MONETARY **POLICY REPORT**

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MONETARY **POLICY REPORT**

* Presented by the technical staff to the Board of Directors for its meeting on 31 October 2019.

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MONETARY **POLICY REPORT**

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Monetary Policy in Colombia

As per its constitutional mandate, *Banco de la República* **must ensure that the purchasing power of the currency is maintained in coordination with the general economic policy[1].** In order to fulfill this mandate, the Board of Directors of *Banco de la República* (hereinafter BDBR) adopted a flexible inflation targeting scheme, by which monetary policy actions (MP) seek to lead inflation to a specific target and achieve the maximum levels of sustainable output and employment.

The flexibility of this scheme allows the BDBR to maintain an adequate balance between the achievement of the inflation target and the purpose of smoothing output and employment fluctuations around their sustainable growth path. The BDBR set a 3.0% inflation target based on the annual variation in the consumer price index (CPI). In the short term, inflation may be affected by factors that are not under control of the monetary policy such as changes in food prices due to climatic phenomena. To incorporate this, the BDBR announces, along with the inflation target, a ±1 percentage point range (i.e., 3.0 ± 1 pp) which is not a target of the monetary policy, but reflects the fact that inflation can fluctuate around the target, and not always be equal to 3.0%.

The main instrument of the BDBR to control inflation is the policy interest rate (overnight repo rate, or benchmark interest rate). Given that monetary policy actions take time to have a full effect on the economy and inflation[2], in order to determine their value, 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.

The BDBR meets once a month, but it produces monetary policy decisions only in eight of its meetings (in January, March, April, June, July, September, October, and December). In the remaining four months (February, May, August, and November), in principle, no such decisions are made[3]. At the end of the meetings where monetary policy decisions are produced, a press release is published and a press conference by the Governor of the Central Bank and the Minister of Finance is held. The minutes of the meeting describing the positions that led the Board 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 scheme seeks to deliver relevant and up-to-date information that contributes to better decision-making by the agents of the economy[5].

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1 Political Constitution of Colombia (1991), Article 373 and Sentence 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, Faculty 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 Inflation Report.

5 The current communication scheme was approved by the BDBR in its August 2019 meeting.

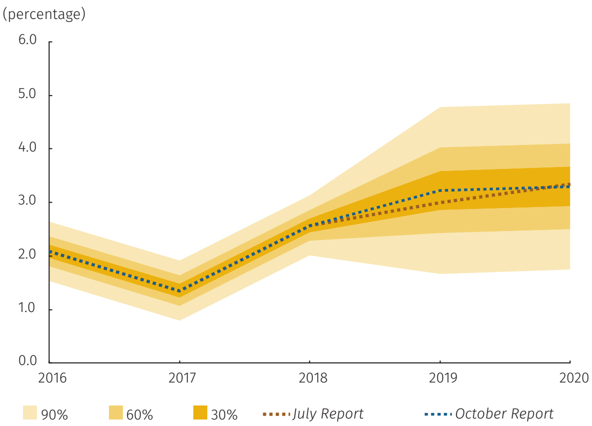
Content

Graphs

Charts

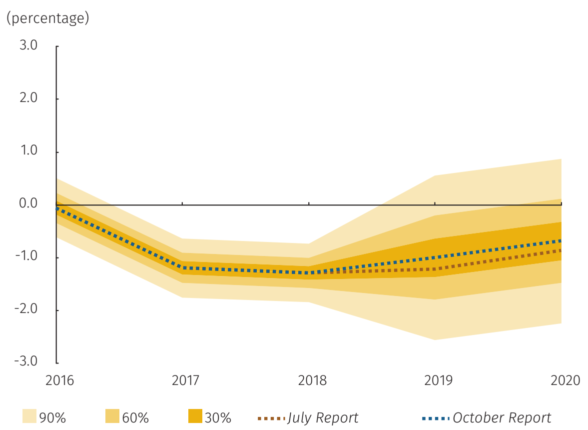
01/Summary

Graph 1.1
Gross Domestic Product (GDP) [a/b]
(Fan chart of annual percentage change)



a/ The graph shows the projected trajectory for the baseline scenario, as well as symmetric confidence intervals at 30%, 60% and 90% over this trajectory for a forecast horizon of 8 quarters. These intervals are derived from the forecast errors of the projection that results from Patacon and 4GM monetary policy models, recursively evaluated in every quarter for the period 2011-2018. Forecast errors are estimated at horizons of between 1 and 4 quarters. These errors are maintained for calculations of the intervals at horizons of between 5 and 8 quarters.
b/ The results presuppose active monetary policy in which the reference rate of *Banco de la República* is adjusted to guarantee compliance with the target inflation rate.
Source: *Banco de la República.*

Graph 1.2
Output Gap[a/b/c/]
(Fan chart of annual percentage change)



a/ The graph shows the forecast path of the baseline scenario, as well as symmetrical confidence intervals at 30%, 60%, and 90% on this path for an 8-quarter horizon. These intervals are constructed from forecast errors in the projection resulting from the Patacon and 4G monetary policy models, assessed recursively every quarter for the period 2011-2018. Forecast errors correspond to GDP growth, and are estimated for horizons between 1 and 4 quarters. These last errors are maintained for calculations of intervals from 5 to 8 quarters.
b/ This gap is calculated as the difference between the observed GDP and potential GDP (trend).
c/ Results imply an active monetary policy in which *Banco de la República*'s benchmark interest rate is adjusted to ensure achieving the inflation target.
Source: *Banco de la República.*

1.1 Macroeconomic summary

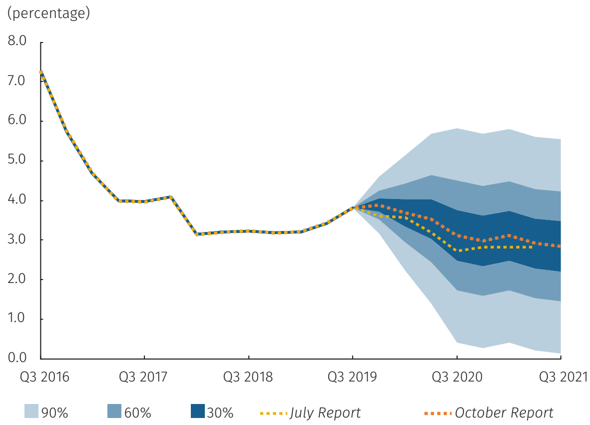
For the remainder of 2019 and through 2020, the world's developed economies are expected to undergo a more pronounced economic slowdown and to implement a more expansionary monetary policy, than was projected three months ago. Concerns that deceleration in the United States and Europe could be more acute than expected in the last iteration of this report are a product primarily of greater uncertainty over trade tensions and Brexit, as well as recent global declines in industrial production and consumer confidence. Lower estimated growth in the United States, alongside lower observed and expected real interest rates, suggests a lower neutral rate of interest. In this context, it is estimated that the fourth quarter of 2019 will see a reduction in the policy rate by the Federal Reserve, which will then remain stable in 2020[1]. As with other countries in Latin America, measures of risk premia in Colombia have fallen to historically low levels, though the peso has depreciated against the dollar. There remains a high degree of uncertainty over the possible persistence of this depreciation, and the degree to which it will pass-through to domestic prices.

The Bank's technical staff's growth projection for 2019 has risen from 3.0% to 3.2% and remains steady at 3.3% for 2020 (Graph 1.1). An increase in observed economic growth in the second quarter of this year, compared to the prior expectations of the Central Bank's technical staff, is due in part to more favorable dynamics both in household spending and in exports. Public consumption recovered less than projected, and a decline in investment in building construction leveled off. In the third quarter and for the rest of the year, the technical staff expects growth in domestic demand similar to that seen in the first six months of 2019. Expansionary monetary policy, the wide availability of consumer credit, remittances from abroad, and other factors, will continue to drive household spending. Investment is expected to maintain strong positive dynamics, after an adjustment that followed an earlier shock in terms of trade[2], and will be driven by progress on public works projects (4G) and the potential effects of the Ley de Financiamiento (Colombia's Financing Law). For the purposes of this report, it is assumed that tax incentives included in that reform will remain in place next year. In 2020, domestic demand

1 At the time of writing, the Federal Reserve reduced its interest rate by 25 basis points.

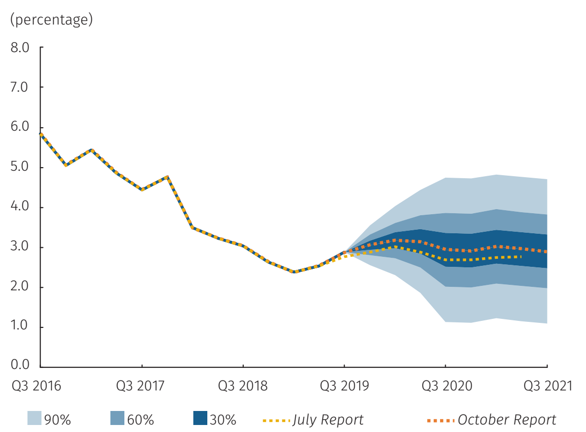
2 Due to a fall in oil prices at the end of 2014.

Graph 1.3
Consumer Price Index (CPI) a/b/
(Fan chart of annual percentage change)



a/ The graph shows the forecast path of the baseline scenario, as well as symmetrical confidence intervals at 30%, 60%, and 90% on this path for an 8-quarter horizon. These intervals are constructed from forecast errors in the projection resulting from the Patacon and 4G monetary policy models, assessed recursively every quarter for the period 2011-2018. Forecast errors are estimated for horizons from 1 to 4 quarters. These last errors are maintained for calculations of intervals from 5 to 8 quarters.
b/ Results imply an active monetary policy in which *Banco de la República*'s benchmark interest rate is adjusted to ensure achieving the inflation target.
Source: *Banco de la República*.

Graph 1.4
CPI Excluding Foodstuffs and Regulated Goods a/b/
(Fan chart of annual percentage change)



a/ The graph shows the forecast path of the baseline scenario, as well as symmetrical confidence intervals at 30%, 60%, and 90% on this path for an 8-quarter horizon. These intervals are constructed from forecast errors in the projection resulting from the Patacon and 4G monetary policy models, assessed recursively every quarter for the period 2011-2018. Forecast errors are estimated for horizons from 1 to 4 quarters. These last errors are maintained for calculations of intervals from 5 to 8 quarters.
b/ Results imply an active monetary policy in which *Banco de la República*'s benchmark interest rate is adjusted to ensure achieving the inflation target.
Source: *Banco de la República*.

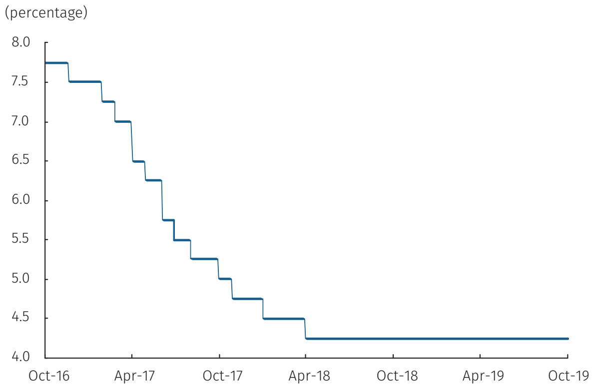
is not projected to be as strong as in 2019, primarily due to changes in public consumption and, to a lesser degree, normalization in the pace of growth in household spending. Investment, meanwhile, is projected to grow at a similar rate to 2019, thanks to an expected recovery in building construction and to the dynamism in the execution of public works projects; this despite lower expected levels of investment in machinery and equipment. Growth in exports will continue to be low in the context of a moderate recovery in external demand. At the same time, a reconfiguring of investment to non-tradable goods, together with lower growth in consumption in durable goods, suggests a more limited increase in imports. Despite slower growth in domestic demand, it should nonetheless outpace growth in gross domestic product (GDP), and as such the trade deficit is expected to expand. Excess productive capacity is expected to decline gradually between 2019 and 2020, reaching levels slightly below those projected in the previous report, as a result of increased growth projected for 2019 (Graph 1.2).

Inflation will remain close to its current level of 3.8% at the end of 2019, and in early 2020 begin to reconverge toward the target of 3.0% as the effects of temporary supply shocks start to wear off (Graphic 1.3). Observed inflation in September was close to the technical staff's projections; nevertheless, the economy registered inflationary pressures resulting from an unexpected depreciation in the value of the peso. Though changes in currency value continue to convey relatively little effect on prices compared to previous episodes of depreciation, in this particular case their effect on processed foods was more pronounced that projected in the July report. This was partially offset by a lower-than-expected increase in energy prices. The technical staff's expectation is that by the end of the year, supply shocks that lifted inflation through 2019[3] will begin to dissipate, a circumstance that will be partly offset by accumulated depreciation in the value of the peso above previous forecasts and the partial transmission of that depreciation to domestic prices. Given this, inflation should trend downward over the course of 2020. At the end of this year, increases in food prices should not exceed 3%, while prices for regulated goods will increase more slowly and, by December 2020, fall below 4%.

The projection for core inflation (not counting foodstuffs or regulated goods) is slightly higher than last quarter (Graph 1.4), but should reconverge to the target in the second half of 2020. The current forecast suggests that core inflation will continue to increase until March 2020, reach-

3 These shocks resulted from the El Niño weather pattern, a change in the calculation of the taxable base for an ad valorem tax on liquor, and the introduction of a multi-phase tax on soft drinks and beer included in the Financing Law that came into effect in 2019.

Graph 1.5
Banco de la República´s Intervention Rate
(Daily figures)



Source: *Banco de la República.*

ing levels exceeding 3%. Though the exchange rate's impact on the price of goods included in this measurement should remain relatively low, the slight increase in the projection derives from greater accumulated depreciation and persistence within the forecast horizon. The output gap is also projected to be less negative than estimated in the previous report. Nevertheless, multiple factors will contribute to core inflation returning to the target rate in 2020. First, international interest rate performance and international risk premia suggest that pressures from depreciation will be temporary. At the same time, prices in dollars on imports have fallen, a trend that could deepen given the expected slowdown of the global economy. Finally, excess spare capacity is expected to remain in place within the forecast horizon, and inflation expectations should converge to the target as previous supply shocks begin to fade.

1.2 Monetary policy decision

In its September and October meetings, the Board of Directors (BDBR decided unanimously to maintain its benchmark intervention rate at 4.25% (Graph 1.5).

02/Macroeconomic Forecast and Risk Analysis

2.1 Global Context

2.1.1 External Demand

External demand relevant to Colombia is weaker within the forecast horizon than what was anticipated in the last report. The forecast suggests a moderation in economic growth rates in the United States and the euro zone. China's economy is projected to undergo structural growth slowdown , as the result of regulations to reduce debt and a smaller contribution from the external sector. The slowdown in output growth in these economies is expected to deepen due to trade tensions, which could continue to affect global trade, value chains and investment dynamics. This should be partially offset by economic policy responses, including measures adopted by central banks, which would be reflected in looser international financial markets. In Latin America, a less favorable investment environment, domestic demand that continues to trail expectations, and the presence of some supply shocks, are expected to result in weaker economic activity in 2019 than estimated last quarter. To that effect, in the forecast horizon, average economic growth for Colombia's trade partners is expected to be lower than projected in our last report (Table 2.1 and Graph 2.1).

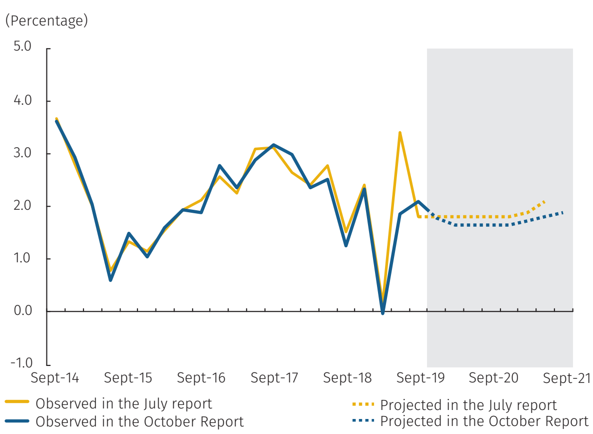
For 2019 and 2020, output growth in advanced economies is expected to remain below 2018 levels. In the United States, real GDP growth in the second quarter (2.0% annualized quarterly change (QOQ)) fell compared to the first quarter of 2019 (3.1% annualized QOQ) as a result of negative contributions to growth from net exports and non-residential investment. This was partially offset by a rebound in household consumption, driven by a strong labor market and relatively high consumer confidence[4]. In the euro zone, economic activity continued to decelerate, registering an annualized expansion in the second quarter of 0.8% compared to 1.7% in the first quarter. This was largely the consequence of a lower contribution to growth from the external sector. In the euro zone and the U.S., manufacturing sectors continued to weaken, while services maintained positive momentum. The most recent indicators suggest that trade tensions could accentuate the deterioration in industrial production and its perspectives moving forward (Graph 2.2.). At the same time, increased global uncertainty continues to have an effect on investment decisions, resulting in a greater slowdown in global

Chart 2.1
Growth Projections for Main Trade Partners a/

Partner	2018 (prelim.)	2019 (proj.)	2020 (proj.)	2021 (proj.)
United States	2.9	2.2	1.6	1.6
Eurozone	1.9	1.0	1.0	1.1
Ecuador	1.1	-0.6	0.2	0.8
China	6.6	6.2	5.9	5.8
Brazil	1.1	0.9	1.8	2.3
Peru	4.0	2.6	3.3	3.5
Mexico	2.0	0.5	1.5	1.8
Chile	4.0	2.5	3.0	3.0
All trading partners a/	2.5	1.5	1.7	1.8

a/ These figures correspond to trade partners excluding Venezuela. For weight calculations, the value of non-traditional trade is used. Sources: Bloomberg, Focus Economics, and offices of statistics and central banks of the countries in question (observed data); *Banco de la República* (calculations and projections).

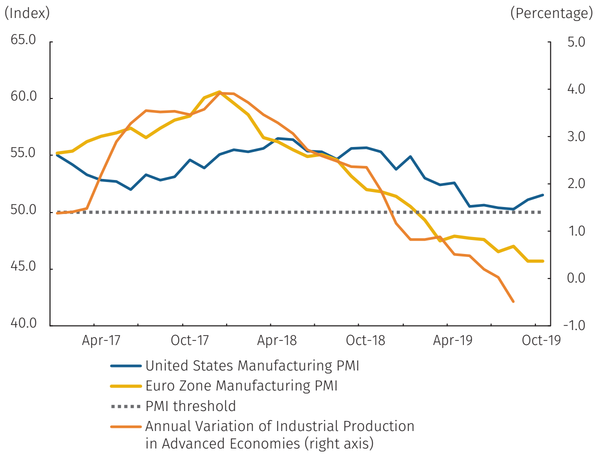
Graph 2.1
Estimated Quarterly Growth for Trade Partners Based on Annual Proposals a/
(Annualized quarterly variation)



a/ These figures correspond to trading partners excluding Venezuela. The US dollar value of non-traditional trade is used to calculate weights.
Sources: Bloomberg, Focus Economics, statistical offices, and central banks (observed data); *Banco de la República* (calculations and projections).

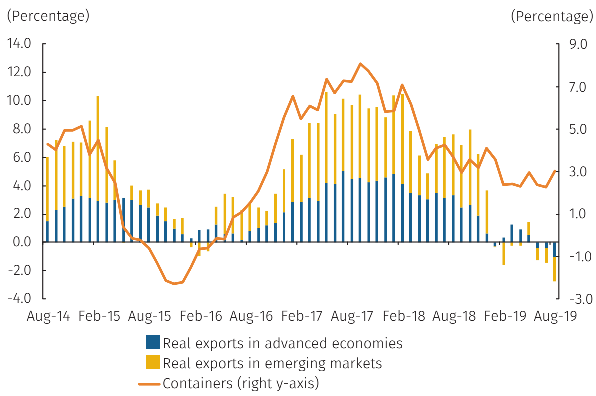
4 At the timing of writing, third-quarter annualized economic growth for the United States was set at 1.9%, higher than average market expectations (1.8%).

Graph 2.2
Manufacturing Purchasing Managers Index and Annual Variation in Industrial Production in Advanced Economies [a/]



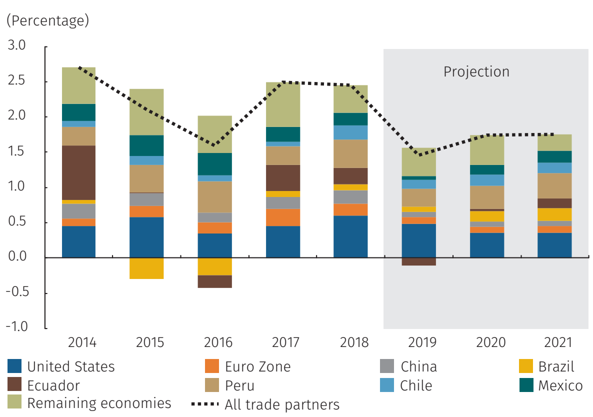
a/ Moving average for three-month annual variation in industrial production, excluding construction.
Note: figures in the purchasing managers index (PMI) above threshold indicate expansion and below threshold indicate contraction in the sector, compared to the previous month.
Sources: Bloomberg and CPB Netherlands Bureau for Economic Policy Analysis.

Graph 2.3
Real Exports and Global Container Traffic
(Annual variation)



Note: Mobile average for three-month annual variation
Source: CPB Netherland Bureau for Economic Policy Analysis and Institute of Shipping Economics and Logistics.

Graph 2.4
Contribution to Annual Growth of Trade Partners [a/]



a/ These figures correspond to trading partners excluding Venezuela. The US dollar value of non-traditional trade is used to calculate weights.
Sources: Bloomberg, Focus Economics, statistical offices, and country central banks (observed data); *Banco de la República* (calculations and projections).

trade that, according to the World Trade Organization, will remain the case for the next several months (Graph 2.3). As a result, growth projections for the United States and the euro zone have been reduced for 2019 and 2020.

Weak domestic demand, amid less favorable external conditions and the persistence of some supply shocks, have led to a downward revision in growth projections for Colombia's main trade partners in Latin America. Political instability in the region could accentuate these trends. In the second quarter of 2019, unexpected reductions in economic activity in Mexico, Peru and Chile were accompanied by deterioration in those countries' labor markets. Some of this can be attributed to the persistence of temporary supply shocks in primary sector activities, especially in Chile and Peru, which should continue to gradually unwind in the second half of the year. In both of these countries, exports reduced growth momentum and private consumption slowed, hurting projections for this year, though some rebound is expected in 2020 and 2021. Projections for Mexico were revised downward on pronounced weakness in components of domestic demand, an adjustment in crude oil extraction, and the possible effects of lower industrial production in the United States. In Brazil, despite an unexpected increase in growth figures in the second quarter, the forecast has also been revised downward on account of lower public spending and a fall in external sales, affected, by deteriorating economic circumstances in neighboring Argentina. Finally, Ecuador's economy is projected to contract in 2019, while only slow growth is expected for 2020 and 2021, in part due to an adjustment in fiscal accounts.

The baseline scenario projects 1.5% real GDP growth in 2019 for Colombia's main trade partners, rising slightly to 1.7% in 2020 and 1.8% in 2021. This level of growth implies a deceleration with respect to 2018 (2.5%) and a lower growth trajectory compared to the previous report (Table 2.1 and Graphs 2.1 and 2.4). The level of uncertainty in these projections is high, given the possibility of increased restrictions in trade, a resurgence in bilateral agreements to the detriment of global trade arrangements, political tensions in the region, the prospect of slowdown in China's economy being greater than expected, and uncertainty over Brexit, among other factors. On balance, these factors represent a risk of lower growth projections for Colombia's trade partners.

2.1.2 External price developments

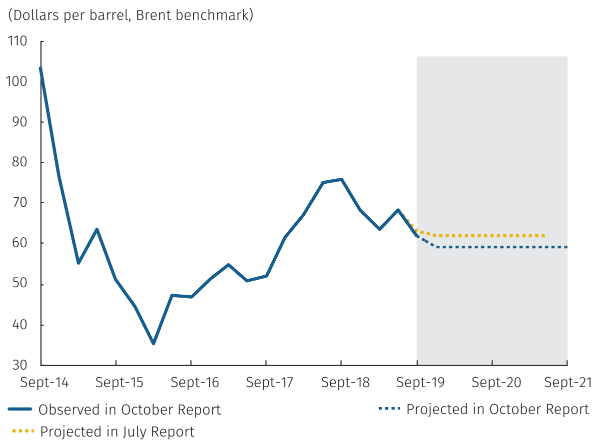
Greater weakness in global demand than previously expected has resulted in a downward revision in projected oil prices. In recent months, the international oil price has fallen compared to observed levels in the first half of the year. This has been the result of weaker global econom-

Chart 2.2
Projections for Reference Prices for Commodities Exported by Colombia

	2018	2019 (Proj.)	2020 (Proj.)
Brent Crude (dollars per barrel)	71.6	63.3	59
Coal (dollars per ton)	85.8	73	60
Colombian coffee (*Ex dock* dollars per pound)	1.37	1.29	1.34
Gold (dollars per troy ounce)	1,269	1,397	1,475

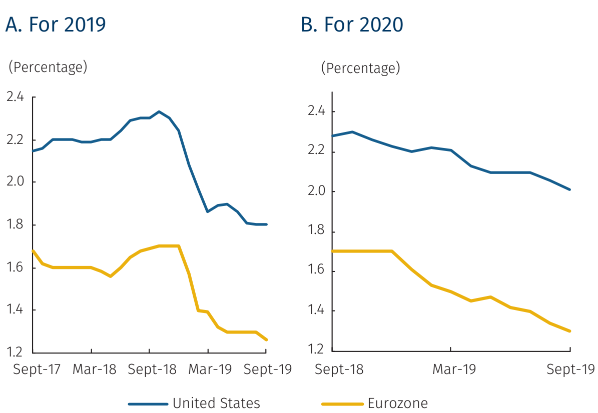
Proj: Projected
Source: Bloomberg, calculations and projections by *Banco de la República*.

Graph 2.5
Assumption on the Quarterly Oil Price Based on Annual Projections



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

Graph 2.6
Evolution in Expectations of Total Annual Inflation for the United States and the Euro Zone [a/]



a/ Corresponds to the monthly average of annual variations in the consumer price index.
Source: Bloomberg.

ic growth perspectives, a generalized appreciation of the dollar, and an increase in hydrocarbons extraction in the United States. These factors have been partially offset by a renewed agreement between members of the Organization of Petroleum Exporting Countries (OPEC) and its allies to cut production until March 2020, as well as by geopolitical events that have reduced supply. In particular, the September attacks on oil infrastructure in Saudi Arabia affected the production and price of crude oil, though only temporarily. It is expected that demand factors will have a greater impact on prices than those of supply, with current projections for the average price of Brent crude at USD 63.3 per barrel for 2019 and USD 59 for 2020 and 2021. This represents a reduction from projections in our previous report (Table 2.2 and Graph 2.5).

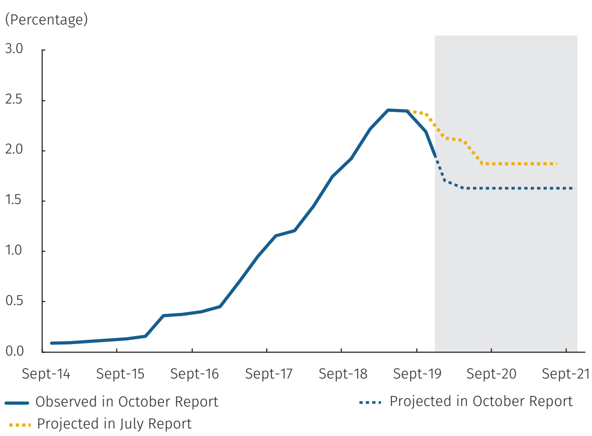
In recent months, expectations for total inflation in advanced economies have been reduced, with current projections showing levels near or below target in the next two years. In September, core and total inflation in the United States were unchanged compared to August (1.7% and 2.4%, respectively), and the latter was below market expectations. The difference between the two measures can be explained, in large part, by a fall in energy prices, primarily of gasoline. For its part, the euro zone saw annual variation in its consumer price index (CPI) fall by 1.0% in August and 0.8% in September, while core inflation registered a slight increase from 0.9% to 1.0%. Expectations for inflation for the rest of 2019 and 2020 have fallen in recent months and are now near target levels, or lower in the case of the euro zone, reflecting limited inflationary pressures for these economies (Graph 2.6).

While lower projected international prices for Colombia's raw materials exports will be partially offset by price performance in dollars of imported goods, an annual reduction in terms of trade for both 2019 and 2020 is expected. The implicit price in dollars of exports fell by 5.5% annually in the year to August. For oil and coal this dynamic has intensified in the two-month period of July-August, registering declines of 15% and 19% respectively. Coal prices have been affected by reduced prices for other sources of energy and an international push toward more environmentally responsible energy practices. At the same time, there has been an observed generalized decline in dollar price indices on imported goods, which declined by around 5.0% between January and August compared to the same period last year. The most significant declines were registered in intermediate goods (-8.0%), consumer goods (-4.2%) and capital goods (-0.9%). These declines could be associated with the appreciation of the dollar compared to other world currencies and the absence of inflationary pressures in advanced economies. As a result, terms of trade are projected to fall by 1.8% in 2019 and continue to decline in 2020 (Table 2.2).

2.1.3 External financial developments

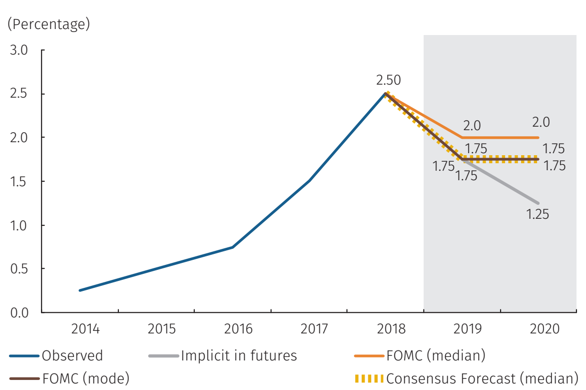
International financial markets have been affected by greater concern over global economic growth and the policy response by central banks in major developed economies. The United States' trade dispute with China intensified in the third quarter and, together with other risk factors (such as a fall in investor confidence), led to some alarm over future activity in the global economy. Over the same period, developed economies' central banks, as well as some in emerging market economies, took additional steps to encourage monetary stimulus. International markets experienced increased volatility, particularly in August (as observed in the VIX indices and the VSTOXX), alongside losses in major stock market indices. This was accompanied by greater demand for assets considered to carry less risk, capital flows being pulled out of emerging markets, and global appreciation of the dollar.

Graph 2.7
Assumption on the Quarterly Federal Reserve Interest Rate



Source: Federal Reserve, calculations by *Banco de la República*.

Graph 2.8
Upper Limit on Range of Fed Interest Rate
(End of year) a/



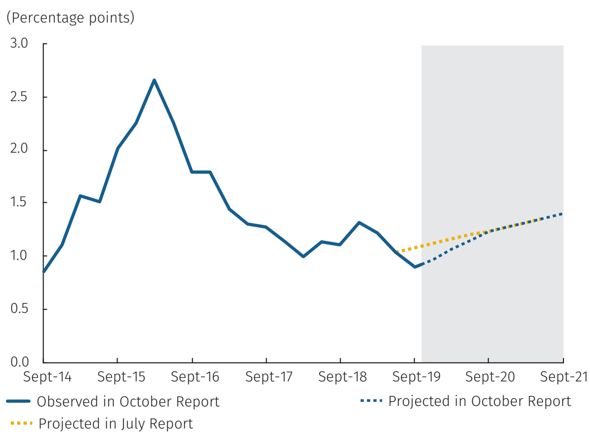
a/ Probability data implicit in futures were updated on 23 October 2019. The projections from members of the Fed correspond to their meeting on 17 and 18 September. Finally, the projections for Consensus Economics were obtained from its October report (information to 19 September).
Source: Bloomberg.

Given an increased risk of deterioration in the global economic outlook, in this report it is projected that monetary policy in developed economies will be more expansionary than expected in July. In particular, on macroeconomic outlook the forecast path for the U.S. Federal Reserve (Fed) interest rate was reduced. The current scenario considers that the Fed will reduce interest rates by 25 basis points in the fourth quarter, settling between 1.50% and 1.75% at the end of the year and through 2020[5] (Graph 2.7). More reductions are not expected, given the U.S.' positive output gap and historically low levels of unemployment. These projections coincide with the forecast mode projected by the Federal Open Market Committee (FOMC) and the median projections of analysts; nevertheless, they are greater than those implied by interest rate futures prices (Graph 2.8). It is worth noting that in September the FOMC made its second cut to interest rates in 2019. This measure was taken as a response to the increased risk of deterioration in the global economic outlook and an absence of inflationary pressures. For its part, the European Central Bank (ECB), in its September meeting, decided to cut its rate on the deposit facility and announced changes to its new targeted longer-term refinancing operations (TLTRO), reducing the type of interest with which it fixes these operations and expanding the timeline for their expiration. Finally, it announced it would resume asset purchases starting in November 2019. Going forward, the expectation is that the ECB's monetary policy will remain expansionary, in accordance with announcements.

Given lower external interest rates, it is expected that international financial conditions for Colombia will remain favorable in coming years. On average, sovereign risk premia for some regional economies fell in the third quarter

5 At the time of writing, the Fed, in its October meeting, reduced interest rates by 25 basis points.

Graph 2.9
Assumption on the Quarterly Risk Premia for Colombia (CDS)[a/]

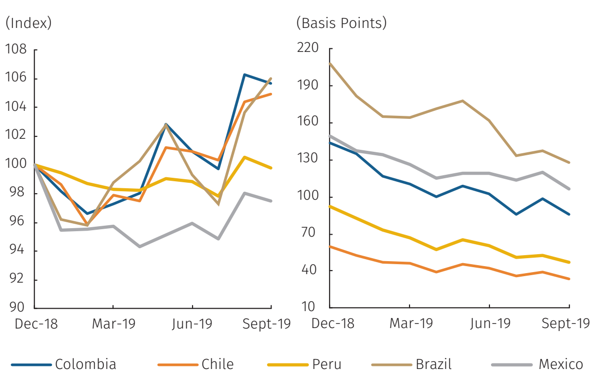


a/ Corresponds to 5-year Credit Default Swaps.
Source: Bloomberg, calculations by *Banco de la República*.

Graph 2.10
Behavior of the Nominal Exchange Rate and Risk Premium (Five-Year CDS) in Selected Economies in the Region

A. Nominal Exchange Rate (base of December 2018)

B. Credit Default Swaps to 5 years



Source: Bloomberg; cálculos del *Banco de la República*.

of 2019 compared to observed rates in the first half of the year. In the Colombian case, risk premia for the third quarter, measured through five-year credit default swaps (CDS), were 89.9 basis points, lower both than projected levels and those registered in the first half of the year (112.5 basis points), and nearing a historic low. The baseline scenario continues to project a convergence of risk premia toward their historic average in the forecast horizon, but from a lower starting point (Graph 2.9). This projection takes into account Colombia's accumulation of external deficits and other previously mentioned risk factors.

Despite looser international financial conditions and a lower risk premia, the exchange rate depreciated in a manner that was not anticipated in the July report. Current projections estimate that part of this depreciation will reverse course in coming months. In the third quarter, exchange rates on some regional currencies, including Colombia's, depreciated compared to the second quarter of the year. The biggest increases came in Chile (3.3%), Colombia (3.17%) and Mexico (1.73%) (Graph 2.10). The average exchange rate for the Colombian peso to the dollar was COP 3,343 for the third quarter, higher than the second-quarter average of COP 3,240. As a result, annual variation in the Colombian peso rose from 11.9% in June to 12.33% in September, higher than projected in the July report.

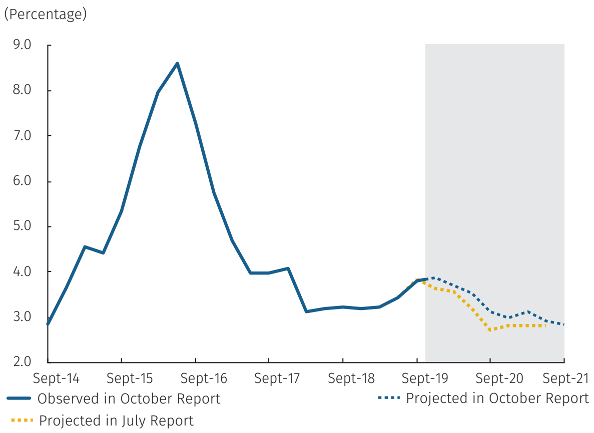
2.2 Macroeconomic projections[6]

2.2.1 Inflation

Annual consumer inflation should begin to fall at the beginning of next year, a quarter later than projected in the July report, and converge to the 3.0% target at the end of 2020. This delay is the result of unanticipated temporary pressures derived from exchange rate depreciation. During the second and third quarters of the year, price shocks related to foodstuffs and non-tradable goods affecting inflation remained in place. These originated in adverse weather conditions, as well as temporary modifications associated with changes in the calculation of the ad valorem tax on liquors. Nevertheless, the impact of these events began to dissipate at the end of the third quarter, contributing to lower inflation projections for the rest of this year and next. That said, this report identifies additional pressures originating from the recent depreciation of the exchange rate, resulting in higher inflation estimates than the previous quarter. Although part of this depreciation is believed to be temporary, it has delayed the beginning of expected convergence of inflation to the target to the beginning of 2020 (Graph 2.11).

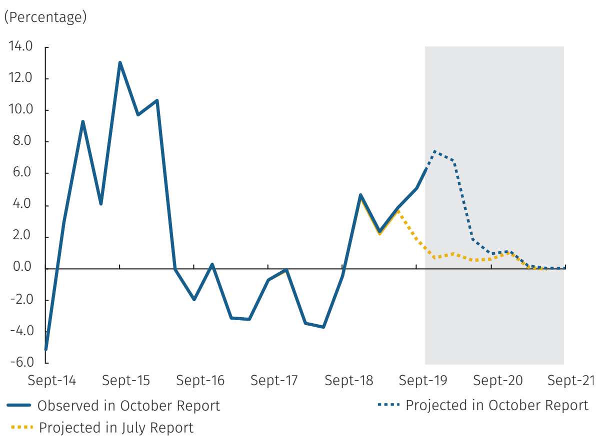
6 Results suppose an active monetary policy in which the *Banco de la República*'s reference rate is adjusted to guarantee the target inflation rate.

Graph 2.11
Consumer Price Index
(Annual variation, %)



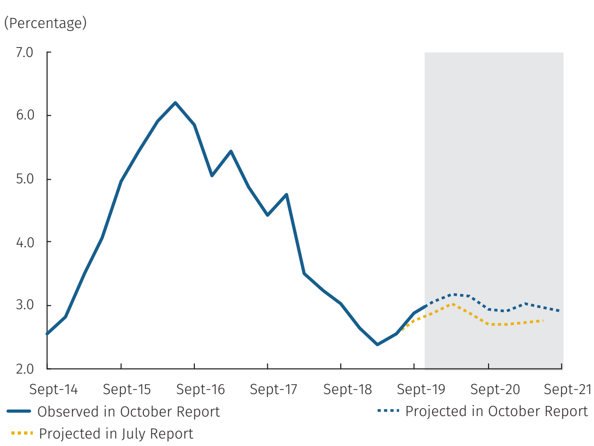
Source: DANE, calculations and projections by *Banco de la República*.

Graph 2.12
Quarterly Real Exchange Rate[a/] Inflationary Gap



a/ The real exchange rate inflation gap captures inflationary pressures originating in the exchange rate. Positive values of this gap imply upward pressures on inflation originating in the exchange-rate. This gap is calculated as the deviation of the real exchange rate vis-à-vis a non-inflationary trend component estimated under the economic structure of the 4G model.
Source: *Banco de la República*.

Graph 2.13
CPI Excluding Foodstuffs and Regulated Goods
(Annual variation)



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

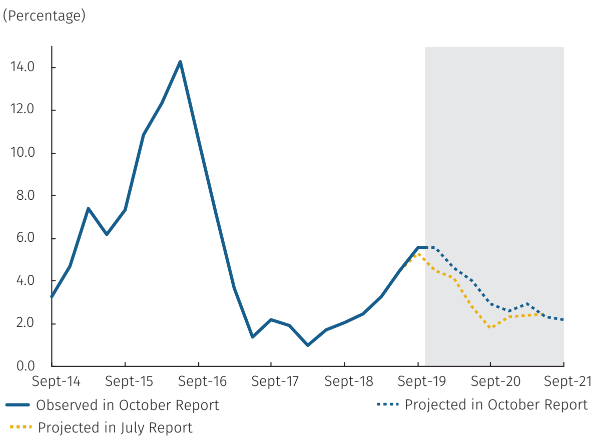
The recent increase in the exchange rate and the persistence of currency depreciation have led to a temporarily higher projected inflationary real exchange rate gap than in the July report. This report considers that pressures from depreciation will be greater and more persistent than previously expected. Nevertheless, these will begin to recede within the forecast horizon (Graph 2.12).

Core inflation (excluding foodstuffs and regulated goods) is projected to increase in the first quarter of 2020, but later fall toward the target within the forecast horizon (Graph 2.13). Annual variation in the CPI on tradable goods has gradually increased alongside the transmission of currency depreciation on prices. Going forward, it is expected that this trend will continue toward levels above those projected in the previous report. Still, it is worth highlighting that the transmission of the exchange rate on prices in the current environment will continue to be relatively low compared to previous episodes of depreciation. Among the possible causes of this phenomenon are reductions in the prices of imported goods and an output gap projected to be in negative territory. With respect to non-tradable goods, observed pressures so far this year have been low, which has translated to relatively stable performance in annual variation for that basket of goods. One-off increases in the price of some goods have led to a slight upward projection for core inflation compared to July. In general, the convergence of core inflation in the medium term is the result of: 1) the temporary nature of the currency depreciation; 2) the projection of an output gap that will remain in negative territory in 2020; 3) the unwinding of supply shocks and their impact on expectations for inflation; and 4) the continuation of a loose labor market and the resulting lack of pressures related to salary costs. It is important to highlight that the inflation forecast does not include an increase in the minimum wage in 2020 far above productivity gains and target inflation.

Compared to the July report, the current projection on the CPI for foodstuffs forecasts that the supply of perishable foods will normalize more slowly, and that exchange rate depreciation may exert stronger pressure on processed foods than previously projected. A reduction in the annual variation of the CPI for foodstuffs is anticipated, but the projection suggests that the decline will come a quarter later than previously believed (Graph 2.14). The effects of the El Niño weather pattern will continue to recede beginning in the fourth quarter of 2019 and through the first half of next year, at the same time as shocks derived from increases in indirect taxes[7] start to unwind. That said, relatively unfavorable climate conditions in recent months

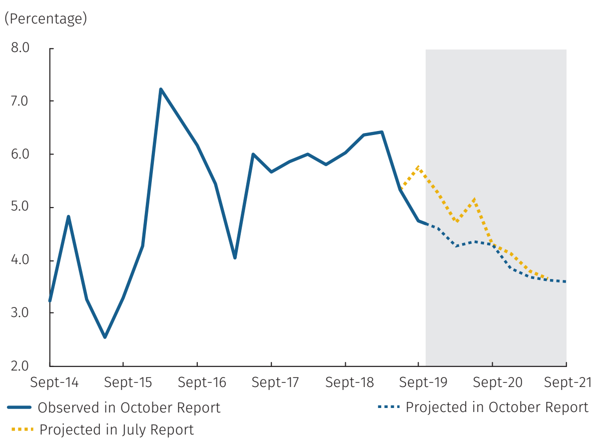
7 These shocks related to a methodological adjustment in the calculation of the taxable base for an ad valorem tax on liquor, and the introduction of a multi-phase tax on soft drinks and beer. The latter presupposes that the Financing Law will remain in place next year.

Graph 2.14
CPI for Foodstuffs [a/]
(Annual variation)



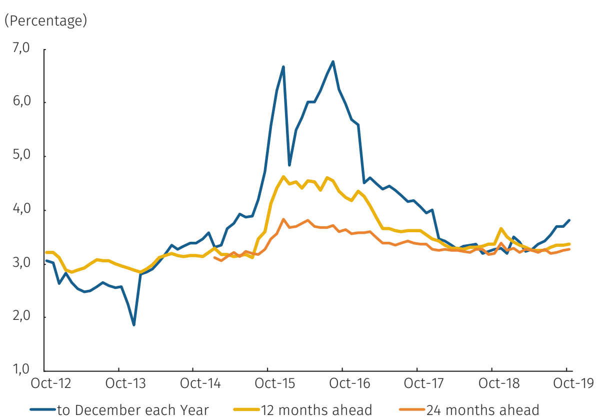
a/ Includes food away from home
Source: DANE, calculations and projections by *Banco de la República*.

Graph 2.15
CPI for Regulated Goods
(Annual variation)



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

Graph 2.16
Analyst and Stockbroker Inflation Expectations



Source: *Banco de la República* (monthly analyst survey).

may slow recovery in the supply of foodstuffs. Unexpected exchange rate depreciation will also transmit inflationary pressure to the price of imported goods.

Annual variation in the CPI for regulated goods will continue to increase at a relatively high level for the remainder of the year, though with a more marked downward trajectory than estimated in the previous report. In the second and third quarters of the year, annual change in the CPI for regulated goods was unexpectedly low, particularly considering lower than anticipated adjustments in electricity rates. This has led to lower projection for regulated goods for the remainder of the year. For 2020, annual change is now projected to be lower than the anticipated in July, though still at levels near 4.0% toward the end of the year (Graph 2.15). This dynamic is, in part, the result of reduced pressures from fuel costs and transportation services, given the current forecast of a lower price for oil than projected in the previous report.

Analysts' expectations for inflation tended to increase in September, projecting to around 3.8% at the end of the year. Responses to the Bank's monthly analyst survey revealed expectations that inflation would settle at 3.81% at the end of the year, 3.37% at the 12-month horizon and 3.28% at the 24-month horizon (Graph 2.16). In the July report, those values were 3.54% for the end of the year, and 3.31% and 3.20% at 12- and 24- month horizon. Responses to the Bank's quarterly survey, taken at the beginning of October, showed inflation expectations for year-end at 3.80%, falling to 3.63% and 3.61% at 12- and 24-month horizon, respectively. It is worth noting that the quarterly survey has historically produced higher inflation expectations than the monthly survey. Meanwhile, estimates from TES treasury bonds[8] show inflation expectations at two, three, five and ten years to be 3.44%, 3.50%, 3.54% and 3.59%, respectively.[9]

2.2.2 Economic activity

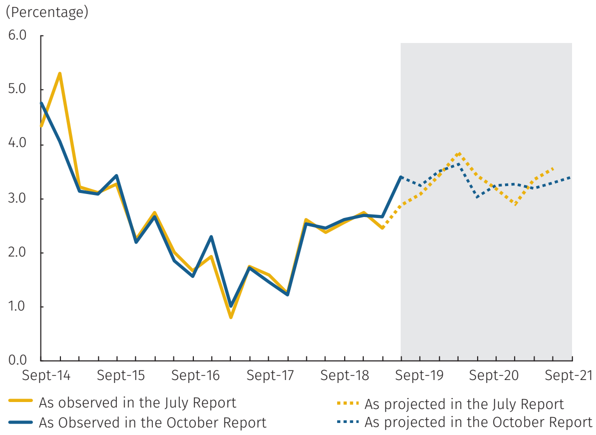
GDP is expected to grow at an annual average rate slightly above 3.0% within the forecast horizon, maintaining a gradual convergence to its potential. The most recent figures (seasonally adjusted and corrected for calendar effects[10]) from Colombia's national statistics agency (DANE)

8 With information to October 24, 2019.

9 Without inflationary and liquidity premiums, the two- and five-year rates are 3.03% and 3.12%, respectively. For these calculations, we used methodology implemented by Espinosa, Melo y Moreno (2015). "Expectativas de inflación, prima de riesgo inflacionario y prima de liquidez: una descomposición del break even inflation para los bonos del Gobierno colombiano," Borradores de Economía, No. 903, *Banco de la República*

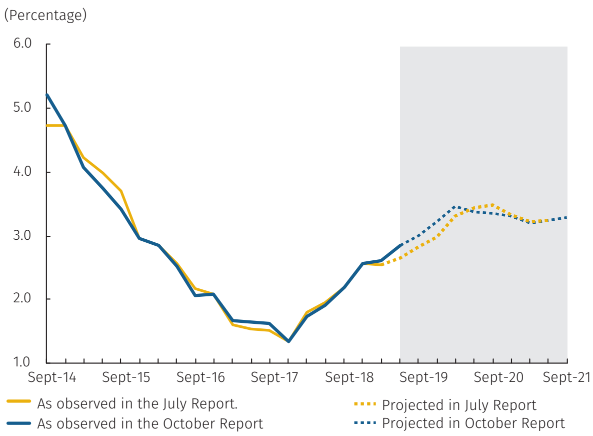
10 Going forward, data concerning GDP and its components will make reference to seasonally adjusted and calendar-effect corrected data series published by DANE.

Graph 2.17
Quarterly GDP [a/]
(Annual variation)



a/ Seasonally Adjusted and Corrected for Calendar Effects
Source: DANE; calculations and projections by *Banco de la República*.

Graph 2.18
Accumulated GDP, 4 Quarters [a/]
(Annual variation)



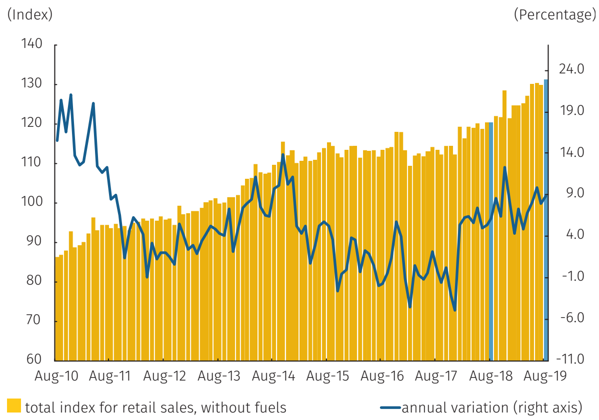
a/ Seasonally Adjusted and Corrected for Calendar Effects
Source: DANE; calculations and projections by *Banco de la República*.

show economic expansion in the first half of the year greater than that forecast in the previous monetary policy report. That includes second quarter annual growth of 3.4%, which was higher than the preceding quarter (2.9%), thanks to positive momentum in investment in machinery and equipment, exports and private consumption. Though exports should return to more moderate levels of annual growth in the second half of the year, private consumption and investment in machinery and equipment are expected to continue to expand at relatively high rates. This, together with recovery in investment in public works and, to a lesser extent, in public consumption, project a growth rate for the whole economy at 3.2% in the third quarter (Graph 2.17) and slightly higher in the fourth quarter of 2019. This report has lowered the projection for third quarter growth in housing investment, given that the rebound that was expected in the second quarter was only partially realized, at least in terms of annual variation.

Given the change highlighted above, the projection for GDP growth in 2019 has been revised upward to 3.2%, compared to 3.0% in the previous report (Graph 2.18). This figure is compatible with growth in domestic demand somewhere above 4.0%, which is higher than projected in July. If these trends are confirmed, it would represent Colombia's best economic performance since 2014, when the economy hit the end of an upward cycle in the international price of oil. It is also worth mentioning that the current projection would represent one of the highest growth rates in Latin America this year.

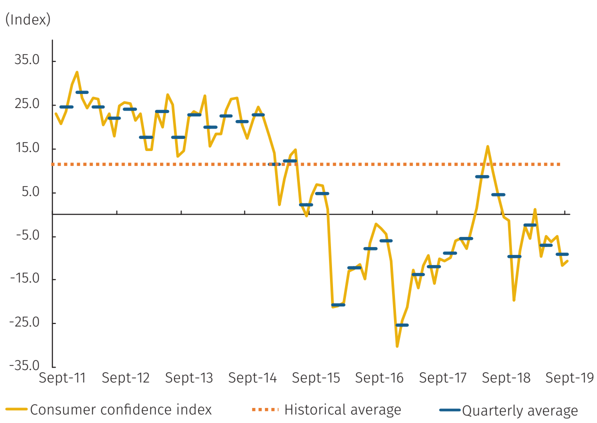
The forecast for economic growth in 2020 at 3.3% did not change, with domestic demand expected to grow at a higher rate. Loose international financial conditions, characterized by real interest rates in slightly expansionary territory, should continue to contribute to growth in domestic demand and reduce excess installed capacity. Progress in public works projects and the reactivation of construction in the housing sector will also contribute. These projections assume that tax stimulus measures, created by the Ley de Financiamiento, which was recently declared unconstitutional by the Constitutional Court, will remain in place. The projection also considers a small downward revision in the terms of trade and weak conditions for external demand for Colombian products, with less momentum than projected in the previous report, as well as a more uncertain international environment for investment. Despite this, it is considered that the country will continue to operate in an environment of relatively loose financial conditions that should not act as a drag on growth. If this holds true, the impulse for growth in 2020 will come primarily from private demand, both in investment (including public works driven by the national government) and household consumption. Some reshuffling is expected in investment and consumption towards

Graph 2.19
Monthly Survey of Retail and Vehicle Sales
(Annual variation)



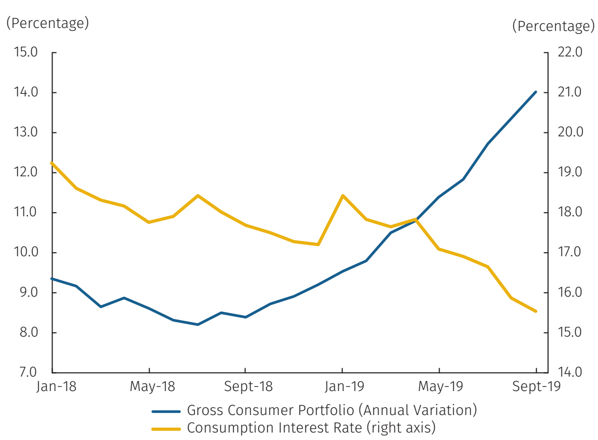
Source: DANE; calculations by *Banco de la República*.

Graph 2.20
Consumer Confidence Index and Quarterly Average



Source: Fedesarrollo.

Graph 2.21
Gross Portfolio and Consumer Interest Rate
(Annual variation)



Source: *Banco de la República.*

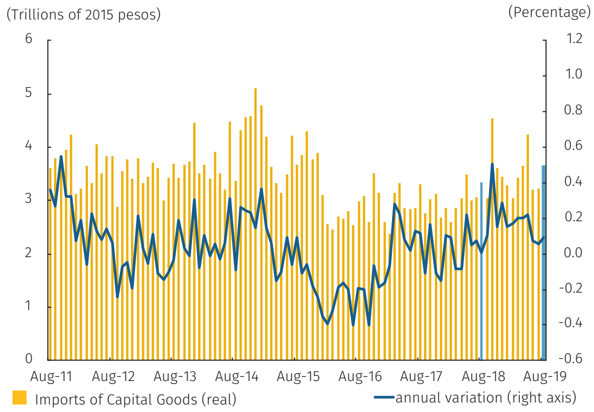
less intensive items in imported goods, which would allow for net exports' contribution to growth to be less negative than estimated for 2019.

Figures to June show two quarters of annual growth above 4.0% in private consumption. It is projected that momentum will carry through to the end of the year, but moderate in 2020 and 2021. Second-quarter momentum for this component of spending exceeded projections from the previous report. The few indicators available for the third quarter, such as retail sales to August (Graph 2.19), demand for regulated electricity over the same period, and imports to September (based on early reports from DIAN, Colombia's national tax and customs agency), suggest a similar pace. Strong indicators of private spending come despite the fact that consumer confidence, as measured by Colombian think tank Fedesarrollo, has not rebounded (Graph 2.20).

Favorable conditions that have driven growth in household consumption in 2019 are projected to remain in place through the second half of the year and into 2020. Among the factors driving household consumption are an expansion of consumer credit at relatively low interest rates (Graph 2.21) and the significant expansion of remittances measured in dollars and in pesos in real terms. In upcoming quarters, the projected reduction of inflation toward the target should also contribute to growth in private consumption. Toward 2020 the contribution to aggregate growth of consumption in durable and semi-durable goods is projected to be less than that observed in the year so far and the expectation for 2019 as a whole. This, in part, is due to the accumulated depreciation of the peso and its possible persistence in the forecast horizon. Additionally, preliminary calculations from the Bank's technical staff suggest that immigration from Venezuela will have had a positive effect on growth in private consumption, a situation that is expected to persist in 2020.

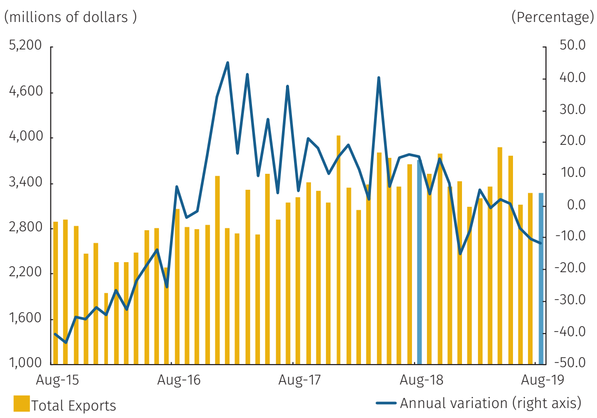
In the first half of the year, public consumption contributed less to growth than it did in 2018, a pattern that is expected to repeat itself through 2019 and deepen in 2020. The observed recovery in public consumption in the second quarter, after a poor performance at the beginning of the year, was smaller than expected. Nevertheless, budget implementation observed in the third quarter justifies the expectation of accelerated annual growth for the period and through the end of the year. Regional and local government spending is expected to have contributed to this uptick. Still, in order for the national government to comply with its fiscal rule (which this year puts a cap on the fiscal deficit at 2.4%) growth in public spending in 2019 will be less than it was in 2018. For 2020, an additional weakening in this component of demand is expected, considering the government's requirement to continue to reduce the fiscal deficit to 2.2% of GDP next year, and given the

Graph 2.22
Imports of Capital Goods in Constant Pesos
(Trillions of pesos from 2015, annual variation)



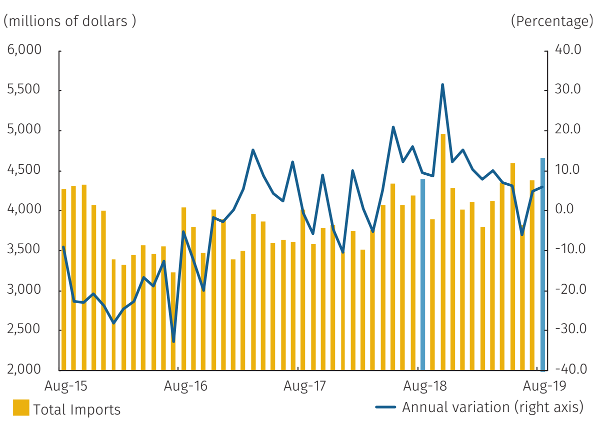
Sources: Dane and DIAN (Foreign Trade Developments); calculations by *Banco de la República*.

Graph 2.23
Total Goods Exports (FOB)
(Millions of dollars and annual variation)



Source: DANE, calculations by *Banco de la República*.

Graph 2.24
Total Imported Goods (FOB)
(Millions of dollars and annual variation)



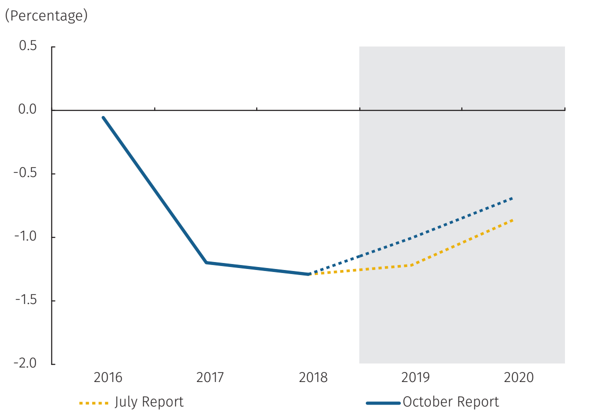
Sources: Dane and DIAN (Foreign Trade Developments); calculations by *Banco de la República*.

current projection of GDP growth. Additionally, compared to 2019 spending by regional and local governments is expected to moderate, as usually occurs during a change in administrations (as is now the case).

Investment is projected to continue to grow at relatively high rates for the remainder of the year and in 2020. Observed shocks in construction investment at the beginning of the year began to unwind in the second quarter, though at a slower pace than was expected by the Bank's technical staff. The same period showed significant momentum in investment in machinery and equipment, due principally to spending in transport equipment. This investment could include a transitory element, as it was directed toward the modernization of transport fleets in several cities and the purchase of airplanes. Taken together, this explains the acceleration in total investment observed in the second quarter. Information already available for the third quarter, in particular preliminary data on imports of capital goods to September (Graph 2.22), suggests that investment in machinery and equipment continued to grow at a healthy pace over the period. High rates of growth for total investment are expected to continue through the rest of the year and in 2020. In addition to machinery and equipment (helped forward by tax stimulus), investment momentum is expected to continue alongside recovery in the "other buildings and structures" category (which includes public works), thanks to the 4G highway projects, both for the rest of 2019 and for 2020. In the case of housing construction, a moderate boost from the government's public housing program (VIS) is projected. Given an expected significant decrease in excess supply of non-social interest housing over the course of the year, investment in this market segment, which provides the highest rate of added value, should gain momentum in 2020 and contribute more than in previous years to growth in total investment. On the other hand, public investment next year could have a moderating effect on growth, given the seasonality effects generated by the arrival of new local administrations.

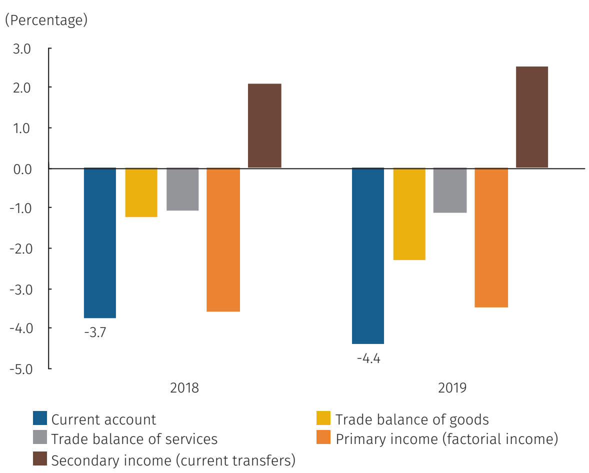
Exports are projected to show only modest growth in the second half of the year and in 2020, reversing a positive shock seen in the second quarter. Export growth accelerated between April and June of this year. However, that performance may have been temporary, and for the second half of the year export growth is expected to return to rates similar to those of the first quarter (Graph 2.23). The projection supposes that oil production will decrease in the third quarter due to the negative effects of attacks on oil infrastructure in July and an anticipated reduction in coal production, in addition to a small increase in non-traditional and service exports. The deterioration in prospects for global growth and for economic expansion of Colombia's main trade partners in 2020 do not justify

Graph 2.25
Annual Output Gap a/



a/ This gap is calculated as the difference between observed GDP and potential GDP (trend).
Source: *Banco de la República.*

Graph 2.26
Current Account and its Components as a Percentage of GDP, First semester 2018-2019



Source: *Banco de la República.*

a forecast of significant growth in this component of demand.

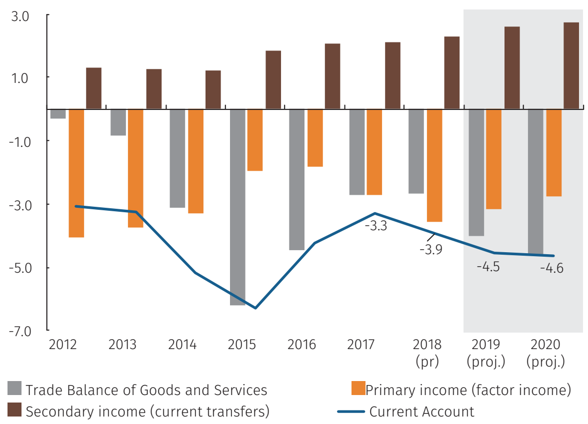
Imports will continue to grow at a strong rate in the second half of the year, but they will do so at a slower pace than in 2020 due an expected reconfiguration in domestic demand. Preliminary information to September (Graph 2.24) shows that imports have continued to grow at high rates and, given projections for domestic demand for the rest of the year, this trend is expected to extend to the fourth quarter of 2019. Nevertheless, next year a reconfiguration of demand in favor of goods and services produced locally is expected, taking into account the growing role for investment in housing as well as some expected slowdown in investment in machinery and equipment. Moreover, consumption of durable imported goods will tend to moderate due to the change in relative prices, given the previously noted higher exchange rate.

For 2019 and 2020 the output gap is projected to be slightly less negative than the forecast in the July report. The output gap should continue to close over the next two years (Graph 2.25). The projected increase in overall growth for 2019 explains this revision. The output gap will have begun to close in the second quarter of the year, slightly ahead of schedule, given unexpectedly high growth in the second quarter. This gradual close is expected to continue over the next two years, thanks to projected GDP expansion above 3.0% for that period, which is higher than GDP growth trend assumptions for those years.

2.2.3 Balance of payments

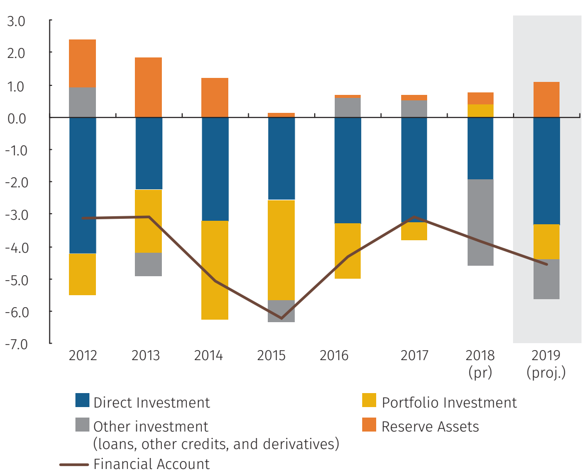
In the first half of 2019, the current account deficit as a percentage of GDP was 4.4%, higher than the 3.7% observed a year ago (Graph 2.26). This deterioration is principally due to a generalized increase in imports, driven by domestic demand. The effects of currency depreciation on the measurement of GDP in dollars also contributed. On the other hand, remittances from workers abroad and higher profit levels on foreign investment mitigated the increase in the current account deficit somewhat. During this period external financing came principally from direct investment into the country and, to a lesser extent, from portfolio investment and the liquidation of assets abroad. Preliminary data for the third quarter suggests that the deficit as a portion of output will be higher than what was observed in the first half of the year, due to a continued expansion of the trade deficit. In effect, the two months from July to August registered a 6.0% expansion in the growth of imports, led by external purchases of capital goods, in contrast to the annual decline in exports (-11%) due in large part to lower foreign sales of oil and coal.

Graph 2.27
Annual Current Account and its Components as a Percentage of GDP



(pr): preliminary.
(proj): projection.
Source: *Banco de la República.*

Graph 2.28
Financial Account and its Components as a Percentage of GDP



(pr): preliminary.
(proj): projection.
Source: *Banco de la República.*

Strong domestic demand, which is outperforming output, will drive the current account deficit as a percentage of GDP to 4.5% in 2019 and 4.6% in 2020. These deficits will continue to be financed in large part by foreign direct investment[11]. In addition to economic growth supported by domestic demand, compared to last year the projected expansion of the deficit in 2019 is the result of less favorable terms of trade and a slowdown in the economies of Colombia's main trading partners, which was reflected in an expansion of the trade deficit. In effect, all imports are expected to increase, in accordance with the projected performance of private consumption and investment in machinery and equipment. This dynamic is expected to moderate, however, in the third quarter, on account of the base effect of an automotive fair in 2018 and a reduction in the price of imports. A reduction in exports due to lower international prices for oil and coal is also expected, made more acute by shrinking production of the latter.

Some factors will partially offset increases in the current account deficit. First, lower profits for companies with capital abroad is expected, due to a lower rate of return on extractive industries (oil and coal) and the depreciation of the peso, which will impact the earnings in dollar terms of foreign firms focused on the domestic market. An increase in remittances from workers abroad is also expected, owing to favorable labor markets in some countries of residence of Colombian migrants. Moreover, exports in services associated with tourism will continue to grow, as a response to the increase in non-resident travelers arriving to the country. At the same time, the deterioration in the current account balance in 2020 is projected to follow a similar pattern to that expected in 2019 (Graph 2.27).

In 2019 and 2020, foreign direct investment will continue to be the principal source of external financing for the current account deficit (Graph 2.28). Following on expected improvements in economic performance, direct investment is projected to continue to finance projects from foreign companies that focus on the domestic market. At the same time, support from foreign capital directed at sustaining national production in the mining and oil sectors will continue. Equally, lower global interest rates and the expansion of international liquidity will make available other sources of external financing, such as debt and portfolio investment.

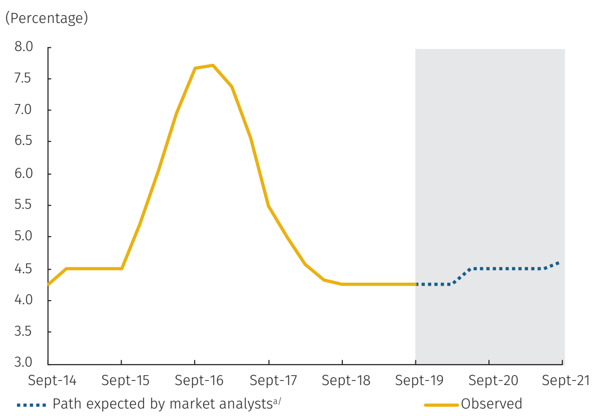
11 The current account deficit projection for 2019 in millions of dollars (-USD 14.425 m) is similar to the projection published in our July report (-USD 14.410 m). Nevertheless, the estimate as a percentage of GDP (-4.5%) is slightly higher (0.1%) than in the July report (-4.4%), due to the effect of depreciation on GDP measured in dollars.

2.2.4 Analyst expectations on interest rates and monetary policy

The baseline scenario foresees a lower real neutral interest rate, as a consequence of revisions in the United States' real neutral interest rate. The Bank's technical staff projects the domestic neutral interest rate as the sum of Colombia's long-term risk premia and the external real neutral interest rate. The latter has been reduced as a result of the U.S.' projected output gap, which is expected to be less positive than previously forecast. Together with lower real observed and expected interest rates, this suggests a lower neutral interest rate for the U.S. To that effect, the technical staff projects the real neutral external interest rate in 2019 to be 24 basis points lower than the previous forecast (currently -0.2% compared to 0.04% in July). Given that projections for Colombia's long-term risk premia remain unchanged, the real domestic neutral interest rate for 2019 is now projected to be (1.2%) less than estimated in the previous report (1.4%). Additional econometric exercises confirm this result. For 2020 and 2021 the average real projected neutral interest rates are projected at 1.35% and 1.52%, respectively.

Analysts expect a slightly less expansionary trajectory for interest rates than that which is implicit in the technical staff's baseline scenario in the forecast horizon (2.29). According to the monthly survey of analyst expectations conducted by the Central Bank in mid-October, the median response suggests an expectation that the policy interest rate will remain at 4.25% in 2019. This is in line with projections based on the technical staff's baseline scenario, characterized by the persistence of a negative output gap, together with inflation and inflation expectations above the target, but that converge to 3.0% at the end of next year. For 2020, the median response from analysts surveyed suggested the expectation of a single increase of 25 basis points in the policy interest rate in the second quarter of that year. The macroeconomic projections of monetary policy from the technical staff are a bit more expansive than analysts' projections for next year. At the moment, the magnitude and rate of the normalization of monetary policy will be determined primarily by: 1) domestic demand and the pace at which the output gap is closed, and 2) the evolution of external financial conditions, and their effects on the exchange rate and prices.

Graph 2.29
Policy Interest Rate Quarterly Average Observed and Policy Interest Rate Expected by Analysts



a/ Corresponds to the median projections from analysts. These projections are calculated taking the quarterly average of the responses to monthly surveys on analyst expectations conducted by *Banco de la República* in October 2019.
Source: *Banco de la República*.

03/The Current Economic Situation

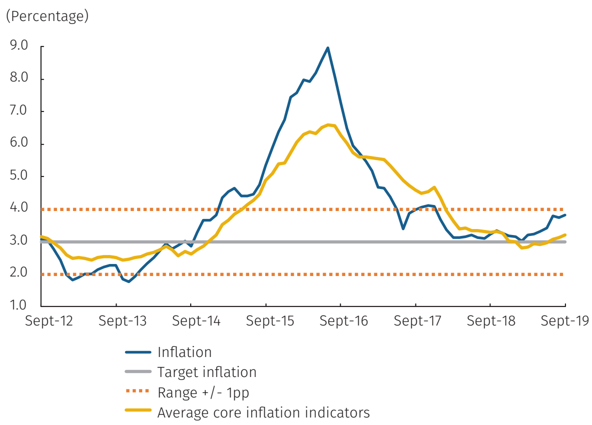
3.1 Inflation and price performance

Total annual inflation increased in the third quarter, in line with projections, although the performance of some sub-baskets of goods reflected upward pressures not fully considered in the July report. In the last three months, consumer inflation remained above the target established by the BDBR. The 3.82% print in September was close to projections from the previous report and higher than observed in the second quarter (3.43%). The annual variation of principal sub-baskets of goods increased over the period, with the exception of regulated goods. Supply factors associated with the climate continued to exert upward pressure on inflation in a more intense manner than previously expected. There has also been a gradual transmission of accumulated currency depreciation on domestic prices, as seen from the beginning of the year, though in recent months the impact on food prices has been greater than previously projected. These pressures were offset, in part, by lower than expected increases in prices on regulated goods.

Core inflation, measured as the CPI without foodstuffs and regulated goods, also increased, but by a greater degree than previously projected. Core inflation in September registered at 2.87%, 33 basis points higher than in June. This indicator continued to converge gradually to the target, alongside the slow transmission of accumulated currency depreciation to domestic prices. Nevertheless, in recent months the upward trend was greater than previously projected, which can be attributed to one-off unanticipated increases in some non-tradable groups (methodological change in education), that do not appear to have been driven by factors related to demand. The remaining core inflation indicators also increased and exceeded the 3.0% seen several months ago. In September, the average of the four indicators of core inflation was 3.22%, 26 basis points higher than in June (Graph 3.1).

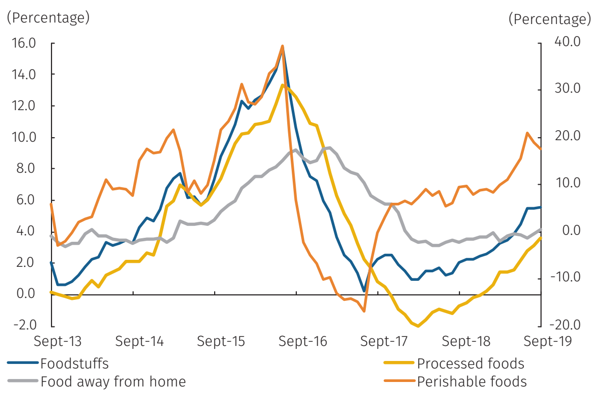
Adverse climate conditions, even after the end of the El Niño weather pattern, together with the accumulated depreciation of the peso, generated upward pressure on the price of foodstuffs. To September, the annual variation of the CPI for foodstuffs was 5.58%, higher than expected. This marks nearly a year of increases in this indicator that, in addition to normal price cycles for these goods, can be explained by increases in indirect taxes on soft drinks, depreciation of the peso being reflected in prices, and a weak El Niño phenomenon that began at the end of last year and ran through the middle of 2019. El Niño reinforced normal increases in the prices of perishable foods

Graph 3.1
Consumer Price Index (CPI) Total and Core
(Annual variation)



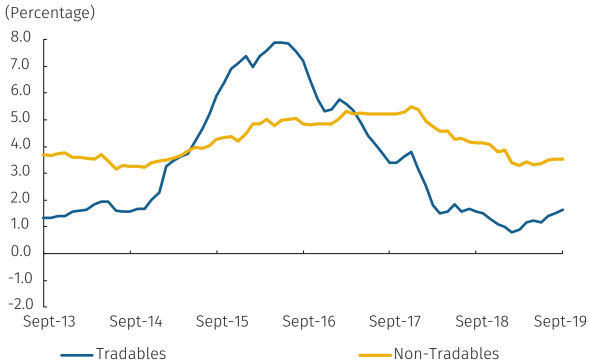
Sources: DANE and *Banco de la República*.

Graph 3.2
CPI for Foodstuffs by Group



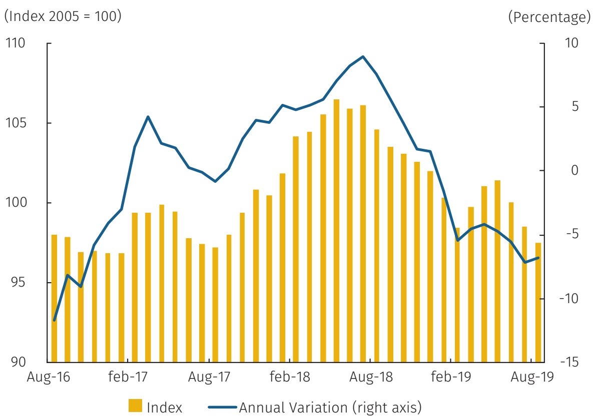
Source: DANE, and *Banco de la República*.

Graph 3.3
CPI of Tradable and Non-Tradables, excluding Foodstuffs and Regulated Goods



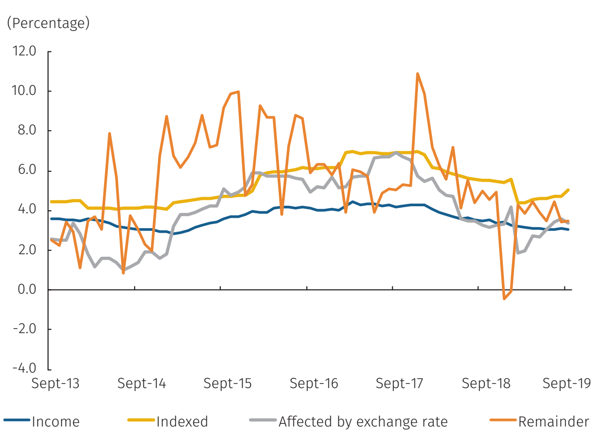
Source: DANE; calculations by *Banco de la República.*

Graph 3.4
Index of Prices on Total Imports



Sources: Statistic from DIAN and DANE; calculations by *Banco de la República.*
For more details on the calculation methodology, see Garavito, A., López, D.C., Montes, E (2011). "Approximation of the unitary and quantum value indices of external Colombian trade," Borradores de Economía, *Banco de la República*, 680.

Graph 3.5
CPI for Non-Tradable Goods, Excluding Foodstuffs and Regulated Goods
(Annual variation)



Source: DANE, *Banco de la República.*

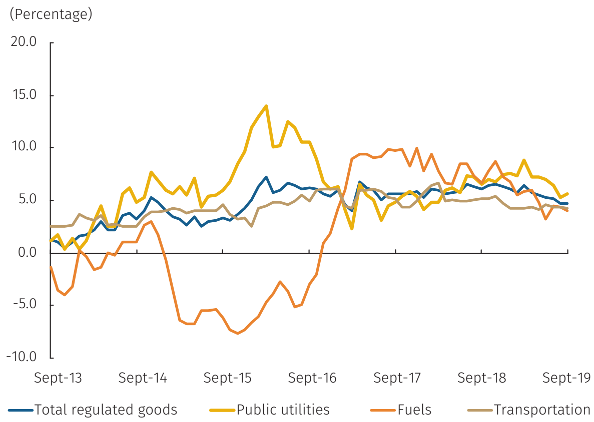
that occur as a natural product of the agricultural cycle, generating annual increases in this segment of the CPI of 17.5% to September (Graph 3.2). Adverse climate conditions in recent months, resulting in relatively low levels of rainfall that delay planting or affect productivity, may also be preventing prices in perishable foods from returning to normal levels at the anticipated speed.

Accumulated depreciation of the peso affected the price of processed foods more than expected. Prices for this sub-basket of goods showed annual variation in September of 3.57%, and increased significantly compared to June and to previous quarters (Graph 3.2). At the same time, the implementation of a multi-phased tax included in the Ley de Financiamiento has meant an adjustment in the price of soft drinks over 5.0% in the year-to-date.

Annual variation of the CPI in tradable goods (excluding foodstuffs and regulated goods) continued to increase in the third quarter, in line with projections and hand-in-hand with accumulated currency depreciation. Prices in tradable goods increased 1.65% in September (Graph 3.3). A broad set of mostly imported goods have shown a growing rate of price adjustment from low levels observed at the beginning of the year, a circumstance that is related to exchange rate behavior starting midway through 2018. Nevertheless, these adjustments continue to be moderate in relation to the size of the accumulated depreciation, which may be the result of observed reductions in external prices in dollars over the same period. According to estimates from the Bank, declines in international prices this year of goods imported by Colombia have sharpened in recent months, to the order of 7.0% annually (Graph 3.4). These declines will have partially mitigated the inflationary pressures caused by the depreciation of the peso. There has also been a partial reversion, in the third quarter, of a legal norm that had increased the taxable base for the charge of an ad valorem tax, which had caused increases in this basket of goods at the beginning of the year.

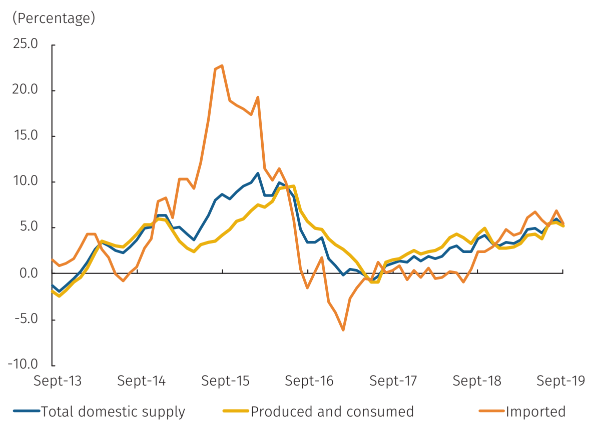
Demand momentum did not exert significant pressures on consumer prices in the last three months, as follows the performance of the CPI in non-tradable goods, excluding foodstuffs and regulated goods. The annual variation of this basket of goods settled at 3.53% in September, increasing slightly compared to figures registered in June and March, but significantly below observed adjustments in the previous year (Graph 3.3). Observed increases in this indicator in the last two quarters can be explained by the depreciation of the peso and by one-off adjustments in some prices (education), which are not expected to be repeated. On the other hand, rentals, the most important item in this sub-basket, remained at levels close to the target inflation rate, showing a slight downward trajectory and without exerting inflationary pressure in the third quarter (Graph 3.5).

Graph 3.6
CPI for Regulated Goods and its Components
(Annual variation)



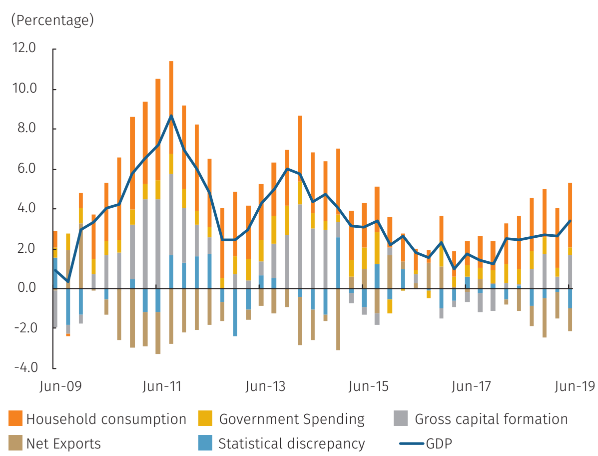
Source: DANE, *Banco de la República*.

Graph 3.7
PPI by Source
(Annual variation)



Source: DANE.

Graph 3.8
Quarterly GDP [a/]
(Annual variation and expenditure side contributions)



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

The annual adjustment of the CPI on regulated goods was unexpectedly low and offset for inflationary pressures that were observed in other sub-baskets of the CPI. The annual variation of regulated goods (which closed in September at 4.74%) had been on a downward trajectory since March (Graph 3.6). In recent months, price increases have been lower than expected due to performance of public utilities and, in particular, electricity rates, which have not reached the levels of adjustment projected in previous reports. To September, energy prices showed an accumulated increase of just 2.47%. Price increases as a result of the recent El Niño phenomenon, a financial bailout of Electricaribe, and greater investment, among other factors, are not reflected in prices. This may be thanks to larger electricity imports from Ecuador. Lower international fuel prices this year compared to 2018 have also contributed to limiting domestic price increases, mitigating inflationary pressures from the depreciation of the peso.

Consumer inflation continued to experience upward pressures due to non-labor costs, originating primarily in supply factors in the agricultural sector and in the accumulated depreciation of the peso. The total annual change in the Producer Price Index (PPI) for total domestic supply has been on a growth trajectory for more than a year, a trend that continued in the third quarter. In September consumer inflation reached 5.28%, compared to 4.43% in June (Graph 3.7). The largest increases in the PPI have been concentrated in prices of agricultural products, whose annual adjustment in September was just below 13.0%, and in imported PPI. Prices for these baskets of goods have been affected by climate events, road closures, increases in indirect taxes, and by depreciation in the exchange rate.

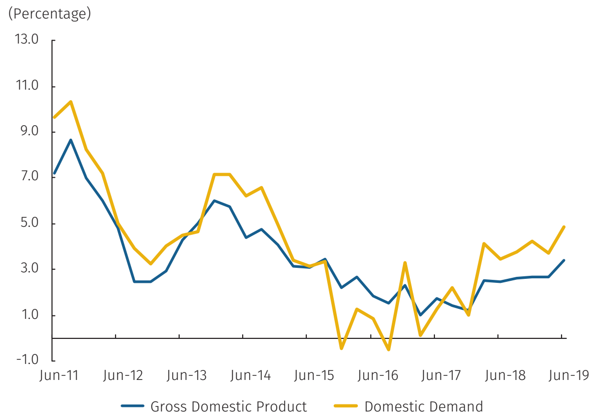
3.2 Growth and domestic demand

3.2.1 GDP on the expenditure side

In the second quarter of 2019 the Colombian economy accelerated and grew more than projected by the Bank's technical staff. According to figures from DANE (seasonally adjusted and corrected for calendar effects), in the second quarter Colombia's GDP grew at an annual rate of 3.4%, more than the 2.9% projected in the Bank's last inflation report and the 2.7%[12] registered in the first quarter (Graph 3.8). Growth was 1.4% on a quarterly basis, which also represents an acceleration compared to the first quarter (0.8%). Non-seasonally adjusted GDP series registered 3.0% growth (compared to 3.1% in the first quarter of 2019).

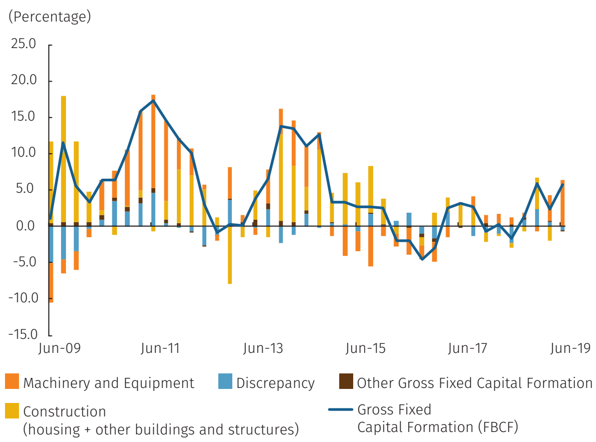
12 The annual GDP growth figure for the first quarter was revised by DANE in its most recent report, from 2.3% to 2.7%.

Graph 3.9
GDP and Domestic Quarterly Demand[a]
(Annual variation)



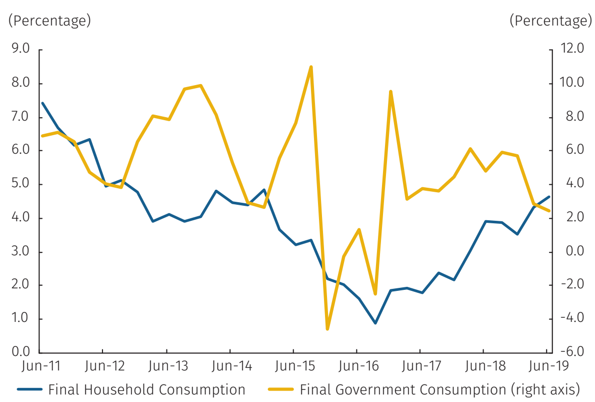
a/ Seasonally adjusted series and adjusted by calendar effect.
Source: DANE; calculations by *Banco de la República*.

Graph 3.10
Quarterly Gross Fixed Capital Formation[a]
(Annual variation and contribution of its components)



a/ Seasonally adjusted series and adjusted by calendar effect.
Source: DANE; calculations by *Banco de la República*.

Graph 3.11
Final Consumer Spending for Households and Final Quarterly General Government Spending[a/]
(Annual variation)



a/ Seasonally adjusted series and adjusted by calendar effect.
Source: DANE; calculations by *Banco de la República*.

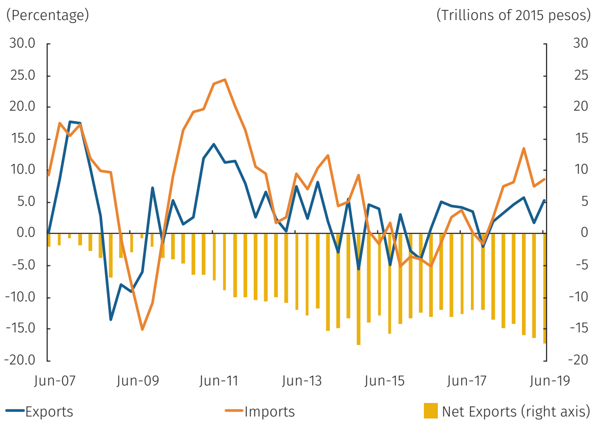
The GDP growth results on the expenditure side show an acceleration in domestic demand in the second quarter. The seasonally adjusted series for this aggregation registered 4.9% in the second quarter of 2019, greater than the 3.7% observed in the first quarter and the 3.9% observed in 2018 as a whole (Graph 3.9). Momentum in household consumption and investment in machinery and equipment provided the largest contributions to the expansion of domestic demand in this period.

Gross fixed capital formation accelerated thanks to investment in machinery and equipment and in the "other buildings and structures" category (Graph 3.10). Seasonally adjusted investment in machinery and equipment grew at an annual rate of 20.6% and reported its highest level since 2005. This behavior is consistent with the observed in imports of this type of good and, in particular, those related to transportation equipment. At the same time, investment in the other buildings and structures category expanded at an annual rate of 5.0%, starting to reverse the negative shock observed at the beginning of the year. Something similar, although to a lesser degree, was observed in investment in housing. However, in this last case growth rates continued to be negative (-8.7%), though less so than in the first quarter (-11.5%).

Private consumption continued to grow at rates outpacing those of GDP, while public consumption continued to show weak momentum (Graph 3.11). For the second consecutive quarter, household consumption registered annual growth above 4.0%, performance not seen since 2014. Though services consumption contributed the most to growth in household consumption, there was significant momentum in all of its components. The performance of durable goods, which accelerated significantly in the second quarter, growing at 8.3% in annual terms compared to an expansion of 1.8% in the first three months of the year, is also noteworthy. All of this was in the context of credit being widely available at relatively low interest rates. In fact, in the second quarter, the consumption portfolio grew 11.1% in nominal terms. When deflated with the CPI excluding foodstuffs, the consumption portfolio grew at an annual real rate of 7.5% in the second quarter. For its part, public consumption continued to show little momentum, growing at 2.5% annually, similar to the 2.8% registered in the first quarter, and significantly below the 5.6% expansion registered in 2018.

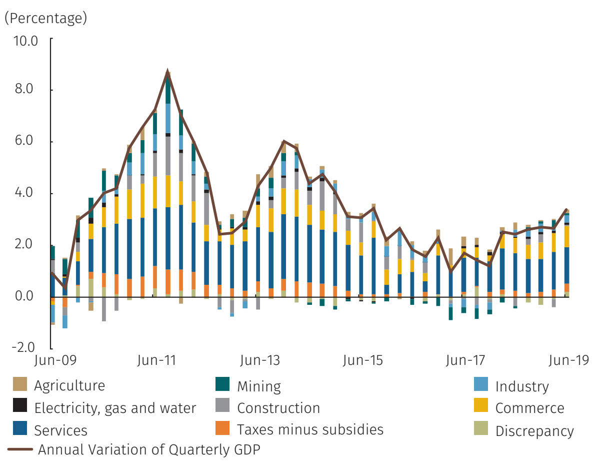
Exports registered significant quarterly growth and accelerated in annual terms. Seasonally adjusted annual growth for this component of GDP was 5.2% in the second quarter, a contrast to the lack of dynamism on display at the beginning of the year (Graphic 3.11). The figures show significant expansion between quarters (corresponding to an annualized rate of 15.2%), although it is expected this to be largely transitory. The principal contributions to ex-

Graph 3.12
Exports, Imports and Trade Balance [a/]
(Annual variation and trillions of 2015 pesos)



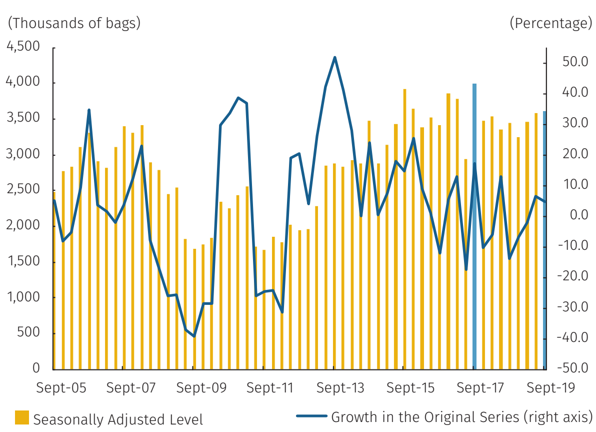
a/ Seasonally adjusted series and adjusted by calendar effect.
Source: DANE; calculations by *Banco de la República*.

Graph 3.13
Contribution by Sectors [a/]
(Annual variation)



a/ Seasonally adjusted series and adjusted by calendar effect.
Source: DANE; calculations by *Banco de la República*.

Graph 3.14
Coffee Production
(Quarterly and annual growth)



Source: National Coffee Federation of Colombia and *Banco de la República*.

ports during the second quarter came from external sales of crude oil and refined products.

Imports maintained a significant rate of expansion, thanks to domestic demand momentum. In the period from April to June, annual growth of imports was 8.7%. This performance, consistent with the intensive domestic demand of goods from abroad, can be explained primarily by the purchase of transportation equipment during the second quarter. As a result, net exports continued to subtract from growth (Graph 3.12).

3.2.2 GDP on the supply side and indicators by sector

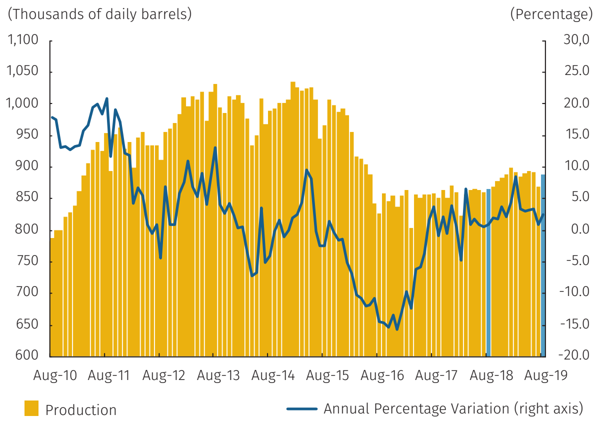
During the second quarter all major sectors registered annual growth, with particularly noteworthy expansion in financial and insurance activities (5.7%), and retail sales, repairs, transport and accommodation (4.8%). The latter continued to be the sector that most contributed to economic growth (Graph 3.13), providing for almost one fourth of the total expansion of the economy in the second quarter. According to figures from the monthly survey on retail sales from July and August, seasonally adjusted real sales excluding fuel grew 8.4%, indicating that these activities should continue as one of the most important drivers of economic growth in the third quarter.

Public administration and defense, education and health performed well, especially in activities related to health care and social services. These activities grew annually at 3.0%, constituting the second sector that most contributed to annual expansion in the second quarter. Close to half of the total expansion in this group of activities can be explained by those related to human health and social services, which registered a 6.2% annual increase, a figure very similar to the first quarter of this year, though greater than that of 2018 (5.3%).

In the same period, growth in the agricultural sector accelerated, though at a slower pace than the average in recent years. The annual variation of the sector was 2.0%, a result, especially, of growth from cultivated crops. Here, growth in coffee production is a standout (6.6%), while the value added from cattle raising remained practically unchanged from levels similar to those in the first half of last year. Coffee production continued to grow in the third quarter (4.9%) recovering from the shock associated with climate-related issues in the second half of last year.

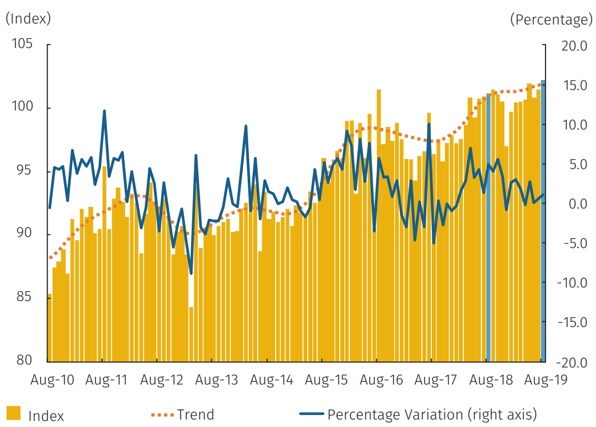
Mining registered growth in annual terms, but contracted on a quarterly basis. This was a consequence primarily of a decrease in the value added by the extraction of coal, due to lower global demand for the mineral and adverse factors in exploration and extraction. Crude oil and natural gas extraction remained in positive territory both in

Graph 3.15
Oil Production
(Monthly and annual growth)



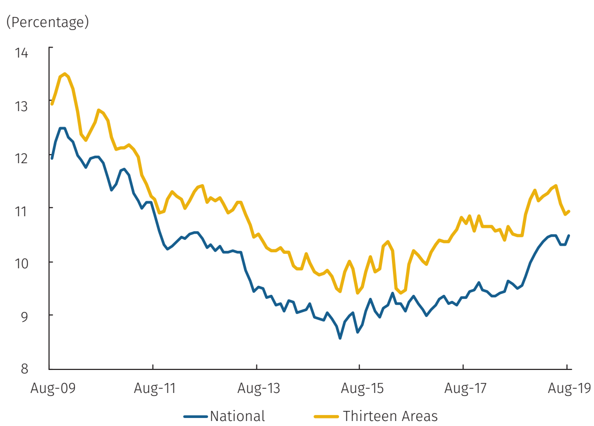
Source: ANH; calculations by *Banco de la República*.

Graph 3.16
Real Industrial Production Index
(Seasonally adjusted series, trend component and annual growth)



Source: DANE; calculations by *Banco de la República*.

Graph 3.17
Unemployment Rate
(Seasonally adjusted moving quarter)



Source: DANE (GEIH); calculations by *Banco de la República*.

annual and quarterly terms, though some loss of momentum may be expected in the third quarter given supply cuts that began in July associated with problems of public order. In the two-month period of July and August, average production fell on the margin and registered annual growth lower than in the second quarter (Graph 3.15).

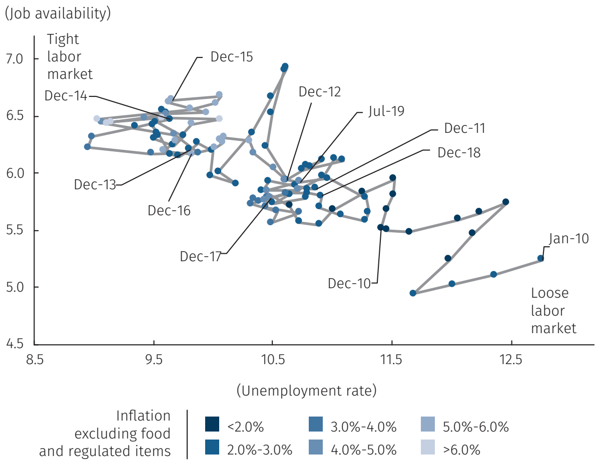
Growth in the manufacturing industry accelerated in the second quarter, both on an annual and quarterly basis. Manufacturing registered annual growth of 2.1% and improved in quarterly terms. In particular, the sub-sector comprising the manufacture of automobiles, trailers and semi-trailer trucks, with growth of 18.8%, played an important role in the annual expansion of this sector in the second quarter. At the same time, oil refining continued to register negative annual variation (-1.2%) although this was less pronounced than in the first quarter of the year (-2.7%). Figures on industrial production from July-August, from DANE's monthly manufacturing survey (Graph 3.16) point to growth in value added that is expected to continue along a similar dynamic in the third quarter of the year.

Value added in the construction sector registered positive though modest annual growth (0.7%), thanks largely to progress in public works. The construction of public works recovered in quarterly terms and annual variation was relatively high (8.8%), thanks in large part to a low base comparison from the previous year. Nevertheless, the construction of residential and non-residential buildings remained in negative territory, due primarily to stagnation in the construction of high-income housing, offices and commercial spaces. Meanwhile, the construction of middle- and low-income housing continued to expand. The advancement of social interest housing programs and the reduction in excess supply in non-social interest housing are expected to have a positive effect on housing construction in the second half of the year.

3.3 Labor market

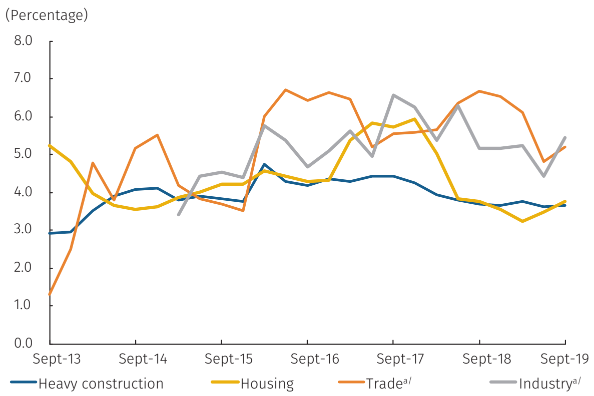
The most recent employment figures suggest the persistence of a weak labor market, though there are suggestions of a trend toward stabilization, particularly in urban areas. For the quarter ending in August 2019, the average unemployment rate, both at the national level and for the thirteen most significant urban areas in the country, remained relatively high and above levels observed for the previous year. This can be explained by larger reductions in the employment rate and in the overall participation rate, which are derived from an increase in the number of unemployed and inactive workers. Despite this, when adjusted for seasonality, the urban unemployment rate, which increased at the end of last year, has remained stable so far in 2019. The national unemployment rate, meanwhile, increased slightly due to a fall in rural employment (Graph 3.17).

Graph 3.18
Beveridge Curve for Seven Principal Cities



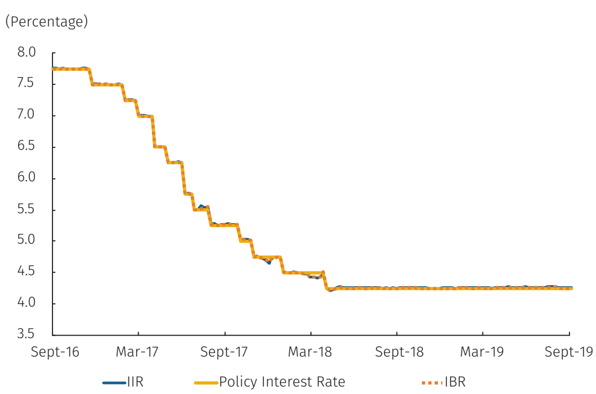
Notes: Seasonally adjusted series. Mobile Quarter.
The unemployment rate estimated by the GEIH recruitment methodology is used. See Morales, L. F., & Lobo, J. (2017), and estimating Vacancies from firms' Hiring Behavior: The Case of a Developing Economy. Borradores de Economía, 1017.
Source: DANE (GEIH); calculations by *Banco de la República*.

Graph 3.19
Nominal Quarterly Salaries
(Annual percentage change)



a/ The average corresponds to July and August.
Source: DANE; calculations by *Banco de la República*.

Graph 3.20
Policy Rate, Interbank Interest Rate and IBR[/a]



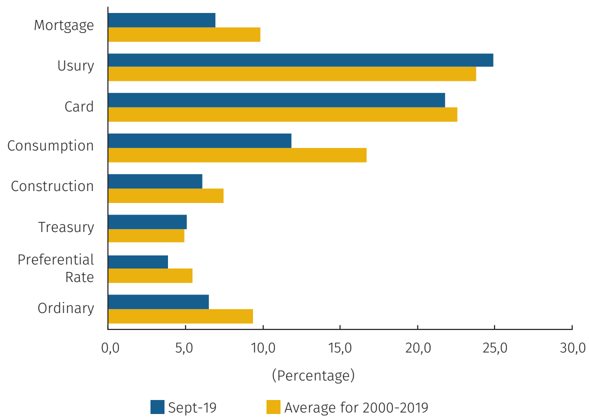
a/ TIB: Interbank interest rate. IBR: Reference Banking Indicator. REPO: Policy rate.
Sources: Office of the Financial Superintendent of Colombia and *Banco de la República*.

Figures from DANE's large integrated household survey (GEIH by its initials in Spanish) suggest that total employment at the national level has been on a slight downward trajectory since the beginning of the year, and that urban employment has remained stagnant over the same period. The fall in the number of employed people nationally can be explained, in the first place, by a reduction in employment in the agricultural sector, which is related to the drop in rural employment. There has also been a less significant drop in employment in the manufacturing sector. On the other hand, employment in construction and services has shown increases over the course of the year. In the case of construction this is, above all, due to the increase in employment in the public works sub-sector, more than for housing construction.

Quality of employment has remained steady in recent months, as was the case at the beginning of the year. Employment rates for salaried and formal workers remain stable, while those for non-salary and informal employees show annual reductions. When examined by sub-category, salaried employees, both in the formal and informal sectors, show positive contributions to the annual variation of the urban employment rate, while employment in the non-salaried informal sector shows pronounced negative contributions. In accordance with a reduction in demand from the non-salaried segment, real wages for this sub-set show reductions that could be accentuated by migration flows, while those for non-salaried employees have shown increases thanks primarily to the segment of non-salaried employees without higher education, where adjustments in the minimum wage have a significant effect.

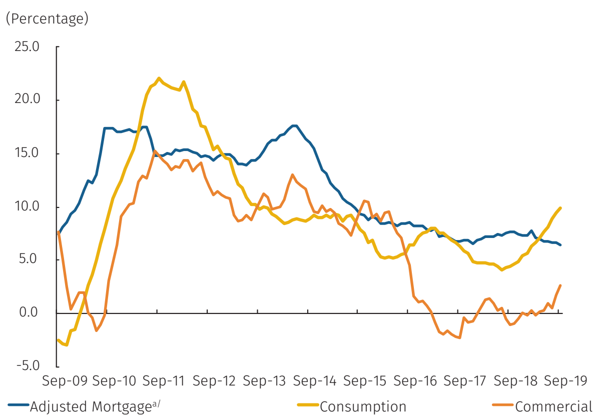
Available data suggest the persistence of a loose urban labor market, and a concomitant lack of inflationary pressures. Indicators measuring tightness of the labor market, defined by the difference between job openings and the number of unemployed, showed a recovery at the margin, though still at relatively low levels, suggesting a loose labor market. Putting these figures on the Beveridge curve (Graph 3.18), which relates the rate of openings to the unemployment rate, suggests that the labor market is at a point where it should not generate inflationary pressures. This is consistent with reductions, signaled above, on wages for non-salaried employees. Additionally, the most recent information on nominal salaries suggests that these have accelerated a little. Some have adjusted to rates close to the target inflation rate, as is the case with construction salaries, which have remained without significant changes and closed the third quarter, on average, up 3.7% for housing and 3.8% for heavy construction. Other sectors have registered higher increases, as is the case with retail sales salaries, which rose from 4.8% in the second quarter to 5.2% in the two-month period from July-August, and in industry, which rose from 4.4% to 5.4%.

Graph 3.21
Real Interest Rates and Bank Credit in National Currency
(Deflated with CPI excluding Food)



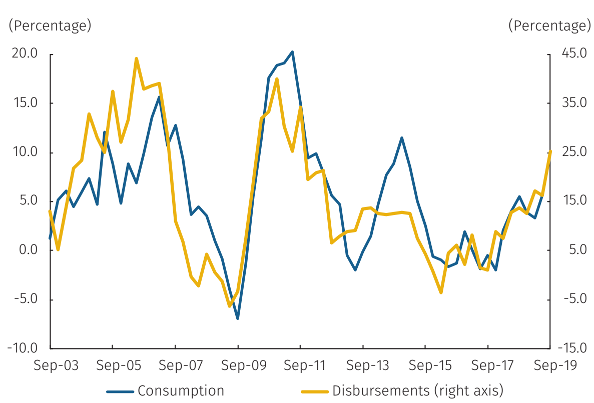
Sources: Office of the Financial Superintendent of Colombia and DANE; calculations by *Banco de la República*.

Graph 3.22
Real Gross Portfolio in National Currency
(Deflated with CPI excluding food)



a/ Adjusted mortgage: Bank portfolio plus securitizations.
Sources: Office of the Financial Superintendent of Colombia and DANE; calculations by *Banco de la República*

Graph 3.23
Semi-Durable and Durable Consumption and Provision of Consumer Credit [a/]
(Real annual variation, quarterly data)



a/ Disbursements include credit cards. Disbursements are smoothed of 2nd order.
Sources: Office of the Financial Superintendent of Colombia and DANE; calculations by *Banco de la República*.

3.4 The monetary and financial market

Money market interest rates are aligned with the policy rate (Graph 3.20). During the third quarter, as was the case over the course of the year, the interbank lending rate, and the overnight banking reference index (IBR in Spanish) and one-month IBR remained at levels near the policy rate. For the period in question, the first two averaged 4.26%, while the one-month IBR averaged 4.25%. The IBR interest rates for three and six months, which in June and July were below the policy rate, leveled with the policy rate in August and September. Therefore, money markets suggest favorable conditions and there are no signs of increased costs for these resources.

Real interest rates for consumption credit fell from their levels in June, and mortgages and commercial rates continued to be low (Graph 3.21). Beginning in June, performance of the nominal interest rate for consumer credit, as well as those for credit cards, took on a downward trajectory, falling between May and September by 160 and 37 basis points, respectively. As such, all interest rates available to households are below historic averages. Real commercial interest rates have remained low, though slightly higher than the lows observed in the last quarter of 2018.

Real banking credit has accelerated as a result of positive momentum in consumer credit and the recovery of the commercial portfolio in national currency (Graph 3.22). In September, household credit accelerated and reached a real rate of annual growth of 8.8%. This can be explained, primarily, by positive momentum for consumer credit, directed in large part to spending on durable and semi-durable goods (Graph 3.23). For its part, starting in June the real commercial portfolio showed signs of recovery, growing to September at 2.6%. Including other sources of funding (bonds and direct external debt) the resulting trend suggests a recovery in the demand for financial resources on behalf of businesses.

There are currently various signs that point to favorable conditions for credit supply in upcoming quarters. Among those are low interest rates, the stabilization of indicators in the quality of loans, high levels of coverage for credit risk, and the solvency of the banking system. On the other hand, according to surveys of the current credit situation and economic expectations, there is still a positive perception among credit agents in terms of the availability of financing, as well as the disposition of lending establishments to increase credit.

Box 1
Banco de la República's Monetary Policy Decision-Making Process and Dissemination Strategy[1]

1. Introduction

In order for *Banco de la República* to comply with the constitutional mandate to ensure that the purchasing power of the currency is maintained, in coordination with the general economic policy,[2] the Board of Directors of the Central Bank (BDBR) adopted a flexible inflation target scheme as its strategy, according to which monetary policy actions (MP) seek to bring inflation to a specific target and achieve the maximum sustainable output and employment levels.

The flexibility of the scheme allows the BDBR to maintain an adequate balance between achieving the inflation target and the purpose of smoothing out output and employment fluctuations around a sustainable growth path. The BDBR set a 3.0% inflation target, based on the annual variation of the consumer price index (CPI).

The main instrument of the BDBR to control inflation is the benchmark interest rate (overnight repo or policy interest rate). Given that MP actions take time to have a full effect on the economy and on inflation, to set this rate, the BDBR assesses the inflation forecast and expectations vis-à-vis the target, as well as the current economic situation and outlook.

To define the benchmark interest rate, the Central Bank follows a few steps known as the MP decision-making process, which involves different analyses by sectoral experts together with the application of economic models, and several meetings of the Central Bank's technical staff and the Board. Additionally, the BDBR implemented a new communication strategy, which seeks to deliver relevant and up-to-date information that contributes to better decision-making by the agents of the economy[3].

2. The BDBR´s Monetary Policy Meetings

The BDBR meets once a month, but only in eight occasions (January, March, April, June, July, September, October, and December) it sessions regularly to produce monetary policy decisions. In the remaining four months (February, May, August, and November), in principle, decisions of this kind are not made. At the end of the meetings where MP decisions are made, a press release is published, and a press conference is held by the Governor of the Central Bank and the Minister of Finance and Public Credit. The minutes of the Board are published on the following business day, describing the elements that led to the Board's decision. Additionally, in January, April, July, and October, the Monetary Policy Report (MPR) is published together with the minutes, which is produced by the Central Bank's technical staff. On the Wednesday following the Board meeting, the Governor clarifies concerns about the minutes and the Bank's Technical Governor presents the MPR.

3. The Macroeconomic Forecasting Process and Communication between the Central Bank's Technical Staff and the BDBR

In order to serve the eight annual MP meetings of the BDBR, the Central Bank's technical staff divides them into four macroeconomic forecast cycles, each lasting about two and a half months (Diagram R1.1), and with the BDBR meeting twice. Each cycle is intended to answer the following questions: What is the current state of the economy? Where is it headed? What is the path of the benchmark interest rate that would bring inflation to the target and stabilize output at its long-term levels? And, what uncertainty does that path face?

Each forecast cycle has two phases (Diagram R1.1). The first is called preliminary phase and starts when the National Administrative Department of Statistics (DANE) publishes the figure for gross domestic product (GDP) for the previous quarter. It is called preliminary because, although the previous quarter's economic growth figure is already known, at the time of macroeconomic forecasting, some data from the current quarter are not yet known or there is not enough time for analysis.[4] As shown in Diagram R1.1 and Table B1.1, this phase lasts about a month and a half. In it, macroeconomic diagnosis is begun and the baseline scenario for inflation and growth forecasts is developed. In this process, the technical staff meets internally over seven times, in

1 * Summary of the document "Proceso de toma de decisiones de política monetaria del *Banco de la República* y comunicación sobre política monetaria," by Andrés González, Carlos Huertas, Julián Parra, and Hernando Vargas.

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

3 The current communication scheme was approved by the BDBR in its August 2019 meeting.

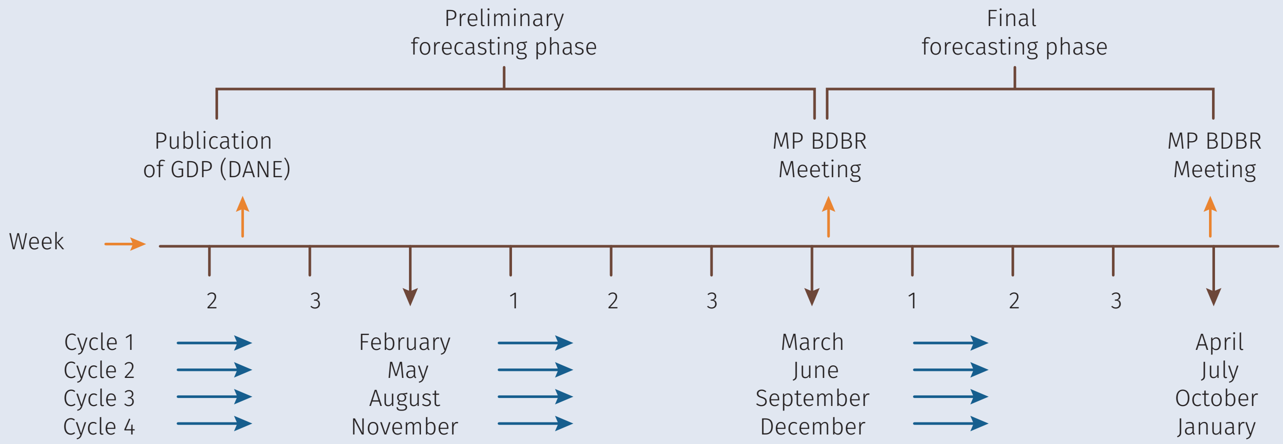
4 E.g., current account, industrial production, retail trade.

Table B1.1
Preliminary phase of the macro forecast cycle: description of meetings and objectives

Internal meetings of the technical staff	Presentations and meetings with the BDBR	Objectives of the meetings and presentations to the BDBR
1. Preparation of the first presentation to the BDBR.	Presentation of the economic situation	Analyze main economic events: external sector, real sector, financial sector, labor market, other non-labor costs, observed inflation, and inflation expectations.
3. Definition of external assumptions and financial conditions. 4. Development of the short-term inflation[a/] and GDP forecasts, estimates of gaps [b/], and balance of payments. 5. Definition of the macro baseline scenario: 5. Definición del escenario macro central: a. Initial proposal b. First revision c. Second revision	Presentation of the current situation of the economy and preliminary forecasts of the baseline scenario.	Present an analysis of the current situation of the economy: includes the estimate of economic growth in the current quarter and the calculation of non-observable variables. [c/]. Transient and permanent shocks facing the economy, as well as the assumptions of the baseline scenario. [d/] and the short-term inflation forecast, are described. Present preliminary results of the medium-term forecasts by the technical staff, according to the baseline scenario.
6. Review of comments by the BDBR to the baseline macro scenario 7. Risk scenarios a. Proposals b. First revision c. Second revision	Presentation of macroeconomic forecasts and risk scenarios	To present the forecasts of the technical staff two years ahead: Using the models and the informed judgment of the technical staff, projections of economic growth and inflation are shown. Also, the path of the benchmark interest rate that would allow inflation to be driven to the target and stabilize output at its long-term level. Present the results of the risk scenarios that reflect the uncertainty of the macro forecast.
8. Incorporate comments from the BDBR 9. Policy recommendation and drafting of the Monetary Policy Report (preliminary)	Meeting to read the MP recommendations	Present the technical staff's recommendation: synthesis of the current situation and outlook of the economy, and assessment of possible deviations of the forecasts and inflation expectations vis-à-vis the 3.0% target. Recommendation for the adequate benchmark interest rate level.

a/ PCP: Short-term forecast. In the case of inflation, two quarters ahead, and for GDP, of the current quarter.
b/ Gaps: Real exchange rate, domestic real interest rate, output.
c/ Unobservable Variables: neutral interest rate, gaps, potential growth.
d/ Main assumptions for two years ahead: external interest rate, oil price, terms of trade, country risk premia, growth of trading partners, etc.
Source: *Banco de la República*.

Diagram B1.1
Cycles and Phases of the Macroeconomic Forecast Process



Source: *Banco de la República*.

Table B1.2
Final Phase of the Macro Forecast Cycle: description of Meetings and Objectives

Internal meetings of the technical staff	Presentations and meetings with the BDBR	Objectives of the meetings and presentations to the BDBR
1. Review of major topics		
2. Review of external assumptions and financial conditions[a/]		Present the latest, most relevant new information on the economic situation.
3. Revision of the short-term forecast[b/] for inflation and GDP, of the estimates of gaps[c/], [d/], and of the balance of payments		Show changes in the diagnosis of the current situation of the economy made in the previous month.
4. Review of the baseline macro scenario:	Presentation: Update on the current situation of the economy and review of macroeconomic forecasts and risk scenarios.	Present revisions to macroeconomic forecasts and risk scenarios shown in the previous month.
a. First revision		
b. Second revision		
5. Review of risk scenarios		
a. First revision		
b. Second revision		
6. Produce inflation and growth fan chart		
7. Incorporate comments from the BDBR.		Present the technical staff's recommendation: synthesis of the current situation and outlook of the economy, and assessment of possible deviations of the forecasts and inflation expectations vis-à-vis the 3.0% target. Recommendation for the adequate benchmark interest rate level.
8. Policy recommendation and drafting of the Monetary Policy Report (final)	Meeting to read the Monetary Policy Report	

a/ Main assumptions for two years ahead: external interest rate, oil price, terms of trade, country risk premia, growth of trading partners, etc.
b/ PCP: Short-term forecasts. In the case of inflation, two quarters ahead, and for GDP in the current quarter.
c/ Gaps: Real exchange rate, domestic real interest rate, output.
d/ Unobservable Variables: Neutral interest rate, gaps, potential growth.
Source: *Banco de la República*.

addition to a fourth one with the BDBR. This phase culminates with a document containing a MP recommendation and with the BDBR meeting. At this stage, the elaboration of the MPR to be published on the following month begins.

In the second month of the forecast cycle (final phase), there is more information from the previous and current quarters, with which more reliable forecasts can be made. The technical staff holds over seven internal meetings, plus two with the BDBR (Table B1.2). The MPR addressed to the public is produced in this stage of the cycle and is published on the next business day after the Board meeting.

4. The New Monetary Policy Report (MPR)

After revising the kind, timeliness, and depth of information presented in the former MPR (known as the Inflation Report), the Central Bank decided to modify it with the purpose of improving the quality of its content and implementing better practices in line with other central banks around the world (Diagram R1.2). The changes, implemented since October 2019 allows, on the one hand, a better communication on the analysis of the current economic situation and forecasts and, on the other, to deliver a more concrete, easy-to-read report that showcases the assumptions and forecasts presented by the Central Bank's technical staff to the BDBR. The MPR is published four times a year (January, April, July, and October), and its construction process takes about two and a half months.

5. Communication

Communication by a central bank can be defined as the provision of information to the public regarding the objectives and strategy of MP, the outlook of the economy and the explanation of policy decisions (De Hann et al., 2007). This is done through different channels, including press conferences, minutes, periodic reports, and speeches and interviews by members of the Board of Directors.
Dissemination is a key element of *Banco de la República*'s MP strategy, for which purpose several channels of communication have been provided, namely:

a. **Minutes, Press Release, and Press Conference:** At the end of each MP meeting of the BDBR (in January, March, April, June, July, September, October, and December), a statement is produced and a press conference is offered by the Governor of the Central Bank (as the spokesperson for the BDBR) and the Minister of Finance (who presides the Board)[5]. These two channels explain the main aspects considered at the meeting. Since August 2016, the press release includes the voting balance of the members of the Board regarding the policy decision taken. A detailed summary of the discussion and the various arguments presented at these meetings is made available to the public on

5 Since 2018, the BDBR meets eight times a year to make MP decisions. Formerly, these decisions were made on a monthly basis.

Diagram B1.2
Monetary Policy Report (previous vs. new scheme)

Contents of the Inflation Report (previous)

Governor's Summary

1. External Context and Balance of Payments
1.1 External Context
1.2 Balance of Payments

2. Domestic growth: Current situation and short-term prospects
2.1 GDP Performance in the last quarter observed
2.2 GDP in the next quarter (short-term forecast)

3. Recent developments in inflation
3.1 General Performance
3.2 Performance by Components

4. Medium-term forecasts
4.1 Economic Growth to 1 and 2 years
4.2 Inflation to 8 quarters
4.3 Risk balance (no longer included)

Content of the Monetary Policy Report (new)

1. Summary

2. Macroeconomic forecasts
2.1 External Context
2.2 Macroeconomic Forecasts
2.2.1 Inflation
2.2.2 Economic Activity
2.2.3 Balance of payments

3. Current Economic Situation
3.1 Performance of Inflation and Prices
3.2 Growth and Domestic Demand
3.3 Labor Market
3.4 Monetary and Financial Market (New)

Source: *Banco de la República.*

the business day following the meeting through the publication of the BDBR's minutes. The transcripts of the meetings of the BDBR are recorded in the corresponding records, which have a fifteen-year reserve for publication.

b. **Monetary Policy Report (MPR):** In January, April, July, and October, the business day following the BDBR meeting, the technical staff makes available to the public the analysis, macroeconomic forecasts, and risk perspectives of the economy with the quarterly publication of the MPR. This report is prospective, contains the analysis, the forecast, and its main assumptions together with other details presented to the BDBR[6] as a result of the process herein described. The technical staff produces these reports and projections independently, and therefore they do not necessarily reflect the BDBR's analysis or opinion. However, the information and analysis contained in these reports is an important input for the BDBR's decision-making process. The interaction that takes place in this and in the forecasting process intends that the BDBR and the technical staff share a common base of information. The technical staff, also independently, delivers a policy recommendation to the BDBR, which has a fifteen-year reserve and which rests within the corresponding policy meeting records.

c. **Presentations and Speeches:** The Governor and members of the Board also provide information to the public through presentations and speeches given to different types of audiences. The Governor is the official spokesperson for the MP. The individual opinions of the members of the BDBR, including the Minister of Finance, are their own responsibility.

d. **Report of the Board of Directors to the Congress of the Republic:** As part of the accountability process, and in accordance with Article 5 of Law No. 31 of 1992, the BDBR presents a Report to the Congress of the Republic twice a year, where it informs not only on the state of the economy and the achievement or not of inflation targets, but also on the administration of international reserves, the country's payment systems, and the financial statements of the Central Bank.

6 The main difference between the Monetary Policy Report presented to the public and the one defended at the BDBR meeting lies in that some parts are under reserve (protected by law) and not of public domain, such as the recommendation made by the technical staff regarding the interest rate.

Box 2
The 4G Model

Alexander Guarín
José Vicente Romero*

The objectives of the Central Bank include the development of new tools for macroeconomic forecasting and monetary policy analysis. For this process, the Bank assessed the structure and properties of its main models, specifically the Transmission Mechanism Model (MMT; Gómez et al., 2002) and the Policy Analysis Tool Applied to Colombian Needs (Patacon; González et al., 2011). This assessment determined the need for a new model to replace the MMT. In this context, the implementation of a 4G (four-goods) model was proposed.

The 4G model is a neo-Keynesian semi-structural model adapted for a small, open, oil exporting economy. It follows the overall structure of the International Monetary Fund's global projection model, and is similar to that used by other central banks. The adapted version for Colombia considers four sub-baskets of the consumer price index (CPI: food and regulated, tradable, and non-tradable items) and their corresponding relative prices.

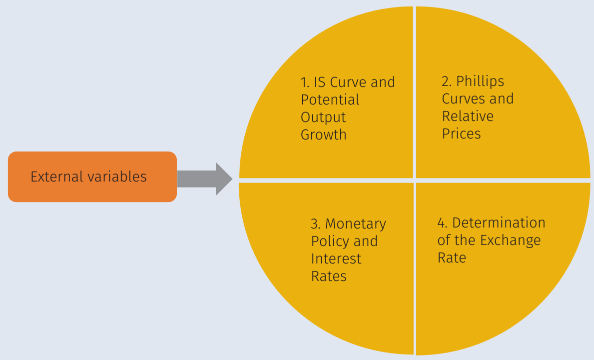
This box is intended to describe the 4G model in a simple way. A full description of the model and its properties can be found at González et al. (2019).

1. Structure of the 4G Model

The model consists of four blocks of endogenous variables (Figure R2.1) and a set of exogenous variables. The latter incorporates the dynamics of external variables, specifically the United States interest rate and inflation, the output gap of Colombia's main trading partners, the external neutral real interest rate, the risk premia for Colombia, and the international price of oil, as well as its permanent and transitory components.

The first block of endogenous variables corresponds to the output gap, which is considered an as indicator of the economic cycle, and to potential output. Aggregate demand is modeled by an IS curve[1], where the output gap depends on the persistence of the economic cycle and of expected

Diagram B2.1
Structure of the 4G Model



Source: González *et al.*, 2019.

pressures from future income. This gap also reflects changes in consumption and investment resulting from the effects of the monetary policy stance and the deviation of the real exchange rate vis-à-vis its long-term trend. The IS curve also incorporates the pressures from the external demand of our trading partners and those caused by transitory variations in oil revenues. On the other hand, potential output is modeled as a trend whose long-term growth is determined by the technological development of the oil sector, resulting from permanent changes in the revenues from this activity.

The second block corresponds to the Phillips curves that characterize the dynamics of the variation in the prices of food and regulated, tradable and non-tradable items, besides establishing their relationship with the real costs in each sector. This breakdown of the CPI provides flexibility to the model by capturing the heterogeneity implicit in the inflation figure of each basket, its different long-term averages, and its different volatilities. It also improves the analysis of monetary policy by capturing the different sensitivities of each sector regarding the cyclical components of output and the real exchange rate gap, which represent the marginal costs of local producers and importers, respectively. The real exchange rate gap captures inflationary pressures coming from the exchange rate. Positive values in this gap imply upward pressures on inflation. This gap is calculated as the deviation of the real exchange rate versus a non-inflationary trend component estimated under the economic structure of the 4G model.

The Phillips curves in the 4G model also include relative price deviations versus their long-term trend. This gap is one of the price-adjustment mechanisms within the model and allows the inclusion of stances on their convergence in the forecasting scenarios. Finally, regarding regulated inflation, the impact that transitory variations in oil prices may have on their dynamics is acknowledged.

Monetary policy is characterized by a Taylor rule in the third block, in which the main instrument is the short-term

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1 The IS curve represents the balance in an economy´s goods and services market.

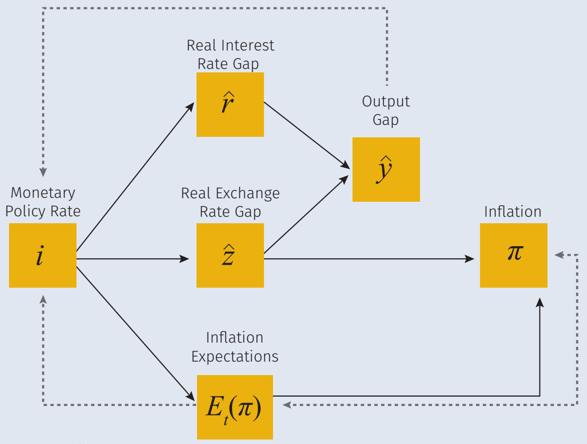
interest rate. As in the Patacon model, the 4G model takes into account that Banco de la Republica's objective is to achieve the inflation target and to ensure that output remains around its long-term sustainable level. Particularly, the policy rule of the 4G model depends on the output gap and on the deviations from annual inflation expectations versus the target three quarters ahead, such that shocks in the current period are included in the Central Bank's reaction function.

The fourth block determines the exchange rate by means of the uncovered interest rate parity, which collects the differentials between the internal interest rate and the risk-adjusted external rate, as well as the expected value of the exchange rate. The uncovered interest rate parity is a standard assumption for economies with an open capital and financial account such as Colombia and a high degree of floating exchange rate. This block also estimates the non-inflationary trend of the real exchange rate, whose growth fluctuates around a long-term value according to changes in productivity and technological factors in the oil sector as a result of permanent changes in this activity's revenues.

2. Monetary policy transmission mechanism in the 4G model

An illustration of the monetary policy transmission mechanism in the model is shown in Figure R2.2. In this case, a monetary policy shock implies an increase in the market interest rate and a fall in inflation expectations. The latter lead to an increase in the real interest rate, and thus to a positive gap vis-à-vis the neutral real interest rate. This represents a contractive monetary policy stance. At the same time, the increase in the interest rate leads to an appreciation of the nominal exchange rate. The real exchange rate is also appreciated by opening a negative gap in the face of its long-term non-inflationary trend. A contractive monetary policy stance, along with a negative gap in the real exchange rate, causes downward pressures on

Diagram B2.2
Monetary Policy Shock



Source: González *et al.*, 2019.

aggregate demand. In turn, negative product and real exchange-rate gaps reduce inflation. Inasmuch as the monetary policy shock recedes, the output gap closes, while price and nominal exchange rate levels stand lower than where they stood initially. The other variables converge to their corresponding long-term values (steady state).

3. Advantages of the 4G model as a forecasting and policy analysis tool

The nature of semi-structural models, particularly the 4G model, facilitates both the adjustment of the model to the data and the dissemination of its results. Its structure allows to incorporate the technical staff´s different judgments about the dynamics of the economy within the forecasting exercises. In addition, the model allows for an adequate understanding of the assumptions and risks included in the different scenarios. Thus, the 4G model is an additional tool for the technical staff at the Central Bank that allows to characterize the heterogeneity of the shocks that may affect inflation and economic activity, within a scheme that is consistent with the main characteristics of the Colombian economy. The main results concerning the historical decomposition of the shocks and the benefits of the adjustment of the model are presented in González et al.(2019).

References

González, A.; Guarín. A.; Rodríguez, D.; Vargas, H. (2019). "4GM: A New Model for the Monetary Policy Analysis in Colombia," Borradores de Economía, (publication pending). *Banco de la República*.

González, A.; Mahadeva, L.; Prada, J.; Rodríguez, D. (2011). "Policy Analysis Tool Applied to Colombian Needs: Patacon Model Description," Ensayos sobre Política Económica, vol. 29, no. 66, pp. 222-245.

Gómez, J.; Uribe, J.; Vargas, H. (2002). "The Implementation of Inflation Targeting in Colombia," Borradores de Economía, No. 202, *Banco de la República*.

Annex 1
Macroeconomic Projections from Local and Foreign Analysts

This annex presents a summary of the most recent projections by local and foreign analysts on principal variables related to the Colombian economy for 2019 and 2020. The analysts surveyed had information available as of October 23, 2019.

1. Projections for 2019

On average, local analysts expected economic growth of 3.2%, which represented an increase with respect to average growth rates expected by analysts in the previous Report on Inflation (3.1%). Foreign observers also forecast an average growth rate of 3.2%, which was also above the rate expected in the previous report (3.0%).

With regard to prices, local analysts projected inflation of 3.8% at the end of the year, higher than they expected in the previous Report on Inflation (3.5%). Foreign analysts expect a rate of 3.5% at year-end. Both projections are above the target rate of 3.0% set by the Board of Directors of the *Banco de la República* (BDBR by its initials in Spanish).

With respect to the exchange rate, local analysts projected a representative market rate at the end of the year averaging COP 3,347 to the dollar, higher than the COP 3,187 expected in the previous Report on Inflation. Foreign analysts projected a representative market rate close to COP 3,410 to at year-end.

Table A1
Forecasts for 2019

	Real GDP Growth (Percentage)	CPI Inflation (Percentage)	Nominal Exchange Rate end of	Nominal DTF (percentage)	Fiscal deficit (% of GDP)	Unemployment Rate in the Thirteen Cities (percentage)
Local Analysts						
Alianza Valores[a]	3.4	3.9	3,450	4.5	2.6	10.7
ANIF[b]	3.0	3.8	n.a.	4.6	2.0	11.1
Banco de Bogotá[a]	3.0	3.8	3,300	4.5	2.4	10.5
Bancolombia[a]	3.2	3.9	3,400	4.6	2.7	10.7
BBVA Colombia[a]	3.0	3.8	3,388	4.4	2.4	11.1
BTG Pactual[a]	3.0	3.8	3,320	4.5	3.0	10.9
Corficolombiana[a]	3.2	3.6	3,275	4.5	2.4	n.a.
Corredores Davivienda[a] [c]	3.2	3.9	3,350	4.6	2.4	10.3
Credicorp Capital[b] [d]	3.3	3.7	3,400	4.5	2.0	11.5
Davivienda[a]	3.2	3.9	3,350	4.6	2.4	10.3
Fedesarrollo	3.3	3.6	n.a.	n.a.	n.a.	n.a.
Itaú[a] [e]	3.0	3.8	3,400	4.4	2.6	10.3
Ultraserfinco[a] [f]	3.3	3.9	3,180	4.4	2.4	10.4
Average	3.2	3.8	3,347	4.5	2.4	10.7
Foreign Analysts						
Citigroup	3.1	3.5	3,429	n.a.	n.a.	n.a.
Deutsche Bank	3.2	3.5	n.a.	n.a.	n.a.	n.a.
Goldman Sachs	3.2	3.4	3,400	n.a.	n.a.	n.a.
JP Morgan	3.3	3.6	3,400	n.a.	n.a.	n.a.
Average	3.2	3.5	3,410	n.a.	n.a.	n.a.

a/ The deficit projection corresponds to that of the NCG.
b/ The deficit projection corresponds to that of the SPC.
c/ Formerly Corredores Asociados.
d/ Formerly Correval.
e/ Formerly Corpbanca, until June 2017.
f/ Formerly Ultrabursatiles.
n.a.: not available.
Source: *Banco de la República* (electronic survey).

Table A2
Forecasts for 2020

	Real GDP Growth (Percentage)	CPI Inflation	Nominal Exchange Rate end of
Local Analysts			
Alianza Valores	2.5	3.7	3,500
ANIF	3.3	3.6	n.a.
Banco de Bogotá	3.3	3.0	3,200
Bancolombia	3.3	3.5	3,280
BBVA Colombia	3.0	3.3	3,370
BGT Pactual	2.8	3.0	3,250
Corficolombiana	3.1	3.4	3,350
Corredores Davivienda[a/]	3.2	3.5	3,300
Credicorp Capital[b/]	3.2	3.2	3,150
Davivienda	3.2	3.5	3,300
Fedesarrollo	3.5	3.2	n.a.
Itaú[c/]	2.8	3.4	3,430
Ultraserfinco[d/]	3.5	3.8	3,050
Average	3.1	3.4	3,289
Foreign Analysts			
Citigroup	3.5	3.0	3,386
Deutsche Bank	3.5	3.5	n.a.
Goldman Sachs	3.5	3.0	n.a.
JP Morgan	3.0	3.4	n.a.
Average	3.4	3.2	3386

a/ Formerly Corredores Asociados.
b/ Formerly Correval.
c/ Formerly Corpbanca, until June 2017.
d/ Formerly Ultrabursatiles.
n.a.: not available.
Source: *Banco de la República* (electronic survey).

For the fixed-term deposit rate, local analysts projected an average of 4.5%, and expected an unemployment rate of 10.7%.

2. Projections for 2020

For 2020, local analysts expected economic growth at 3.1%, while foreign observers forecast growth of 3.4%. With respect to inflation, local analysts projected 3.4% for the end of the period in question, while foreign analysts set the figure at 3.2%. With regard to the exchange rate, national analysts expect an average value of COP $3,289.

Annex 2
Main Variables of the Macroeconomic Forecast

		Years										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exogenous Variables												
External [a/]												
Trading Partners GDP [b/]	Percentage, annual variation,seasonally adjusted	4.8	5.0	4.0	3.6	2.8	2.1	1.6	2.6	2.5	**1.5**	**1.7**
Oil Price (Brent)	Dollars per barrel, period average	80	111	112	109	99	54	45	55	72	**63**	**59**
Effective Federal Funds Interest Rate (Fed)	Percentage, period average	0.2	0.1	0.1	0.1	0.1	0.1	0.4	1.0	1.8	**2.2**	**1.6**
5-year Credit Default Swaps for Colombia	Basis points, period average	135	131	119	113	101	184	212	129	114	**103**	**118**
Domestic												
Neutral Real Interest Rate for Colombia	Percentage, period average	1.6	1.4	1.3	0.9	0.9	1.1	1.3	1.1	1.3	**1.2**	**1.4**
Potential GDP for Colombia (Trend)	Percentage, annual variation	4.5	4.6	4.5	4.3	4.0	3.4	2.8	2.5	2.7	**2.9**	**3.0**
Endogenous Variables												
Prices												
Total CPI	Percentage, annual variation, end of the period	3.17	3.73	2.44	1.94	3.66	6.77	5.75	4.09	3.18	**3.88**	**2.98**
CPI Excluding Food [c/]	Percentage, annual variation, end of the period	2.82	3.13	2.40	2.36	3.26	5.17	5.14	5.01	3.48	.	.
Tradable Inflation CPI	Percentage, annual variation, end of the period	-0.29	0.80	0.77	1.40	2.03	7.09	5.31	3.79	1.09	.	.
Non-Tradable CPI	Percentage, annual variation, end of the period	3.52	3.63	3.92	3.76	3.38	4.21	4.85	5.49	3.79	.	.
Regulated CPI	Percentage, annual variation, end of the period	6.64	5.81	1.91	1.05	4.84	4.28	5.44	5.86	6.37	**4.62**	**3.85**
Food CPI [d/]	Percentage, annual variation, end of the period	4.09	5.27	2.52	0.86	4.69	10.85	7.22	1.92	2.43	**5.55**	**2.60**
Perishables CPI	Percentage, annual variation, end of the period	10.96	7.73	-3.90	-0.16	16.74	26.03	-6.63	5.84	8.88	.	.
Processed Items CPI	Percentage, annual variation, end of the period	2.31	4.50	2.83	-0.24	2.54	9.62	10.74	-0.91	-0.08	.	.
Food away from Home CPI	Percentage, annual variation, end of the period	4.52	5.60	4.90	3.26	3.51	5.95	8.54	5.21	3.68	.	.
Core Inflation Indicators												
CPI Excluding Food	Percentage, annual variation, end of the period	2.82	3.13	2.40	2.36	3.26	5.17	5.14	5.01	3.48	.	.
Core 20 CPI	Percentage, annual variation, end of the period	3.17	3.92	3.23	2.72	3.42	5.22	6.18	4.87	3.23	.	.
CPI Excluding Perishable Foods, Fuels and Utilities	Percentage, annual variation, end of the period	2.65	3.18	3.02	2.19	2.76	5.93	6.03	4.02	2.76	.	.
CPI Excluding Food and Regulated Items [e/]	Percentage, annual variation, end of the period	1.80	2.38	2.55	2.74	2.81	5.42	5.05	4.76	2.64	**3.06**	**2.92**
Average of all Core Inflation Indicators	Percentage, annual variation, end of the period	2.61	3.15	2.80	2.50	3.06	5.43	5.60	4.66	3.03	.	.
MER	Pesos per US dollar, period average	1.899	1.848	1.798	1.869	2.001	2.742	3.055	2.951	2.956	.	.
Real Exchange Rate Inflationary Gap	Percentage, period average	-3.2	-1.6	-3.3	-1.0	-0.5	9.1	2.2	-1.8	-0.8	**4.7**	**2.7**
Economic Activity												
Gross Domestic Product	Percentage, annual variation, SACE	4.3	7.4	3.9	4.6	4.7	3.0	2.1	1.4	2.6	**3.2**	**3.3**
Final Consumption Expense	Percentage, annual variation, SACE	5.2	6.6	5.2	4.8	4.6	3.4	1.6	2.4	4.0	.	.
Final Household Consumption Expenditure	Percentage, annual variation, SACE	5.1	6.6	5.3	4.0	4.6	3.1	1.6	2.1	3.6	.	.
Final General Government Consumption Expenditure	Percentage, annual variation, SACE	5.2	6.5	4.8	8.9	4.7	4.9	1.8	3.8	5.6	.	.
Gross Capital Formation	Percentage, annual variation, SACE	8.7	19.0	3.4	6.1	11.8	-1.2	-0.2	-3.2	3.5	.	.
Gross Fixed Capital Formation	Percentage, annual variation, SACE	6.7	14.9	3.0	6.0	9.9	2.8	-2.9	1.9	1.5	.	.
Housing	Percentage, annual variation, SACE	-11.2	4.4	-2.3	3.9	9.6	9.5	-0.2	-1.9	0.1	.	.
Other Buildings and Structures	Percentage, annual variation, SACE	12.0	3.9	5.0	6.9	12.1	10.2	-0.0	4.6	1.5	.	.
Machinery and Equipment	Percentage, annual variation, SACE	12.0	30.3	5.4	5.5	8.3	-9.3	-7.9	1.4	2.1	.	.
Cultivated Biological Resources	Percentage, annual variation, SACE	12.4	7.5	-7.2	4.0	0.9	2.3	13.1	0.3	0.9	.	.
Intellectual Property Products	Percentage, annual variation, SACE	6.8	9.6	4.2	15.7	6.8	1.2	-12.0	2.5	4.5	.	.
Domestic Demand	Percentage, annual variation, SACE	5.9	9.2	4.8	5.1	6.2	2.4	1.2	1.2	3.9	.	.
Exports	Percentage, annual variation, SACE	2.1	12.3	4.9	4.7	-0.3	1.7	-0.2	2.5	3.9	.	.
Imports	Percentage, annual variation, SACE	10.8	22.0	9.4	7.4	7.8	-1.1	-3.5	1.2	7.9	.	.
Product Gap	Percentage	-1.9	0.7	0.1	0.3	1.0	0.6	-0.1	-1.2	-1.3	**-1.0**	**-0.7**
Situation Indicators												
Real Industry Production	Percentage, annual variation, seasonally adjusted	3.4	5.5	-0.3	-1.7	1.9	2.1	4.1	-0.7	3.1	.	.
Retail Sales, Excluding Fuels	Percentage, annual variation, seasonally adjusted	13.5	10.5	3.0	4.0	9.2	2.9	1.6	-1.2	7.0	.	.
Coffee Production	Percentage, Annual variation, accumulative production of the period	14.2	-12.5	-0.8	40.6	11.5	16.8	0.4	-0.3	-4.5	.	.
Oil Production	Percentage, annual variation, period average	17.2	16.5	3.3	6.6	-1.8	1.7	-11.8	-3.4	1.4	.	.
Labor Market												
National Total												
Unemployment Rate	Percentage, seasonally adjusted, period average	11.8	10.8	10.4	9.6	9.1	8.9	9.2	9.4	9.7	.	.
Occupancy Rate	Percentage, seasonally adjusted, period average	55.4	56.8	57.8	58.0	58.4	59.0	58.5	58.4	57.8	.	.
Overall Participation Rate	Percentage, seasonally adjusted, period average	62.7	63.7	64.5	64.2	64.2	64.7	64.5	64.4	64.0	.	.
Thirteen Cities And Metropolitan Areas												
Unemployment Rate	Percentage, seasonally adjusted, period average	12.4	11.4	11.2	10.6	9.9	9.8	10.0	10.6	10.8	.	.
Occupancy Rate	Percentage, seasonally adjusted, period average	57.6	59.1	60.1	60.3	61.2	61.4	60.7	59.9	59.2	.	.
Overall Participation Rate	Percentage, seasonally adjusted, period average	65.7	66.7	67.6	67.5	67.9	68.0	67.5	67.0	66.4	.	.
Balance Of Payments [f/ g/]												
Current Account (A + B + C)	Millions of US dollars	-8,732	-9,803	-11,362	-12,501	-19,764	-18,564	-12,036	-10,241	-13,037	**-14,425**	**-15,050**
Percentage Of GDP	Percentage, nominal terms	-3.0	-2.9	-3.1	-3.3	-5.2	-6.3	-4.2	-3.3	-3.9	**-4.5**	**-4.6**
A. Goods And Services	Millions of US dollars	-2,164	636	-1,187	-3,164	-11,863	-18,267	-12,705	-8,447	-8,908	**-12,702**	**-14,871**
B. Primary Income (Factor Income)	Millions of US dollars	-11,228	-15,490	-15,008	-14,224	-12,523	-5,727	-5,229	-8,405	-11,772	**-10,010**	**-9,011**
C. Secondary Income (Current Transfers)	Millions of US dollars	4,659	5,051	4,833	4,887	4,622	5,430	5,898	6,611	7,643	**8,287**	**8,832**
Financial Account (A + B + C + D)	Millions of US dollars	-9,332	-8,707	-11,553	-11,740	-19,292	-18,244	-12,273	-9,558	-12,640	,	,
Percentage Of GDP	Percentage, nominal terms	-3.3	-2.6	-3.1	-3.1	-5.1	-6.2	-4.3	-3.1	-3.8	.	.
A. Foreign Investment (I + Ii)	Millions of US dollars	-947	-6,227	-15,646	-8,558	-12,270	-7,506	-9,330	-10,147	-6,413	,	.
I. Foreign Direct Investment In Colombia (FDI)	Millions of US dollars	6,430	14,647	15,040	16,210	16,169	11,724	13,848	13,837	11,535	,	.
Ii. Colombian Investment Abroad	Millions of US dollars	5,483	8,420	-606	7,652	3,899	4,218	4,517	3,690	5,122	,	.
B. Portfolio Investment	Millions of US dollars	88	-6,171	-4,769	-7,438	-11,565	-9,166	-4,839	-1,617	1,297	,	.
C. Other Investment (Loans, Other Loans, And Derivatives)	Millions of US dollars	-11,615	-51	3,457	-2,690	106	-1,988	1,731	1,661	-8,710	,	.
D. Reserve Assets	Millions of US dollars	3,142	3,742	5,406	6,946	4,437	415	165	545	1,187	,	.
Errors And Omissions (E AND O)	Millions of US dollars	-599	1,096	-190	761	472	320	-237	683	398	,	.
Interest Rates												
Policy Intervention Rate	Percentage, period average	3.2	4.0	5.0	3.4	3.9	4.7	7.1	6.1	4.4	.	.
Policy Rate Expected By Analysts [h/]	Percentage, period average	.	.	.	.	.	.	.	.	.	.	**4.4**
IBR Overnight	Percentage, period average	3.2	4.1	5.0	3.4	3.8	4.7	7.1	6.1	4.3	.	.
Commercial Interest Rate [i/]	Percentage, period average	7.6	9.0	10.3	8.7	8.7	9.4	12.8	11.1	9.3	.	.
Consumption Interest Rate	Percentage, period average	18.0	18.2	19.2	17.9	17.3	17.2	19.2	19.4	17.9	.	.
Mortgage Rate [j/]	Percentage, period average	13.1	13.0	13.2	11.1	11.1	11.0	12.4	11.6	10.6	.	.

Notes: values in bold correspond to a projection or assumption.
SACE: Seasonally adjusted and adjusted for calendar effects.
a/ Quarterly data in bold correspond to an assumption based on the annual projection of each variable.
b/ Estimated for the first 21 trading partners (excluding Venezuela), weighted by Colombia's non-traditional exports in US dollars.
c/ Calculations by *Banco de la República* with the new methodology; excluding the division of food and subclasses for food away from home.
d/ Calculations by *Banco de la República* with the new methodology; including the division of food and subclasses for food away from home.
e/ Calculations by *Banco de la República* with provisional classifications.
f/ The results presented follow the recommendations of the sixth version of the IMF Balance of Payments Manual. For additional information and methodological changes, visit http://www.banrep.gov.co/balanza-pagos.
g/ The results for 2017 and 2018 are preliminary.
h/ Corresponds to the median of analysts' projections. These projections are calculated by taking the quarterly average of the monthly responses to *Banco de la República*'s Survey of Economic Expectations by Analysts from October 2019.
i/ Weighted average by amount of ordinary, treasury, and preferential credit rates.
j/ The rate corresponds to the weighted average by amount of the rate for disbursements in pesos and in UVRs for the acquisition of non-social interest housing.

Annex 2 (Continued)
Main Variables of the Macroeconomic Forecast

		2016				2017				2018				2019				2020				2021		
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3
Exogenous Variables																								
External [a/]																								
Trading Partners GDP [b/]	Percentage, annualized quarterly variation, seasonally adjusted	1.6	1.9	1.9	2.8	2.4	2.9	3.2	3.0	2.4	2.5	1.3	2.3	-0.0	1.9	**2.1**	**1.8**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**	**1.8**	**1.9**
Oil Price (Brent)	Dollars per barrel, period average	35	47	47	51	55	51	52	62	67	75	76	68	64	69	62	**59**	**59**	**59**	**59**	**59**	**59**	**59**	**59**
Effective Federal Funds Interest Rate (Fed)	Percentage, period average	0.36	0.37	0.40	0.45	0.70	0.95	1.15	1.20	1.45	1.74	1.92	2.22	2.40	2.40	2.19	**1.71**	**1.63**	**1.63**	**1.63**	**1.63**	**1.63**	**1.63**	**1.63**
5-year Credit Default Swaps for Colombia	Basic points, period average	266	225	179	180	144	130	127	113	99	113	110	132	121	104	90	**97**	**106**	**114**	**124**	**128**	**131**	**135**	**139**
Domestic																								
Neutral Real Interest Rate for Colombia	Percentage, period average	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Potential GDP for Colombia (Trend)	Percentage, annual variation	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Endogenous Variables																								
Prices																								
Total CPI	Percentage, annual variation, end of the period	7.98	8.60	7.27	5.75	4.69	3.99	3.97	4.09	3.14	3.20	3.23	3.18	3.21	3.43	3.82	**3.88**	**3.69**	**3.54**	**3.12**	**2.98**	**3.11**	**2.91**	**2.84**
CPI Excluding Food [c/]	Percentage, annual variation, end of the period	6.20	6.31	5.92	5.14	5.13	5.12	4.71	5.01	4.05	3.81	3.71	3.48	3.26	3.15	3.28	.	.	.	.	.	.	.	.
Tradable Inflation CPI	Percentage, annual variation, end of the period	7.38	7.90	7.20	5.31	5.59	4.41	3.41	3.79	1.80	1.83	1.57	1.09	0.90	1.17	1.65	.	.	.	.	.	.	.	.
Non-Tradable CPI	Percentage, annual variation, end of the period	4.83	4.97	4.85	4.85	5.33	5.21	5.21	5.49	4.76	4.27	4.13	3.79	3.29	3.36	3.53	.	.	.	.	.	.	.	.
Regulated CPI	Percentage, annual variation, end of the period	7.24	6.71	6.19	5.44	4.05	6.01	5.68	5.86	6.01	5.82	6.03	6.37	6.42	5.33	4.74	**4.62**	**4.28**	**4.36**	**4.30**	**3.85**	**3.69**	**3.63**	**3.60**
Food CPI [d/]	Percentage, annual variation, end of the period	12.35	14.28	10.61	7.22	3.65	1.37	2.22	1.92	0.98	1.74	2.05	2.43	3.26	4.46	5.58	**5.55**	**4.65**	**4.00**	**2.90**	**2.60**	**2.96**	**2.34**	**2.21**
Perishables CPI	Percentage, annual variation, end of the period	27.09	34.94	6.66	-6.63	-13.09	-14.72	-0.32	5.84	7.13	8.47	9.51	8.88	9.98	15.46	17.50	.	.	.	.	.	.	.	.
Processed Items CPI	Percentage, annual variation, end of the period	10.83	12.09	12.56	10.74	6.28	3.29	0.84	-0.91	-2.01	-0.91	-0.72	-0.08	1.43	2.18	3.57	.	.	.	.	.	.	.	.
Food away from Home CPI	Percentage, annual variation, end of the period	7.53	8.11	9.18	8.54	8.94	7.62	6.01	5.21	3.32	3.13	3.32	3.68	3.43	3.80	4.12	.	.	.	.	.	.	.	.
Core Inflation Indicators																								
CPI Excluding Food	Percentage, annual variation, end of the period	6.20	6.31	5.92	5.14	5.13	5.12	4.71	5.01	4.05	3.81	3.71	3.48	3.26	3.15	3.28	.	.	.	.	.	.	.	.
Core 20 CPI	Percentage, annual variation, end of the period	6.48	6.82	6.73	6.18	6.01	5.31	4.87	4.87	4.04	3.58	3.56	3.23	3.09	3.28	3.51	.	.	.	.	.	.	.	.
CPI Excluding Perishable Foods, Fuels and Utilities	Percentage, annual variation, end of the period	6.57	6.77	6.65	6.03	5.61	5.07	4.31	4.02	2.99	2.71	2.81	2.76	2.57	2.87	3.21	.	.	.	.	.	.	.	.
CPI Excluding Food and Regulated Items [e/]	Percentage, annual variation, end of the period	5.91	6.20	5.84	5.05	5.44	4.87	4.44	4.76	3.49	3.23	3.04	2.64	2.38	2.54	2.87	**3.06**	**3.17**	**3.15**	**2.94**	**2.92**	**3.03**	**2.96**	**2.90**
Average of all Core Inflation Indicators	Percentage, annual variation, end of the period	6.29	6.52	6.29	5.60	5.55	5.09	4.58	4.66	3.64	3.33	3.28	3.03	2.82	2.96	3.22	.	.	.	.	.	.	.	.
MER	Pesos per US dollar, period average	3,262	2,993	2,950	3,016	2,923	2,919	2,977	2,987	2,860	2,841	2,961	3,164	3,134	3,241	3,340	,	,	,	,	,	,	,	,
Real Exchange Rate Inflationary Gap	Percentage, period average	10.7	-0.0	-2.0	0.3	-3.1	-3.2	-0.7	-0.1	-3.5	-3.7	-0.5	4.6	2.3	3.8	5.1	**7,4**	**6,8**	**1,9**	**0,9**	**1,1**	**0,2**	**0,0**	**-0,0**
Economic Activity																								
Gross Domestic Product	Percentage, annual variation, SACE	2.7	1.8	1.6	2.3	1.0	1.7	1.4	1.2	2.5	2.4	2.6	2.7	2.7	3.4	**3.2**	**3,5**	**3,6**	**3,0**	**3,3**	**3,3**	**3,2**	**3,3**	**3,4**
Final Consumption Expense	Percentage, annual variation, SACE	1.6	1.3	0.4	3.2	2.2	2.2	2.6	2.4	3.6	3.9	4.2	4.1	4.2	4.5	**4.3**	.	.	.	.	.	.	.	.
Final Household Consumption Expenditure	Percentage, annual variation, SACE	2.0	1.6	0.9	1.9	1.9	1.8	2.4	2.2	3.0	3.9	3.9	3.5	4.3	4.6	**4.7**	.	.	.	.	.	.	.	.
Final General Government Consumption Expenditure	Percentage, annual variation, SACE	-0.3	1.3	-2.5	9.5	3.2	3.8	3.6	4.4	6.1	4.8	5.9	5.7	2.8	2.5	**2.9**	.	.	.	.	.	.	.	.
Gross Capital Formation	Percentage, annual variation, SACE	-0.2	1.7	-0.0	-2.1	-1.4	-2.4	-4.2	-4.7	1.4	0.3	4.6	8.0	2.7	7.8	**5.2**	.	.	.	.	.	.	.	.
Gross Fixed Capital Formation	Percentage, annual variation, SACE	-2.0	-2.0	-4.6	-3.0	2.5	3.2	2.7	-0.7	0.3	-1.6	1.4	6.0	2.4	5.8	**6.0**	.	.	.	.	.	.	.	.
Housing	Percentage, annual variation, SACE	-8.8	-0.1	-1.1	10.1	4.7	4.0	-1.8	-13.4	-0.8	0.3	-1.6	2.5	-11.5	-8.7	**-1.7**	.	.	.	.	.	.	.	.
Other Buildings and Structures	Percentage, annual variation, SACE	3.4	-0.2	-2.4	-0.7	2.3	4.8	6.4	5.0	-0.5	-1.6	-0.6	8.9	1.8	5.0	**6.0**	.	.	.	.	.	.	.	.
Machinery and Equipment	Percentage, annual variation, SACE	-5.2	-11.0	-6.5	-8.6	-4.8	1.2	6.3	3.6	5.4	3.4	2.1	-2.3	11.7	20.6	**13.8**	.	.	.	.	.	.	.	.
Cultivated Biological Resources	Percentage, annual variation, SACE	10.2	21.0	14.1	7.5	8.4	-10.5	-4.2	8.6	-2.7	2.0	7.6	-2.6	-1.1	-4.0	**-11.7**	.	.	.	.	.	.	.	.
Intellectual Property Products	Percentage, annual variation, SACE	-6.8	-11.8	-14.8	-14.4	-2.7	2.4	5.2	5.4	4.0	5.3	4.9	3.8	3.2	1.0	**0.8**	.	.	.	.	.	.	.	.
Domestic Demand	Percentage, annual variation, SACE	1.3	0.9	-0.5	3.3	0.1	1.3	2.2	1.0	4.1	3.4	3.8	4.2	3.7	4.9	**4.5**	.	.	.	.	.	.	.	.
Exports	Percentage, annual variation, SACE	-2.6	-4.1	0.9	5.1	4.5	4.2	3.5	-1.9	2.0	3.4	4.7	5.7	1.8	5.2	**1.9**	.	.	.	.	.	.	.	.
Imports	Percentage, annual variation, SACE	-3.5	-4.0	-5.1	-1.4	2.6	3.7	0.2	-1.5	2.7	7.5	8.2	13.5	7.5	8.7	**8.4**	.	.	.	.	.	.	.	.
Product Gap	Percentage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Situation Indicators																								
Real Industry Production	Percentage, annual variation, seasonally adjusted	6.0	6.2	1.8	2.3	-0.6	-2.5	1.5	-1.3	1.4	4.8	3.4	2.6	2.5	0.8	.	.	.	.	.	.	.	.	.
Retail Sales, Excluding Fuels	Percentage, annual variation, seasonally adjusted	2.4	1.6	-1.3	3.8	-1.7	-0.7	0.2	-2.5	6.0	6.1	6.7	9.0	5.5	8.3	.	.	.	.	.	.	.	.	.
Coffee Production	Percentage, Annual variation, accumulative production of the period	8.9	1.1	-12.2	5.4	13.0	-17.2	17.1	-10.1	-5.8	13.1	-13.8	-6.6	-1.9	6.6	4.9	.	.	.	.	.	.	.	.
Oil Production	Percentage, annual variation, period average	-7.4	-11.5	-13.3	-14.8	-11.6	-5.2	1.5	1.9	0.8	1.2	1.1	2.6	5.4	3.2	1.6	.	.	.	.	.	.	.	.
Labor Market																								
National Total																								
Unemployment Rate	Percentage, seasonally adjusted, period average	9.4	9.1	9.2	9.1	9.4	9.2	9.5	9.5	9.4	9.6	9.6	10.1	10.5	10.3	.	.	.	.	.	.	.	.	.
Occupancy Rate	Percentage, seasonally adjusted, period average	58.7	58.4	58.4	58.6	58.5	58.8	58.2	57.9	57.9	58.0	58.1	57.1	57.5	56.4	.	.	.	.	.	.	.	.	.
Overall Participation Rate	Percentage, seasonally adjusted, period average	64.8	64.3	64.3	64.5	64.5	64.7	64.3	64.0	63.9	64.2	64.3	63.5	64.2	62.8	.	.	.	.	.	.	.	.	.
Thirteen Cities And Metropolitan Areas																								
Unemployment Rate	Percentage, seasonally adjusted, period average	10.2	9.5	10.1	10.2	10.4	10.6	10.9	10.7	10.6	10.6	10.5	11.3	11.3	11.1	.	.	.	.	.	.	.	.	.
Occupancy Rate	Percentage, seasonally adjusted, period average	61.3	60.7	60.3	60.6	60.4	60.1	59.6	59.3	59.4	59.5	59.5	58.4	58.9	58.6	.	.	.	.	.	.	.	.	.
Overall Participation Rate	Percentage, seasonally adjusted, period average	68.2	67.1	67.1	67.5	67.4	67.2	66.9	66.4	66.5	66.6	66.4	65.9	66.4	65.9	.	.	.	.	.	.	.	.	.
Balance Of Payments [f/ g/]																								
Current Account (A + B + C)	Millions of US dollars	-3,439	-2,590	-3,466	-2,541	-3,506	-2,481	-2,725	-1,529	-2,847	-3,267	-3,200	-3,724	-3,587	-3,239	,	.	.	.	.	.	.	.	.
Percentage Of GDP	Percentage, nominal terms	-5.5	-3.8	-4.7	-3.2	-4.7	-3.3	-3.5	-1.8	-3.5	-4.0	-3.8	-4.5	-4.6	-4.2	.	.	.	.	.	.	.	.	.
A. Goods And Services	Millions of US dollars	-3,792	-2,757	-3,367	-2,789	-2,584	-2,482	-2,283	-1,099	-1,491	-2,179	-2,277	-2,961	-2,662	-2,667	,	.	.	.	.	.	.	.	.
B. Primary Income (Factor Income)	Millions of US dollars	-1,018	-1,270	-1,509	-1,432	-2,343	-1,632	-2,128	-2,303	-2,979	-2,899	-2,880	-3,013	-2,735	-2,727	,	.	.	.	.	.	.	.	.
C. Secondary Income (Current Transfers)	Millions of US dollars	1,371	1,437	1,410	1,679	1,421	1,632	1,685	1,873	1,623	1,812	1,957	2,250	1,810	2,155	,	.	.	.	.	.	.	.	.
Financial Account (A + B + C + D)	Millions of US dollars	-3,620	-3,154	-3,423	-2,077	-2,922	-2,363	-2,675	-1,598	-2,563	-2,846	-3,435	-3,795	-3,285	-3,609	,	.	.	.	.	.	.	.	.
Percentage Of GDP	Percentage, nominal terms	-5.8	-4.6	-4.6	-2.7	-3.9	-3.2	-3.4	-1.9	-3.2	-3.4	-4.1	-4.5	-4.2	-4.6	.	.	.	.	.	.	.	.	.
A. Foreign Investment (I + Ii)	Millions of US dollars	-3,672	-2,726	-1,579	-1,353	-1,797	-1,252	-4,148	-2,951	-937	-2,341	-2,470	-666	-2,753	-3,485	.	.	.	.	.	.	.	.	.
I. Foreign Direct Investment In Colombia (FDI)	Millions of US dollars	4,684	3,638	2,256	3,269	2,513	2,526	4,992	3,805	2,007	3,840	2,799	2,889	3,417	3,855	.	.	.	.	.	.	.	.	.
Ii. Colombian Investment Abroad	Millions of US dollars	1,012	913	677	1,916	716	1,275	845	854	1,071	1,499	329	2,223	665	371	.	.	.	.	.	.	.	.	.
B. Portfolio Investment	Millions of US dollars	-856	-1,625	-975	-1,384	265	-1,983	-519	620	1,750	334	536	-1,323	-1,306	-300	.	.	.	.	.	.	.	.	.
C. Other Investment (Loans, Other Loans, And Derivatives)	Millions of US dollars	810	1,352	-954	524	-1,482	717	1,867	560	-3,514	-988	-1,670	-2,538	-1,577	-351	.	.	.	.	.	.	.	.	.
D. Reserve Assets	Millions of US dollars	98	-155	85	136	93	154	126	173	137	150	169	732	2,351	526	.	.	.	.	.	.	.	.	.
Errors And Omissions (E AND O)	Millions of US dollars	-181	-564	43	465	584	117	50	-69	283	421	-235	-71	302	-369	.	.	.	.	.	.	.	.	.
Interest Rates																								
Policy Intervention Rate	Percentage, period average	6.05	6.94	7.67	7.72	7.38	6.56	5.48	4.99	4.58	4.33	4.25	4.25	4.25	4.25	4.25	.	.	.	.	.	.	.	.
Policy Rate Expected By Analysts [h/]	Percentage, period average	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**4.25**	**4.25**	**4.50**	**4.50**	**4.50**	**4.50**	**4.50**	**4.63**
IBR Overnight	Percentage, period average	6.1	6.9	7.7	7.7	7.4	6.6	5.5	5.0	4.6	4.3	4.3	4.3	4.3	4.3	4.3	.	.	.	.	.	.	.	.
Commercial Interest Rate [i/]	Percentage, period average	11.7	13.0	13.4	13.2	12.8	11.6	10.6	10.0	9.4	9.4	9.3	9.0	9.1	9.0	8.9	.	.	.	.	.	.	.	.
Consumption Interest Rate	Percentage, period average	18.5	19.0	19.5	19.6	20.1	19.7	19.0	18.7	18.7	17.9	18.0	17.3	18.0	17.2	16.0	.	.	.	.	.	.	.	.
Mortgage Rate [j/]	Percentage, period average	11.8	12.4	12.7	12.7	12.5	12.3	11.3	10.9	10.8	10.6	10.5	10.4	10.4	10.5	10.4	.	.	.	.	.	.	.	.

Notes: Values in bold correspond to a projection or assumption.
SACE: Seasonally adjusted and adjusted for calendar effects.
a/ Quarterly data in bold correspond to an assumption based on the annual projection of each variable.
b/ Estimated with the first 21 trading partners (excluding Venezuela), weighted by Colombia's non-traditional exports in US dollars.
c/ Calculations by *Banco de la República* with the new methodology, excluding the division of food and subclasses for meals outside the home.
d/ Calculations by *Banco de la República* with the new methodology, including the division of food and subclasses for meals outside the home.
e/ Calculations by *Banco de la República* with provisional classifications.
f/ The results presented follow the recommendations of the sixth version of the IMF Balance of Payments Manual. See additional information and methodological changes at http://www.banrep.gov.co/balanza-pagos."
g/ Results for 2017 and 2018 are preliminary.
h/ Corresponds to the median of analysts' projections. These projections are calculated by taking the quarterly average of the monthly responses to *Banco de la República*'s Survey of Economic Expectations to Analysts in October 2019.
i/ Weighted average by amount of ordinary, treasury, and preferential credit rates.
j/ The rate corresponds to the weighted average by amount of the disbursements rate in pesos and in UVRs for the purchase of non-social interest housing.

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