distribution and its most likely trajectory on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models.
Source: Bloomberg, calculations and projections by Banco de la República.

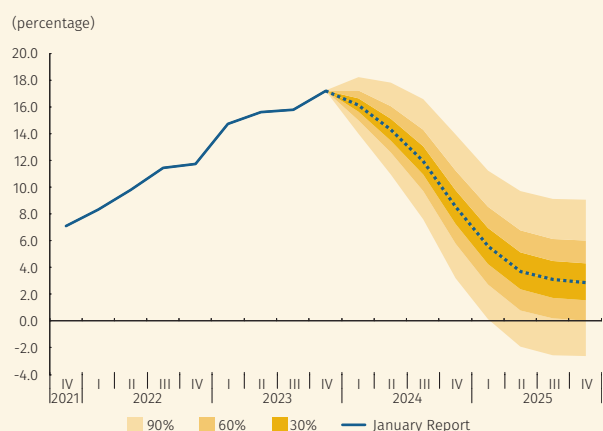
Appendix 3 (continuation) **Predictive Densities for other relevant Macroeconomic Forecasting Variables**

Graph A3.5
 CPI for foods, predictive density ^{a/}
 (Annual change, end-of-period)



a/ The graph displays the probability distribution and its most likely trajectory on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models. Source: calculations and projections by *Banco de la República*.

Graph A3.6
 CPI for regulated items, predictive density ^{a/}
 (Annual change, end-of-period)



a/ The graph displays the probability distribution and its most likely trajectory on an eight-quarter forecast horizon. Densities characterize the balance of potential risks with areas of 30%, 60% and 90% probability around the central forecast (mode), using a combination of densities from the Patacon and 4GM models. Source: calculations and projections by *Banco de la República*.

This Report was coordinated, edited, and designed by the Publishing Management Section of the Administrative Services Department, with font Fira Sans 10.