INFLATION REPORT

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

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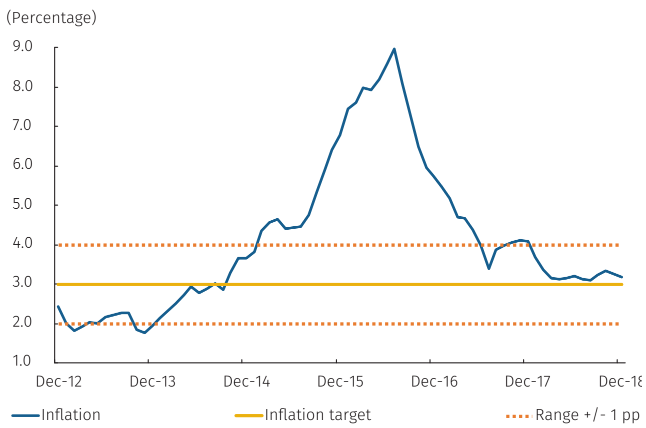
Inflation Developments and Monetary Policy Decisions

In December 2018, inflation and all core inflation indicators fell close to the 3.0% target. Inflation expectations to one and more years are around 3.5%. The new economic activity figures for the last quarter of 2018 suggest that economic growth is still recovering from levels of output lower than the country's natural output level. The current monetary policy stance is slightly expansionary.

Graph A
Consumer Price Index +(CPI)
(Annual change)



Sources: DANE and *Banco de la República.*

At the end of 2018, inflation surprised again by its fall, reaching 3.18% (Graph A), mainly due to the favorable behavior of the prices of tradable items and non-tradable items (excluding food and regulated items). Because of this, inflation excluding food and regulated items fell to 2.64%, and the average of core inflation indicators fell to 3.03%. Food prices continued to show an upward trend, with annual increases lower than 3.0%, while regulated prices rose well-above the target. In January 2019, analysts' expectations to one and more years ranged between 3.3% and 3.5%, while those embedded in public debt bonds to two, three, and five years stood between 3.47% and 3.61%.

Inflation was low and close to 3.0% in the fourth quarter of 2018, in a context of a negative output gap with a relative recovery in domestic demand. Household consumption would have performed better due to the behavior of spending on durable goods. Investment would continue recovering, especially that directed to the purchase of machinery and equipment. The figures for foreign trade suggest that exports would have grown at a lower pace than imports. With this information, the Central Bank's technical staff considers that economic growth for the fourth quarter will stand around 2.7%, and for 2018, at 2.6%. Also for this year, the current account deficit as a share of GDP would stand around 3.7%.

At the end of 2018, the commercial loan portfolio (domestic and foreign currency, direct external credit, and bonds) grew 7.4% on a yearly basis; the one for consumption did so by 9.1%, and mortgages at 11.1%. The real interest rates for commercial, mortgage and consumer credits (except credit cards) are below the averages of the past ten years.

Vis-à-vis the previous Report, the technical staff reduced their forecasts for the international price of oil, growth of the country's trading partners, and external interest rates. Economic activity will continue recovering, and the excess of the country's spare capacity will reduce. Some transitory supply shocks can generate slight increases in inflation versus the target in the first half of 2019, but it will return to levels close to 3.0% in the second half of the year.

For 2019 the technical staff expects an average oil price of USD $63 per barrel (Brent), substantially less than the USD $73 per barrel mentioned in the last report, as world production grew and global demand has slowed down slightly. Lower growth figures for production and the absence of inflationary pressures in advanced economies suggest smaller increases in policy interest rates, particularly in the United States. The country's risk premia and the value of the peso versus the US dollar were above the averages observed last year.

The technical staff at *Banco de la República* revised its growth forecast for the Colombian economy from 3.5% to 3.4%. The projected deterioration in terms of trade and the slight slowdown expected in the country's trading partners would be partly offset by the positive effects of the *Ley de Financiamiento* mainly on investment. The acceleration of economic growth expected in 2019 implies a partial closure of the output gap and a likely widening of the current account deficit as a share of GDP.

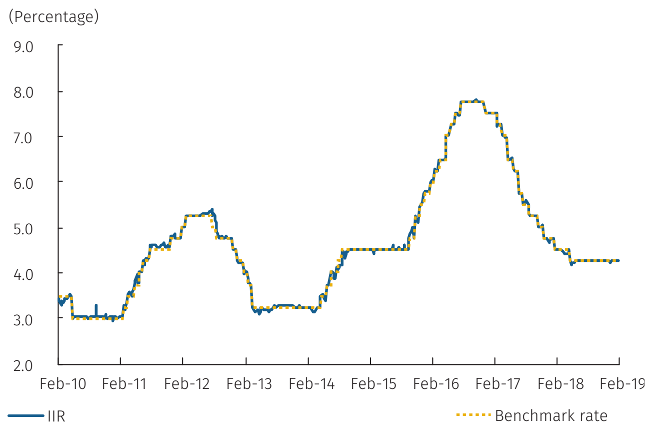
Several shocks could raise inflation above our 3.0% target in the first half of the year. The 6.0% increase in the minimum wage in each of the past two years and a moderate *El Niño* that would raise food prices. The price of regulated goods has increased above 6.0% in recent years, and could continue increasing at high rates in 2019. Nevertheless, these are transitory shocks, and inflation would return to levels close to 3.0% by the end of the year.

In all, economic activity is still recovering from a level that was lower than the country's natural output level. Inflation has lowered, but our forecast and the agents' expectations still exceed 3.0%. External and domestic conditions suggest a gradual closing of the output gap in 2019. The current monetary policy stance is slightly expansionary.

Based on this information, in its December 2018 and January 2019 meetings, the Board considered the following factors its decision:

- The dynamics of economic activity and uncertainty over the pace of its recovery.
- Observed inflation, its expected convergence to the 3.0% target, and the risks associated with it.
- The current moderately expansionary monetary policy stance.
- The effects from the changing international financial conditions on the Colombian economy.

Graph B
Banco de la República's Benchmark Interest Rate and the Interbank Interest Rate (IIR)
(2011-2019) a/



a/ The figures pertain to working days. The last one is for February 11, 2019.
Sources: Office of the Financial Superintendent of Colombia (*Superintendencia Financiera de Colombia*) and *Banco de la República.*

In this environment, assessing the situation of the economy and the risk balance, the Board deemed appropriate to maintain the policy interest rate at 4.25% (Graph B).
The Board will continue to carefully monitor the behavior of inflation and the forecasts for economic activity and inflation in the country, as well as the international context. Finally, the Board reiterates that monetary policy will depend on the new information available.

Juan José Echavarría
Governor

01

International Context and Balance of Payments

The outlook for the international context facing Colombia has deteriorated slightly with respect to what was observed in 2018 and what was estimated in the previous report.

Less global demand and the strength of oil production worldwide reduced the price forecast for this commodity in 2019.

However, no significant changes are expected in capital flows to Colombia and other emerging market economies during 2019, since international liquidity still is expected to remain high.

The new estimates suggest the external imbalance would have widened in 2018, a trend that is expected to continue in 2019.

1.1 International Context

During the final quarter of 2018, the most relevant event for Colombia in terms of the international context was the sharp drop in the price of oil. Although a decline in this variable was predicted in earlier reports, it was sooner and more pronounced than expected.

At the same time, recent months have seen the global growth rate weaken, while it continued to face significant downward risks originating in both advanced and emerging countries. Consequently, by the end of 2018, growing international concerns translated into an increase in the perception of global risk and in indicators of international financial volatility. This was reflected in a reallocation of the portfolio at the international level, with capital outflows from emerging markets, while the sovereign risk premia of several of the region's economies increased, Colombia's included.

The expectation in this *Report* is that the Fed will continue its rate-hike strategy, although the adjustment would be less than was forecast in the last report.

However, the deterioration in the international context was partially reversed during the early weeks of January, when there was some improvement in international financial conditions. Recent signals from the United States Federal Reserve (Fed) indicating smaller hikes in its policy interest rate would have been a key factor in reassuring the markets, insofar as they suggest that global liquidity conditions will remain quite ample, even if the pace of global growth slows. This has allowed for some reduction in risk premia and a recovery in other indicators, including stock indexes. In the case of several emerging market economies, such as Colombia`s, this has contributed to some appreciation of the exchange rate, following the sharp depreciation registered in the final quarter of last year.

Taking this into account, the growth in external demand relevant for Colombia was revised downward slightly in the baseline forecast scenario outlined below. The oil price forecast for 2019 also was reduced significantly and somewhat less for 2020. On the other hand, the Fed is expected to continue its rate hike strategy, although to a lesser degree than was anticipated in the last report. Accordingly, some moderate effects on the cost of external financing for Colombia are expected.

1.1.1 Real Activity, Inflation, and Monetary Policy

In 2018, the US economy completed nine years of consecutive growth, achieving a relatively high growth rate. Going forward, however, the pace of this expansion should become more moderate and converge towards the country's potential growth rate.

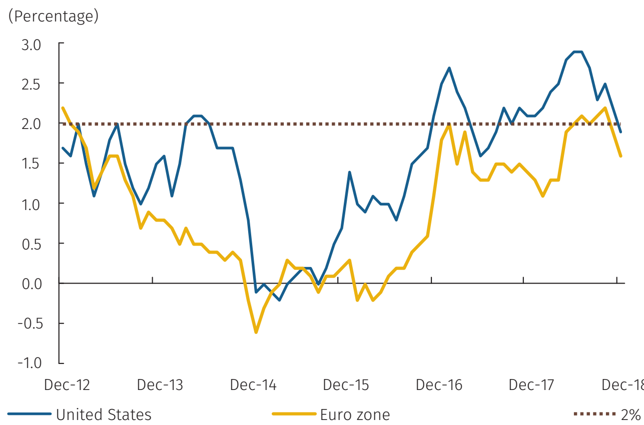
The increase in real gross domestic product (GDP) during the third quarter of 2018 was revised down to 3.4% growth, annualized quarter (a.q.), following 3.5% a.q. as reported previously. The outcome for this indicator in terms of growth has been supported by private consumption that remains strong, favored by good job market conditions, higher household income and confidence that is still at relatively high levels. Along with the increase in federal spending, this has offset the recent poor performance in the external sector and the slowdown observed in investment.

The euro zone, on the other hand, saw its growth rate decline throughout 2018 compared to what was witnessed in 2017.[1] At the statistical close of this Report, it was known that real GDP rose 0.2% during the fourth quarter with respect to the previous period and 1.2% compared to the same quarter the year before. This represents a bit of

1 Annual growth in the euro zone came to 1.8% for all of 2018, following 2.5% in 2017.

a slowdown,[2] which would be explained by domestic demand that would have continued to weaken, according to the latest indicators, and by somewhat less external demand, all of which led to a decline in industrial production.

Graph 1.1
Headline Inflation Indicators for the United States and the Euro Zone
(Annual change)



Source: Bloomberg.

Among the group of emerging economies, China is one of those that generated the most uncertainty. Its economy has continued to lose speed, posting an annual growth rate in the fourth quarter of 2018 (6.4%) that was the lowest since 2009. The latest figures suggest weakening external demand and the trade barriers imposed by the United States would have affected China's export performance. This would have been offset, in part, by the stimulus measures adopted by the local authorities, which, in turn, pose a risk by slowing down the process to adjust the high debt levels in the Chinese economy.

Inflation in developed economies has tapered off in recent months, partly as a result of the drop in international oil prices. In the United States, this decline occurred despite a very low unemployment rate and the presence of a positive output gap. Headline inflation in that country went from 2.3% in September to 1.9% in December 2018. In turn, the annual change in prices in the euro zone went from 2.1% in September to 1.6% in December 2018 (Graph 1.1). By December, the values for core inflation in these economies show no major changes with respect to the previous quarter: 2.2% and 1.0%, respectively. The inflation expectations for 2019 and 2020 have shrunk in recent months and are close to their long-term target, reflecting a scenario of less inflationary pressure for these economies.

1.1.2 Commodity Prices

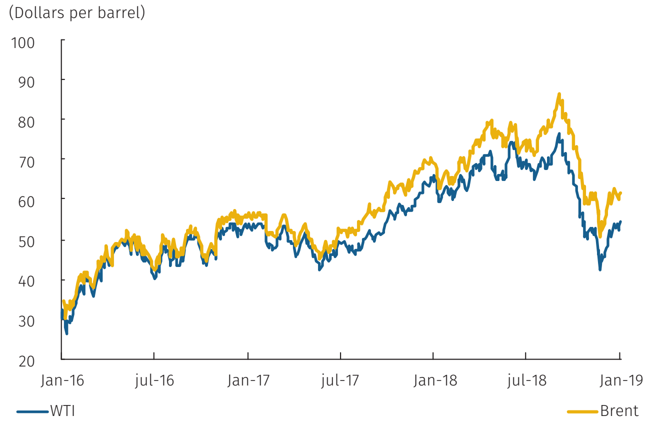
With respect to prices for Colombia's commodity exports, the drop in the price of oil is a major factor, having gone from USD 85 per barrel in the first week of October to USD 53 per barrel in the final weeks of 2018. This decline was related largely to supply factors, particularly the increase in oil production in the United States, Saudi Arabia and Russia, and the relaxation of sanctions on Iran's crude exports. Added to this were the concerns about global economic growth that have led to weaker demand for this particular raw material.

2 Third-quarter growth in the euro zone was 1.6% compared to the same period in 2017.

Even so, the price of oil recovered partially (to USD 60 per barrel) during the course of the year to January 31, 2019. This recent price development is partly the result of cuts by the Organization of Petroleum Exporting Countries (OPEC) and its allies [3] (Graph 1.2).

Terms of trade were down during the final quarter of 2018, as a result of the drop in oil prices; however, the levels recorded during the course of the year up to November continued to represent an improvement over 2017 (Graph 1.3). On the other hand, the prices of imported goods fell slightly, in line with international inflation.

Graph 1.2
International Oil Prices (Brent and WTI)



Source: Bloomberg.

1.1.3 Financial Markets

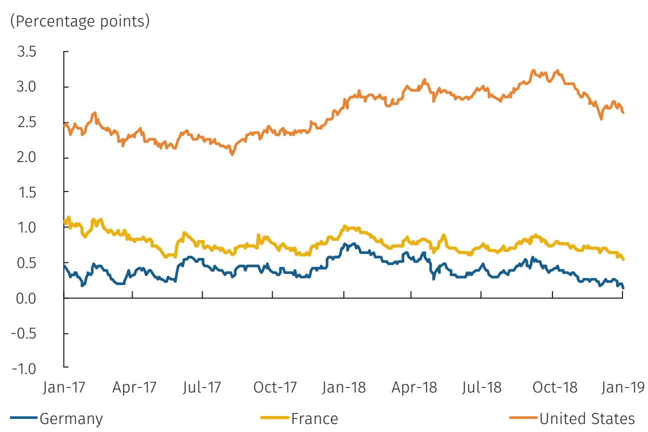
In the last quarter of the year, the central banks of the major advanced economies continued with plans to normalize their respective monetary policies, as anticipated. The United States is a case in point, where the Fed ruled an additional increase of 25 basis points (bp) in the interest rate in December, placing it within a range of 2.25% to 2.50%. Although up to the third quarter of 2018 these hikes had been transmitted in advance to long-term US treasury bonds, particularly to those with a ten-year maturity (the yields on which increased significantly), this situation was reversed during the final months of 2018. This occurred in the midst of added concern about US economic growth and more risk aversion, which increased the demand for assets considered as being more secure (Graph 1.4).

The trend in treasury bonds observed at the end of 2018 would have been reinforced by less optimism concerning the prospects for corporate profits and by a growing concern over the high levels of indebtedness in the United States and in other advanced and emerging economies. Added to this was the increase in uncertainty sparked by the political situation in the United

Graph 1.3
Terms of Trade Index
(Foreign trade methodology)

Source: *Banco de la República.*

Graph 1.4
Interest Rates on Certain 10-Year Sovereign Bonds

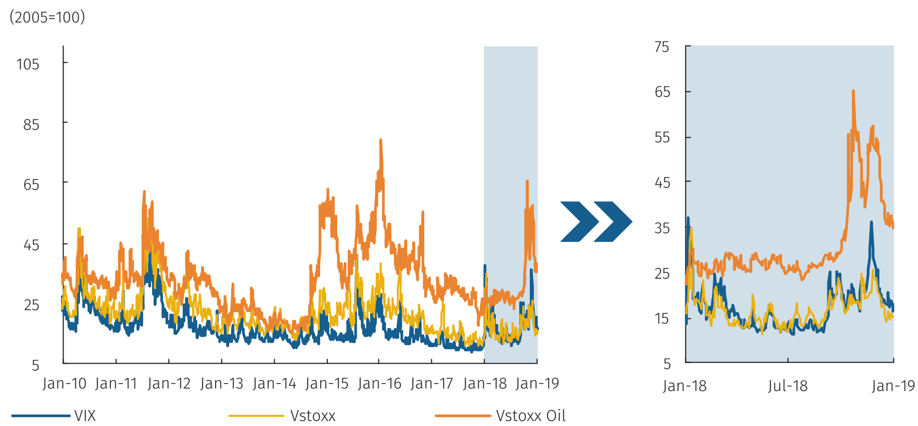


Source: Bloomberg.

3 The agreement reached on December 7, 2018 calls for a cut in oil production equal to 1.2 million barrels per day, starting in January 2019. This was more than what the market expected (1 million barrels per day).

Kingdom on account of Brexit, by the fiscal situation in Italy, and by the effect of the partial shutdown of the US federal government. This meant a correction in the prices of some assets and an increase in stress on international financial markets, as reflected by a significant rise in volatility indicators (Graph 1.5).

Graph 1.5
Financial Volatility Indexes



Source: Bloomberg.

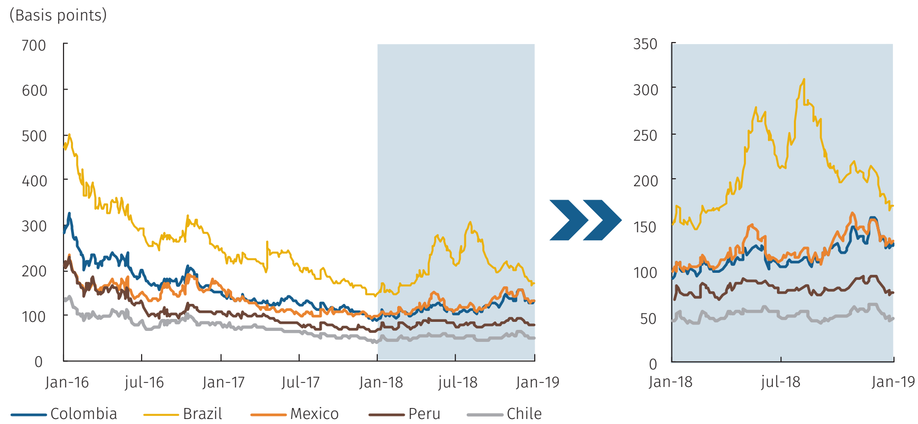
The increase in financial volatility and the decline in demand due to risk resulted in portfolio reallocation, with outflows of capital from emerging markets, while the perception of sovereign risk to these economies increased. Consequently, country risk premia were up in most Latin American economies and their currencies depreciated, although moderately (Graph 1.6 and Graph 1.7).

However, international financial conditions improved at the start of this year, thanks largely to announcements by the Fed suggesting the upward cycle in its interest rates would be less than expected. This has allowed for some reduction in risk premia and a recovery in other indicators, including stock indexes. In the case of several emerging economies, such as Colombia's, this has enabled the peso to appreciate somewhat, partially reversing the depreciation observed in the final months of 2018 (Graphs 1.4, 1.5, 1.6 and 1.7)

1.1.4. Forecasts Developed by *Banco de la República*'s Technical Staff

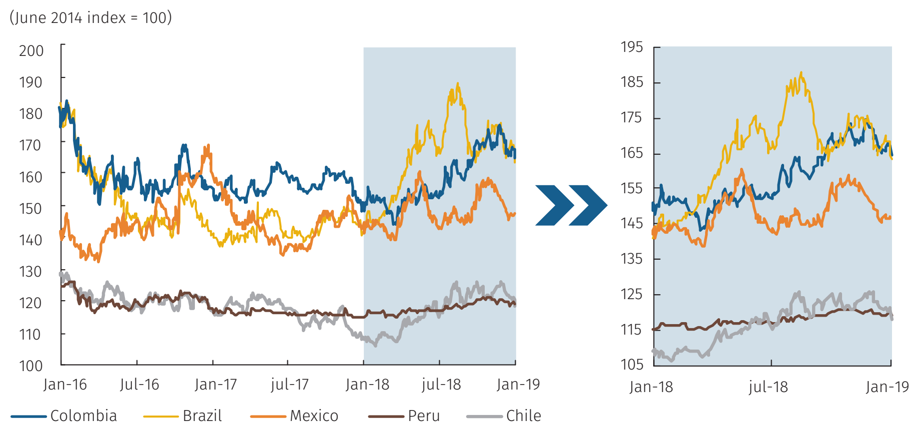
Taking into account the information at hand, the economic growth forecasts for Colombia's trading partners in 2018 and 2019 were revised downward slightly compared to the forecasts in the September edition of this *Report*.

Graph 1.6
Five-year Credit Default Swaps (CDS) for Several Latin American Countries



Source: Bloomberg.

Graph 1.7
Exchange-Rate Index for Several Latin American Countries



Source: Bloomberg.

In the baseline forecast scenario, consumption and investment are expected to still be the driving force of growth in the advance economies. In 2019, growth in these economies is expected to slow gradually to rates that are closer to their long-term levels, in keeping with monetary policies that would continue to be less expansive.

Growth is expected to slow in both the advanced and emerging economies during 2019.

The emerging markets are expected to see more moderate rates of growth in output during 2019 as a result of several factors; namely, reconversion of the Chinese economy towards a model for more sustainable growth, the trade barriers imposed by the United States that affect primarily China, the decline in output in Turkey and in Argentina, and slightly more restrictive terms for external financing. Added to this is the fact that the depreciation observed during the last quarter of 2018 in most of the currencies of these economies, coupled with the appearance of inflationary pressures, have prompted the central banks in some of these countries to raise their monetary policy rates.

This being the case, the forecast for the country's trading partners (excluding Venezuela) is 2.5% annual growth (non-traditional trade weighted) in 2018 and 2.3% in 2019[4] (Graph 1.8), which is even higher than what was observed in 2015 and 2016 (1.9%, on average). The following are the revisions of the individual forecasts in the baseline scenario with respect to the previous report (Table 1.1).

- The forecast for economic growth in the euro zone during 2018 and 2019 was reduced, since the figures at hand were weaker than expected, particularly for some of the largest economies in the bloc (Germany and Italy). In this context, the pace of economic growth in the euro zone is expected to continue to rest on domestic demand favored by terms of credit that would remain expansive, thanks to what is still a very loose monetary policy stance on the part of the European Central Bank (ECB).

Table 1.1
Growth Forecasts for Colombia's Trading Partners

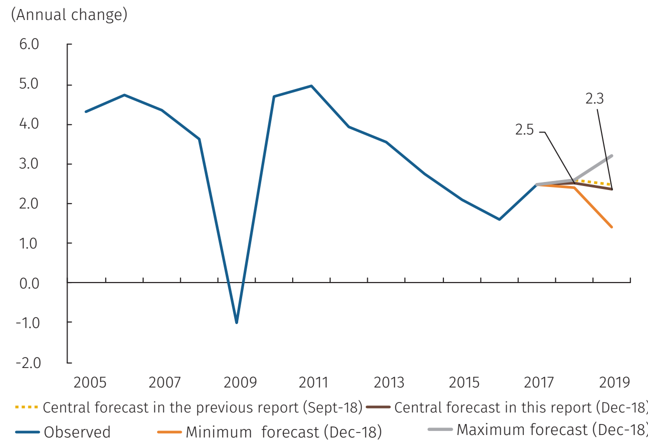
Growth Forecasts for Colombia's Trading Partners	2017	Forecasts for 2018			Forecasts for 2019		
		Scenario			Scenario		
		Minimum forecast	Baseline forecast	Maximum forecast	Minimum forecast	Baseline forecast	Maximum forecast
Main partners							
United States	2.2	2.8	2.9	3.0	1.4	2.5	3.2
Euro Area[a/]	2.5	1.8	1.9	2.0	0.7	1.6	2.2
Venezuela[b/]	-14.0	-17.0	-14.0	-11.0	-11.0	-6.0	-1.0
Ecuador	2.4	0.9	1.1	1.3	-0.7	0.6	2.3
China[c/]	6.8	6.5	6.6	6.7	5.4	6.2	6.7
Other partners							
Brazil	1.1	1.2	1.3	1.4	1.3	2.3	3.4
Peru	2.5	3.7	3.8	3.9	2.5	3.8	5.0
Mexico	2.1	2.0	2.1	2.2	0.8	2.0	3.3
Chile	1.5	3.9	4.0	4.1	2.4	3.4	4.4
Total trading partners (non-traditional trade-weighted)	2.5	2.4	2.5	2.6	1.4	2.3	3.2
Total socios comerciales (ponderado por no tradicionales)	2.0	1.8	2.0	2.2	1.0	2.1	3.1

a/ The fourth-quarter figure for GDP growth in the Euro Zone was published on January 31. This information was part of the set of data used by *Banco de la República*'s Board of Directors to reach a decision on January 31. However, the forecasts outlined in this report do not incorporate that new information.
b/ The 2017 figure for Venezuela is an estimate.
c/ The fourth-quarter figure for China's GDP growth was published on January 20. It was part of the set of data used by *Banco de la República*'s Board of Directors to reach a decision on January 31. However, the forecasts outlined in this report do not incorporate that new information.
Source: Bloomberg and Latin Focus (actual figures); *Banco de la República* (projections and calculations).

4 In the September 2018 report, growth was forecast at 2.6% in 2018 and 2.5% in 2019 for Colombia's trading partners (excluding Venezuela).

- As for Latin America, economic growth declined in Ecuador, Peru, Mexico and Venezuela. This is because commodity prices are expected to be lower, the figures were weaker than anticipated, and political uncertainty in some of these economies and fiscal austerity policies still persist. On the other hand, the forecast for Chile's economic growth was raised in this *Report*, since the indicators at hand suggest economic activity would continue on a solid growth path, supported by buoyant domestic demand.

Graph 1.8
Average Growth of Colombia's Trading Partners (Non-Traditional Trade Weighted)[a/]



a/. These figures pertain to the country's trading partners, in total, with the exception of Venezuela. The lack of information on the Venezuelan economy makes it difficult to forecast its economic growth.
Source: calculations and projections by *Banco de la República*.

In the baseline forecast scenario described here, the Fed is expected to continue its rate hike strategy, given good conditions in the US job market and the positive forces at work for observed and anticipated growth in the United States, beyond that country's potential. However, recent announcements by the Fed concerning the relatively low levels of actual inflation and the limited pressure expected on this front in the future suggest this increase would be less than what was hinted by the announcements in past months.

In particular, this *Report* anticipates an increase of 25 basis points (bp) in the Fed's policy interest rate during 2019 (two basis points less than what was forecast in the September report). So, by the end of the year, it would be somewhere within a range of 2.50% to 2.75%. Added to this would be the balance-sheet reduction program, which apparently would continue to be carried out in accordance with what was announced. In the case of the ECB, no increase in its policy rate is anticipated before the first half of 2019. On the other hand and as announced, the ECB finalized its asset purchase program in December and stated that the reinvestment of maturing securities would continue for quite some time.

This scenario assumes the gradual normalization of monetary policy in the advanced economies has a moderate impact on the perception of risk and the cost of financing for economies such as the one in Colombia, which have been prudent in the way they have managed foreign indebtedness in the recent past. Accordingly, it is assumed Colombia's risk premium will increase gradually. Although, in keeping with the reduction in the forecast for oil prices and growth of the country's trading partners, this increase would be somewhat faster than previously anticipated.

The decline in the price of oil to more sustainable levels happened quicker than expected due to the strength of world supply and weaker demand.

The baseline scenario does not consider the negative effects the federal government shutdown at end of 2018 and the beginning of 2019 might have on the US economy. Nor does it contemplate the United Kingdom exiting from the European Union without an agreement (hard Brexit) or the impact an extension of those negotiations might have on investment.

As for raw materials, the forecast for the price of oil in 2019 was reduced in this *Report* (Table 1.2), given the lower prices observed in recent months, the rise in production and in global inventories (particularly in the United States), and weaker prospects concerning the global demand for crude oil. Accordingly, an average price of USD 63 per barrel (Brent reference) is expected for 2019. This implies a slight increase compared to the price levels observed in the first weeks of the year (USD 59, 96 per barrel, on average, up to January 31).

Table 1.2
Benchmark Price Forecasts for Colombia's Commodity Exports

	2018	Forecasts for 2019 Scenario		
		Minimum forecast	Central forecast	Maximum forecast
Brent crude (dollars per barrel)	71.6	52	63	77
Coal (dollars per ton)	85.8	67	81	91
Colombian coffee (*ex dock*) (dollars per pound)	1.37	1.2	1.4	1.6
Gold a/ (dollars per troy ounce)	1,269	1,500	1,270	1,100

a/ This is assumed to be a haven value, because the price of gold increases when there is more uncertainty (a pessimistic scenario).
Sources: Bloomberg; calculations by *Banco de la República*.

The baseline scenario for the international context faces mainly downside risks. Concerns about the duration of the current expansive phase of the global economy have increased recently, and the possibility of a sharp economic slowdown within a little over a year is now greater. Added to this is the growing concern about the high levels of global debt being registered, particularly by the United States and China. This likely downward cycle also could be reinforced by the adoption of protectionist measures on the part of the United States and other countries, by a resumption of the partial shutdown of the US federal government with subsequent effects on economic activity, by more of a slowdown in the Chinese economy than what is contemplated, and by an eventual uncertain outcome for Brexit, among other factors. Moreover, a bigger drop in oil prices, coupled with higher sovereign risk premiums, cannot be ruled out in this environment.

1.2 Balance of Payments

1.2.1 Results for the Third Quarter of 2018

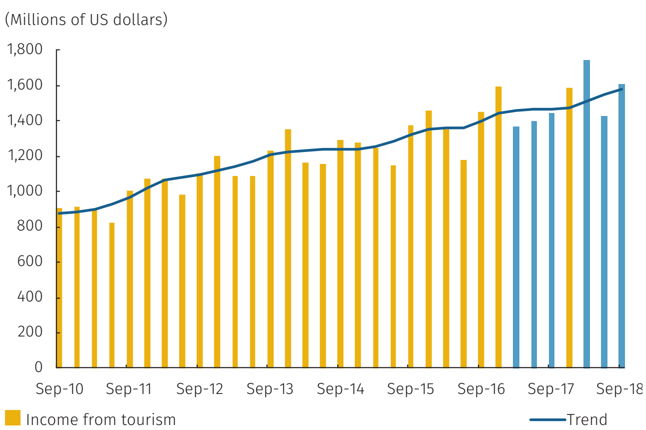
The current account in the country's balance of payments of the country registered a deficit of USD 9,019 m between January and

September 2018, which is slightly higher than a year ago, when it stood at USD 8,850 m. However, as a proportion of GDP, this was 3.6%, which meant a reduction of 0.3 pp as opposed to the 3.9% observed for the same period in 2017.

Compared to a year ago, what stands out is the increase in net factor income outlays (USD 2,171 m). This expansion was offset partly by the decline in the trade deficit for goods (USD 1,141 m) and, to a lesser extent, by the increase in net income from current transfers (USD 654 m).

The reduction in the goods trade deficit was due to export growth in the amount of USD 4,309 m (15%), which offset the rise in imports (USD 3,168 m, 9.6%). The increase in external sales occurred in an environment of higher prices for commodities, especially oil and coal. In addition, sales of industrial products posted higher levels than a year ago (8.8%), in keeping with the added growth for Colombia's main trading partners. On the other hand, the increase in imports was explained by the generalized growth in several items, especially input and capital goods for industry.

Graph 1.9
Income Associated with what Foreigners spend on Travel in Colombia[a/]



a/ Includes income associated with the travel category and passenger air transportation reported under non-factor services.
Source: DANE; calculations by *Banco de la República*.

The service account deficit was down by USD 207 m during that same period. On the export side, the increase in revenue from tourism stands out, having risen 13.4% annually (Graph 1.9), while sales of other services were an important factor as well. When it comes to imports, the largest expenditures were associated with imports of transport services, travel expenses and insurance payments.

The rise in net factor income outlays during the course of 2018 up to September is attributed on the one hand to higher profits for firms with foreign investment in the country, especially those in the oil and mining sector and, on the other, to higher interest payments associated with loans and foreign debt securities.

New current transfers rose 13.8% annually, thanks largely to the growth in worker remittances. With respect to this last item, the most important increases were observed in remittances sent from the United States, Spain and some Latin American countries.

As for external financing, net outflows of capital came to USD 8,800 m during 2018 to September, which is higher than a year ago, when they stood at USD 8,313 m. Net direct investment during this period amounted to USD 5,371 m, accounting for nearly 60% of the net external financing received by the country. FDI received during this period breaks down as follows in terms of economic activity: mining and oil (37.0%), financial and business services, 22.4%; transport and communications, 14.5%; commerce and hotels, 11.1%; the manufacturing industry, 3.9%; and all other sectors, 11.1%

Better terms of trade for Colombia contributed to the reduction in the trade deficit between January and September 2018.

In terms of portfolio investments, the country registered USD 482 m in foreign capital inflows, while constituting USD 1,840 m in foreign financial assets. The funds that were received originated with TES purchases by foreign investors, making it possible to offset, in part, the amortization payments for long-term debt securities and the exit of foreigners from the stock market.

As for other capital flows, the country registered USD 5,268 m in net inflows during the year up to September, mainly because of loans contracted with commercial banks and multilateral entities from abroad. During the period being analyzed, international reserves for balance of payments transactions increased by USD 480 m, due to the net return on the portfolio. By September 2018, the balance of Colombia's net international reserves came to USD 47,512m; by December, this figure was USD 48,393m.

1.2.2 Forecasts

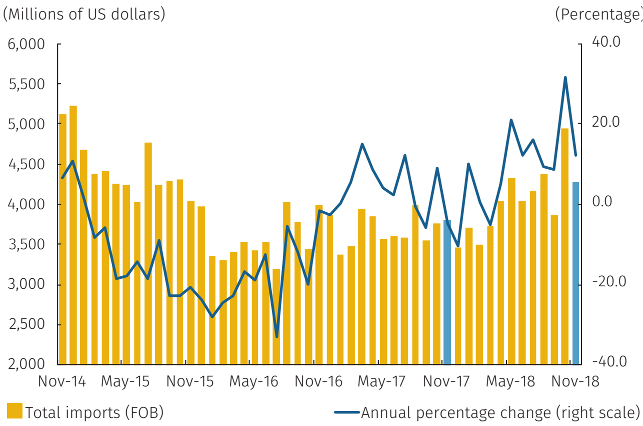
1.2.2.1 Estimate for the Fourth Quarter of 2018

The fourth-quarter 2018 figures for the external balance suggest a halt in its adjustment. Base on the information at hand, this *Report* forecasts a current account deficit in the fourth quarter of 2018 that exceeds the average observed in the last four quarters, both in dollars and as proportion to GDP. This would have been close to 3.9% in terms of GDP, which is two pp higher than a year ago. The low deficit observed in the fourth quarter of 2017, thanks to the increase in oil and coal exports during that period, is worth noting, as is the drop in imports of goods.

With regard to foreign trade in goods, the available data show that free-on-board imports (FOB) were up by USD 1,652m (21.8%, in annual terms) during the October-November period, thanks to a general increase in the different product groups (Graph 1.10) (see shaded section on page 24). Total exports increased by USD 763m (12%) during this period, compared to the previous year (Graph 1.11), mainly because of an increase in the exported value of oil and its derivatives. It is important to bear in mind that the average price of oil for the Brent reference was USD 73.7 per barrel during October-November, which is higher than the price observed during the same period a year ago.

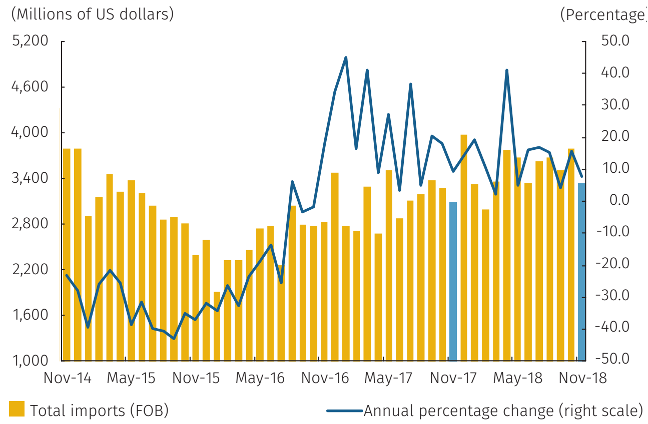
The information available for the fourth quarter of 2018 indicates the current account deficit would have increased throughout all of 2018.

Graph 1.10
Total Imports of Goods (FOB)
(Monthly)



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

Graph 1.11
Total Exports of Goods (FOB)
(Monthly)



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

Exports and Imports of Goods, in US Dollars, during October-November 2018

In November 2018, total exports of goods rose 7.9% in annual terms (Graph 1.11). Growth during the October-November period was 12.0%, supported mainly by the increase in mining exports, which contributed 12.2 pp to the total variation. On the other hand, non-traditional exports grew by 1.2% in annual terms, while agricultural exports declined by 5.0% (Table A).

Up to November, the average international price for mining exports during the period in question continued to drive sales in that sector.[1] The increase in crude oil and refining exports stands out, having grown 23.1% and 71.0%, respectively, compared to the same two-month period in 2017, and contributing 11.2 pp to the variation in total exports during the period (Table A).

In November, non-traditional exports were down 2.7% in annual terms (Graph A). However, they grew 1.2% during October-November, compared to the same two-month period a year ago. This outcome is due largely to better performance in terms of external sales to the United States (18.6%) and Ecuador (11.5%), which contributed 4.8 pp to the annual change in non-traditional exports (Table A). On the contrary, there were fewer exports to rest of the Aladi zone,[2] México, Asia, Venezuela and the European Union. As for exports to the United States, which is Colombia`s main trading partner, the growth in non-traditional exports during November came to 18.3% in annual terms (Table A). Although high, this pace is less than the share observed in previous months (Graph B).

1 The price index for exported mining products rose 18.6% during the two-month period from October to November 2018 compared to the same period in 2017. The same index increased 34.3% during August-September.

2 The Latin American Integration Association (Aladi), with Venezuela, Ecuador, Peru and Mexico.

Table A
Exports and Imports of Goods, in Dollars, during the Two-month Period from October to November 2018 (FOB)
(Percentage)

Group	Annual change	Contribution to the annual change	Items making important contributions to the annual change		
			Item	Annual change in the item	Contribution to the annual change
Total exports	12.0	12.0			
Mining goods	20.4	12.2	Crude oil	23.1	7.2
			Oil refining and others	71.0	4.0
All other exports[a/] (Non-traditional exports)	1.2	0.3	Rubber and plastic	22.9	0.4
			Food and beverages	3.3	0.2
			To the United States	18.6	3.1
			To Ecuador	11.5	1.7
			To all other destinations	4.3	0.8
Agricultural goods	-5.0	-0.6	Coffee	-7.4	-0.5
			Flowers	-2.3	-0.1
			Bananas	-1.6	0.0
Total imports	21.8	21.8			
Capital goods	27.3	8.6	Transport equipment	72.3	5.2
			Capital goods for industry	14.9	3.1
Intermediate goods	18.8	8.1	Raw materials for industry	18.8	6.2
			Fuel	23.6	1.6
Consumer goods	20.3	5.1	Durable goods	34.2	3.8
			Non-durable goods	9.5	1.4

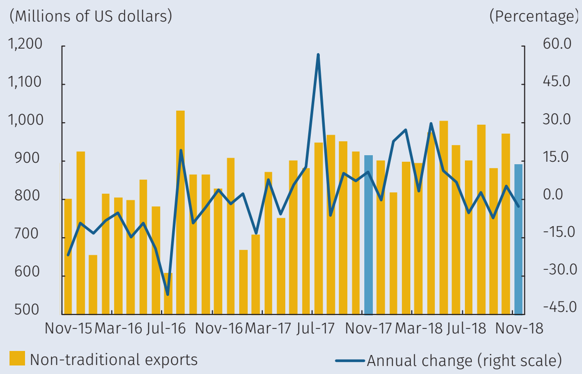
a/ This group does not include petroleum or derivatives thereof, nor does it include coal, nickel-iron, gold, coffee, bananas or flowers. However, it does include other mining and agricultural goods. Most are manufacturing exports.
Source: DANE; calculations by *Banco de la República*.

As for traditional agricultural exports during October-November, foreign sales of flowers, bananas and coffee contracted 2.3%, 1.6% and 7.4% in annual terms (Table A). The total change in exports with respect to this group of goods (-5.0%) is explained by a 6.7% drop in the price index, which was offset partly by a 1.7% increase in export volume.

FOB imports rose 12.6% during November, in annual terms (Graph 1.10). Intermediate goods contributed the most to total imports (4.7 pp) (Graph C), propelled by foreign purchases of raw materials for industry. The two-month period from October to November saw growth in all groups of goods, with an annual increase of 21.8% in total imports. The largest contribution came from capital goods (8.6 pp), driven mainly by the added momentum in imports of transport equipment (72.3%) (Table A).

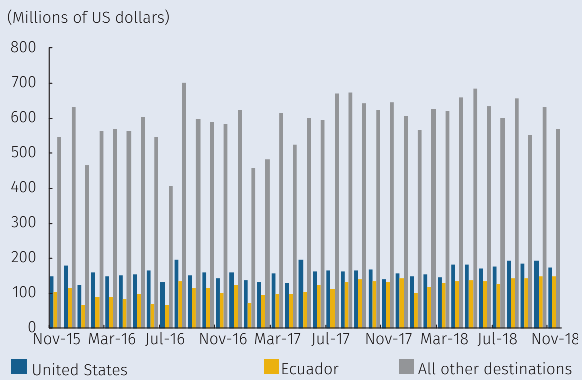
Within the group of intermediate goods, which expanded by 18.8% in this two-month period, raw materials for industry were the item that contributed the most (6.2 pp), followed by fuel (1.6 pp) and raw materials for agriculture (0.3) (Table A).

Graph A
Non-Traditional Exports[a/] (FOB)
(Monthly)



a/ Excludes petroleum and derivatives thereof, coal, nickel-iron, gold, coffee, bananas and flowers. However, it does include other mining and agricultural products. Most are manufacturing exports
Source: DANE; calculations by *Banco de la República*.

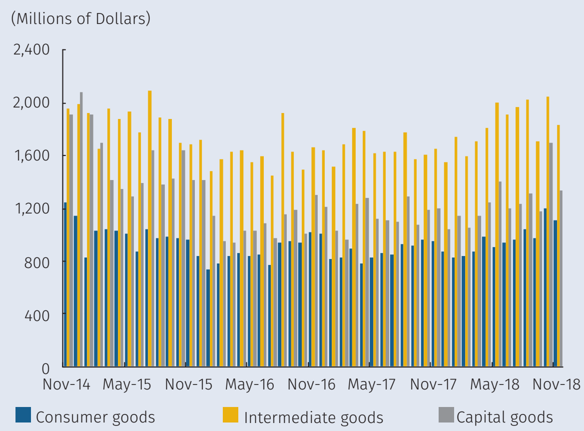
Graph B
Exports of Non-traditional Goods by Destination: United States, Ecuador and All Others[a/] (FOB)



a/ Excludes petroleum and derivatives thereof, coal, nickel-iron, gold, coffee, bananas and flowers. However, it does include other mining and agricultural products. Most are manufacturing exports.
Source: DANE; calculations by *Banco de la República*.

As for consumer goods, imports of non-durables rose 9.5%, supported by purchases of food, pharmaceuticals and clothing. On the other hand, imports of durable goods were up 34.2%, a recovery that is explained mainly by the increase in the category pertaining to transport vehicles (Table A).

Graph C
Imports by Type of Goods (FOB)
(Monthly)



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

On the other hand, the fourth-quarter deficit in non-factor services is expected to be somewhat similar to the one on record for the same period a year ago, while the factor income deficit is expected to rise. The latter is due to the increase in interest payments on loans and debt securities and to higher profits earned by companies with foreign capital in sectors other than mining and oil.

In terms of capital flows, it is estimated that FDI in the fourth quarter of 2018 would have been similar to what was observed during the same period in 2017, thanks to resources received by sectors other than mining and oil, given the favorable outlook for the Colombian economy. On the other hand, the available data on capital flows in the foreign exchange balance show an annual drop in resources for foreign portfolio investment in the private sector between October and December. Added to this are the resources from foreign loans contracted with multilateral banks, especially loans obtained by the government and other entities in the public sector.

1.2.2.2 The Estimate for all of 2018 and 2019

The forecast exercises developed for this *Report* indicate the current account deficit, in terms of GDP, would have increased throughout 2018 compared to what was observed in 2017. Given the most likely scenario, the current deficit in 2018 would be around USD 12,390 m, which comes to 3.7% of GDP (Table 1.3). The larger deficit in this case would be explained by an increase in the growth rate for current expenditures, in contrast with the slowdown in income.

Most of the growth in the current deficit during 2018 would have been due to the increase in net factor income outlays, given the rise in profits for foreign companies operating in the mining-energy sector. This would be in line with the increase in export prices for the sector in the average for the year. Companies that operate in the other sectors also are expected to see better profits, given the forecast for further economic growth. Added to this would have been the increase in interest payments on the foreign debt, due to the higher debt level and the rise in foreign interest rates.

With regard to 2018 as a whole, it is estimated the trade balance for goods would have continued to show a deficit, even somewhat higher than in 2017. The good performance in terms of exports, favored by added foreign sales of the major products and, to a lesser extent, by exports of industrial goods, would have been offset by the sizeable rise in imports, especially during the second half of the year. The increase in export value would have been fueled mostly by the relatively high level of international prices for oil, which continued until mid-November, and by the effect of the recovery in the external demand for Colombian manufactured goods.

The service deficit is expected to be lower in 2018 than in 2017. On the revenue side, income would have been driven mainly by the larger inflows associated with tourism. On the other hand, expenditures would have increased due to more spending on travel by Colombians abroad and to higher shipping costs.

In the most likely scenario, the current deficit for 2018 would be around 3.7% of GDP.

Lastly, net income from transfers is expected to be higher during the year as a whole, particularly due to the momentum observed

Table 1.3
Balance of Payments
Annual Flows (Millions of US dollars)

	2014	2015	2016 (pr.)	2017 (pr.)	2018 (proj.)	2019 (proj.)
Current account (A+B+C)	-19,762	-18,564	-12,025	-10,508	-12,390	-13,165
Percentage of GDP	-5.2	-6.3	-4.2	-3.3	-3.7	-3.9
A. Goods and services	-11,863	-18,267	-12,680	-8,715	-9,085	-11,672
B. Primary income (factor income)	-12,521	-5,727	-5,225	-8,389	-10,870	-9,846
C. Secondary income (current transfers)	4,622	5,430	5,880	6,596	7,565	8,353
Financial account (A+B+C+D+E)	-19,290	-18,243	-12,275	-9,856	-12,170	-13,165
Percentage of GDP	-5.1	-6.2	-4.3	-3.1	-3.6	-3.9
A. Direct investment (ii-i)	-12,268	-7,505	-9,333	-10,267	-7,847	-7,723
i. Foreign investment in Colombia (FDI)	16,167	11,723	13,850	13,956	11,622	11,769
ii. Colombian investment abroad	3,899	4,218	4,517	3,690	3,775	4,046
B. Portfolio investment	-11,565	-9,166	-4,839	-1,618	-1,484	-892
C. Other investment (loans, other types of lending and derivatives thereof)	106	-1,988	1,731	1,484	-3,910	-6,129
D. Reserve assets	4,437	415	165	545	1,070	1,579
Errors and omissions (E & O)	472	321	-251	652	219	0

Observation: The results presented in this table follow the recommendations outlined in the sixth edition of the Balance of Payments Manual proposed by the IMF. For additional information and changes in methodology, see http://www.banrep.gov.co/balanza-pagos
(pr.) preliminary
(proj.): projected
Source: *Banco de la República.*

in the global economy, especially in the United States and the euro zone (see Section 1.1 in this chapter).

In terms of capital flows, it is estimated that direct investment during all of 2018 would have been the main item with respect to the entry of foreign capital. In addition, more loans (net disbursements) are expected to be contracted with multilateral lenders and foreign banks, in contrast to net amortizations in 2017 (Table 1.3). With respect to the investment portfolio, the baseline scenario for 2018 involves fewer bonds placed on the market by the public sector and less momentum in terms of foreign participation in the TES market.

As for 2019, the momentum in oil and coal exports during 2018 is expected to dissipate. This is in line with the decline in export prices, as explained in the first section of this chapter. Likewise, growth in external sales of industrial goods is expected to be more moderate, in the context of a slight slowdown in the growth of Colombia's main trading partners and less momentum in world trade.

The growth rates for imports of goods in 2019 would remain positive, although below the levels observed in 2018.

The setback in export prices and in the momentum in domestic demand anticipated for 2019 would be reflected in a higher external imbalance.

This is consistent with a domestic demand that would increase more than GDP, mainly because of the recovery in private investment. The result would be higher imports, particularly in the form of input and capital goods for industry.

Less export income for oil companies with FDI should translate into fewer profits attributed to factor income. An increase in revenue from Colombian investments abroad is forecast as well. On the other hand, the service deficit would continue to decline, thanks to growth in these exports, especially the income associated with tourism. The fact that the international price of oil is lower would reduce shipping costs and lower the cost of contracting technical services in the petroleum sector. Finally, income from remittances would continue to contribute positively to reducing the external imbalance.

Accordingly, the current account deficit forecast for 2019, in the baseline scenario, is USD 13,165 m (3.9% of GDP) (Table 1.3).

With respect to financing, flows for "other types of investment" are expected to increase in 2019, originating with the liquidation of foreign assets and, to a lesser extent, with the contracting of new debt. A similar level of FDI flows is anticipated, driven by resources destined for sectors other than oil and mining, and TES purchases by foreigners would continue, although at a slower pace.

Lastly, *Banco de la República* currently maintains a program to accumulate international reserves through auction sales of put options. These auctions are contingent in nature, held monthly and their amount is announced only at the moment they are convened. The current balance-of-payments forecast considers only the purchases made in January 2019.

Box 1
Determinants of oil price and prospects for 2019

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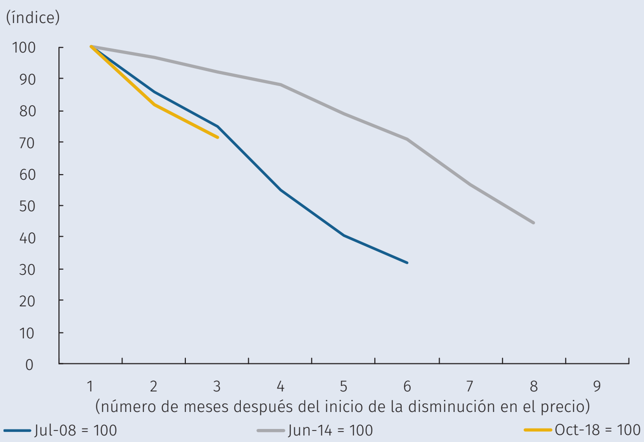
Carlos Daniel Rojas
Edward Gómez Beltrán*

In 2018, there were wide volatility and sudden changes in oil prices[1]. The price of crude oil reached records that had not been observed since 2014, reaching a peak in October of USD 86 per barrel before collapsing to USD 50 in December, which meant a 29% decrease in the average monthly price of oil (Figure B1.1) This fall took place despite the fact that during much of the year the climate of the crude oil market versed on factors that exerted upward pressures such as the expectations of possible sanctions to Iran, the acceleration of the decline of the production in Venezuela, and the discipline by the OPEC countries and their allies to balance the market.

Graph B1.1
Disminuciones pronunciadas recientes del precio del petróleo (Brent)



Source: Bloomberg.

In this sense, understanding the causes behind the movements in the price of oil is important to determine how transitory or permanent they can be, and to what extent they are reflected on market expectations. This should result in better medium-term forecasts. With this purpose in mind, this box analyzes the historical determinants of the price of oil, with emphasis on the most recent situation and the prospects for 2019.

1.1 Historical decomposition of the price of oil

The present work uses the methodology developed in the seminal document by Kilian (2009). In this document, the author proposes a model of autoregressive vectors with a structural specification that allows to identify supply and demand shocks that affect the oil prices. Although the original framework has shown difficulties to explain the movements of recent years (Davig *et al*., 2015), possibly due to the omission of variables that reflect changes in expectations regarding future supply or demand, the econometric technique continues to be widely used in the academic literature, partly because it allows to synthesize the joint effects of macroeconomic aggregates and the price of crude oil.

Useful approaches to select and classify the key determinants in the price of oil can be found in the works by Barsky and Kilian (2002, 2004), Kilian and Murphy (2014), Hamilton (2014), and Fueki *et al*, (2018), among others. On the supply side, a separate oil production between OPEC and non-OPEC is used, along with a series of inventories by the OECD as a *proxy* of their world levels. The first two variables account for the *flow* in production and decision-making processes of country blocs, while the inventories help to synthesize the expectations about the future supply given that oil is a storable commodity. On the demand side, the production of steel as a *proxy* of the economic dynamics is considered, particularly the demand for industrial raw materials (Kilian and Zhou, 2018), besides the price of copper and the nominal exchange rate of the US dollar as indicators of contemporary and future global demand (Hamilton, 2014).

Graph B1.2 presents the historical decomposition for the Brent oil price using the technology described and considering a single lag in the autoregressive vectors. The graph shows the difference in the real price versus a stochastic trend[2] (which we will call *oil gap*), in the last eight years,

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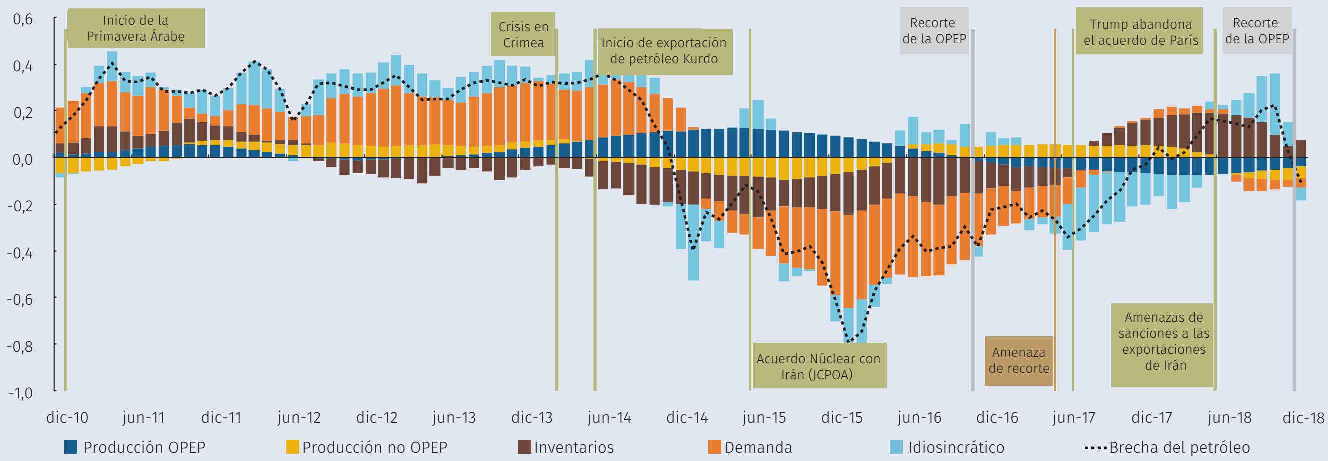
1 The volatility indicator for oil prices (Vstoxx Oil) in 2018 reached values not seen since three years ago; in November 2018, it reached a maximum value of 65.

2 To obtain the stochastic trend, we used the filter by Christiano and Fitzgerald (2003), considering only the real oil price in cycles of over twenty years (Brent price deflated by the CPI in the United States). For a more detailed classification of the cycles in commodity prices, see Zellou and Cuddington (2012), and Erten and Ocampo (2013).

Graph B1.2
Descomposición histórica del precio del petróleo (Brent)
(diciembre de 2010 a diciembre de 2018)

(puntos porcentuales)



Nota: los eventos destacados corresponden a eventos geopolíticos y a los anuncios de recorte por parte de la OPEP.
Sources: Bloomberg, EIA, FRED y Datastream; cálculos propios.

along with its decomposition by the shocks mentioned above and idiosyncratic innovation in the market. The latter accounts for specific factors different from those of supply and demand considered, such as expectations associated to events at the moment.

1.2 What is there behind the latest movements?

This historical decomposition allows to perform at least two types of analysis: one that reflects the effects of each shock at a certain period, which is shown in Graph B1.2, and another that enables to learn about the contributions of these shocks to the movement of this *gap* between certain dates. Graph B1.3 adopts this latter perspective to explain the contributions of the shocks in each of the quarters of 2018.

Thus, the increase in the price of oil observed at the beginning of 2018 was the result—to a large extent—of the reduction of inventories[3], which fell as a response to a more restricted global supply affected by the OPEC agreements and by the political situations in Libya, Venezuela, and Iran. Added to the above was the good performance of demand due to the good economic dynamism observed in the world, and to the increased consumption of fossil fuels in the United States due to the winter.

In the second quarter, oil prices continued to increase amidst the announcement by the United States of the restoration of sanctions on Iran, following its departure from the Joint Comprehensive Plan of Action, besides the announcement by the OPEC to extend the cuts agreed upon in 2016 until the end of 2018, and the fall of production in Venezuela. However, oil production outside the OPEC block pressed down the prices, partly due to a higher growth rate of shale production in the United States[4].

However, the greatest fraction of the price rally was due to the positive contribution of the idiosyncratic factor in the second and third quarters of the year. This shock, not residing in the fundamental factors, synthesizes the junctural expectations of the market. Particularly, the consequences of sanctions on Iran, the acceleration in the fall of the production in Venezuela, and the decrease of inventories in the United States generated expectations of a rebound in the price of crude oil. This optimism of the markets was reflected in analysts' projections and futures contracts for the last quarter of 2018, which reached USD 76 and USD 72 per barrel, respectively, in September (Table B1.1). Thus, the expectations of higher prices were the ones which led, largely, the increase in the price of oil, outperforming all other structural factors that suggested decreases for the third quarter, instead of the increase observed.

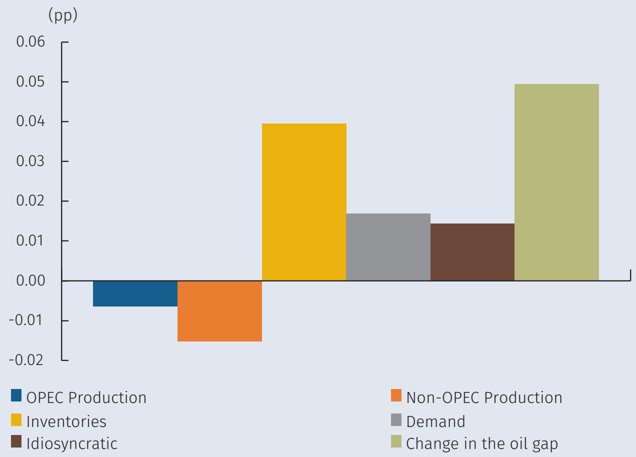
The collapse of the price in the fourth quarter originated in a combination of supply and demand factors, along with the reversal of the market expectations and its consequent reactions on financial markets. A higher supply after the initial decision by Saudi Arabia, Russia, and other producers to offset potential losses of oil from Iran, Libya, and Venezuela, along with a good pace of growth in oil production in the United States, the accumulation of inventories,

3 According to the Energy Information Administration (EIA), the average commercial inventories of oil by the OECD (excluding strategic reserves) fell in the first quarter of 2018 to 2,807 million barrels, having recorded 2.96 million barrels in 2017.

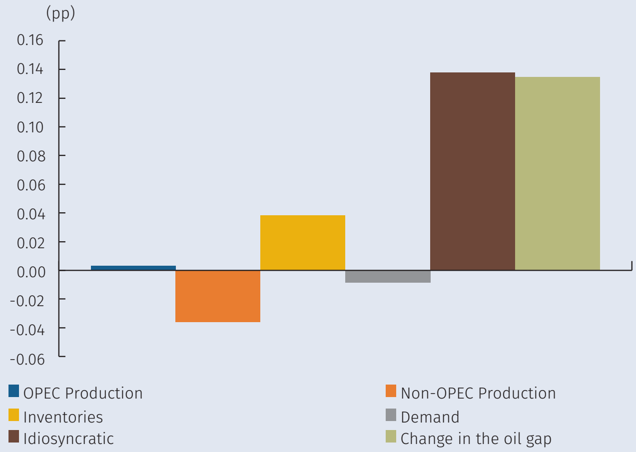
4 Oil production in the United States increased, on average, at a 16% rate in the second quarter of 2018, higher than in the fourth quarter of 2017 (12.8%).

Graph B1.3
Contributions of each estructural shock to the change accumulated for the oil gap.

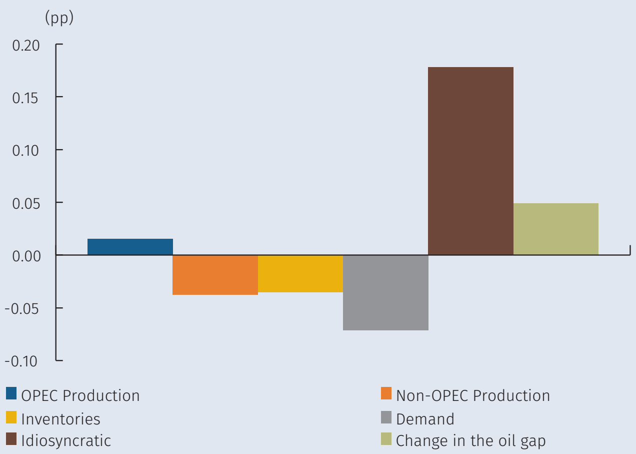
A. First Quarter of 2018



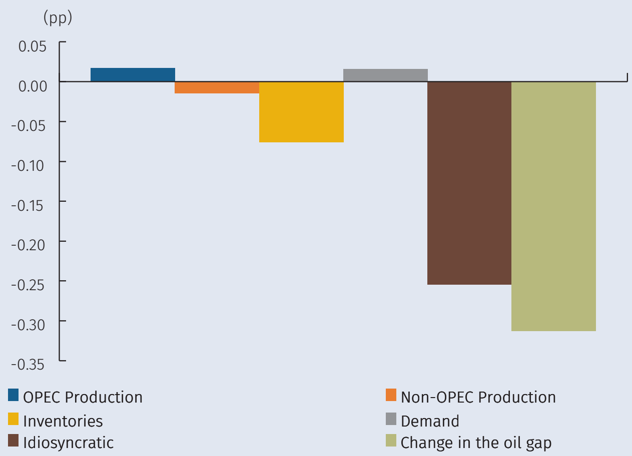
B. Second Quarter of 2018



C. Third Quarter of 2018



D. Fourth Quarter of 2018



Sources: Bloomberg, EIA, FRED, and Datastream; calculations by the author.

Table B1.1
Oil (Brent) Price Forecasts for the fourth quarter of 2018

Date	Analysts' Forecasts	Futures Contracts
Dec-17	57.9	58.8
March-18	63.2	64.0
June-18	66.6	72.5
Sept-18	72.1	75.6
Average Price observed to the Fourth Quarter	68.6	

Note: Analysts' forecasts correspond to the median of Bloomberg, and those of futures contracts correspond to the average of contracts..
Source: Bloomberg.

and the relaxation of sanctions on Iranian crude exports contributed to the downside. Added to the above were the increased concerns regarding global economic growth that resulted in weaker demand prospects, which could lead to a possible future oversupply in the oil market. All this contributed to the adjustment of the price to more sustainable levels consistent with the current state of supply and demand (Figure B1.2).

1.3 Prospects for 2019

As stated before, besides supply shocks and structural demand shocks, the price of oil may be influenced by idiosyncratic shocks, which itself represents an additional difficulty in the price forecast exercise. However, supply and demand flows are factors that might suggest sustainable levels of oil prices. Here are the prospects for these two variables in 2019 and their possible effects on the price of oil.

On the supply side, the good performance in production would continue, especially in the United States. Particularly, the revolution in crude oil production from shale turned the United States into the world's largest oil producer. This has resulted to a large extent from the increase in its efficiency[5]. This should be taken into account because, although the minimum price at which investments are profitable varies among American fields, the Permian Basin enjoys the lowest minimum price and has better infrastructure, with estimates that set this price within a range between USD 45-50 per barrel. However, the current restrictions on the capacity for crude oil transportation from production areas in Texas and Oklahoma are expected to persist until the middle of 2019[6], although an earlier-than-expected improvement in logistics can positively impact oil supply.

The evolution of the cut agreement by the OPEC and its allies reached on 7 December 2018, along with the supply reduction by other member countries (e.g. Iran, where the exemptions granted to eight oil-consuming countries from this country are not expected to continue after May 2019), could counterweight global oil supply. Added to this, there could be a further fall in oil production in Venezuela plus the planned reduction of production in Canada.

On the demand side, as shown in chapter 1 of this *Report*, the growth prospects of global economy have deteriorated with a declining risk balance. According to the IMF, global economy would expand in 2019 at a pace of 3.5%[7], which would imply a decrease compared to 2018 (3.7%). This weakening of the economic activity and its impact on global demand for *commodities* have resulted in a downward revision of the projections by some specialized agencies[8]. However, the forecasts still show no consensus on what effect prevails over growth of crude oil demand, whether global growth or lower prices that would stimulate oil consumption[9].

Table B1.2 presents analysts' forecasts of international oil prices, which reflect, to some extent, the information described earlier. In general, a decline in oil prices is projected for 2019 *vis-à-vis* the average observations for 2018, in line with the forecast of the average price by the technical staff for this *Report* (USD $63 per barrel). It is likely that the daily and monthly prices vary versus this forecast while there are still risks regarding economic growth, not to mention potential geopolitical events that may affect price dynamics.

Thus, oil prices are expected to recover slightly versus the data from December 2018 (USD $57 per barrel), on account of the cut agreement by the OPEC and its allies, the planned reduction of production in Alberta (Canada), and the full implementation of sanctions on Iranian crude oil. However, this reduction in supply would be offset largely by the strength of oil production in the United States, which, added to a weaker global demand, would result in a lower average price level than observed in 2018 and more sustainable than the one estimated in the previous Report.

5 Before 2014, producers required 1,600 platforms to produce nine million barrels per day. Current levels could be sustained with half of those platforms (IIF, 2018).

6 Particularly, the EIA forecasts that the differential between Brent and WTI be USD $6 per barrel in 2019, and that it reduces to USD $4 per barrel in 2020.

7 At the same time, this growth rate implies a downward revision of 0.2 pp *vis-à-vis* the October 2018 Report.

8 In its January report, the EIA projected global crude oil demand for 2019 at 101.45 million barrels per day, less than the figure projected in its previous report (101.54).

9 The International Energy Agency (IEA) expects an acceleration in the annual growth rate for global crude oil demand in 2019 of 1.4% (1.3% in 2018), while the Institute of International Finance (IIF) forecasts a slowdown in 2018 from 1.3% to 1.1% in 2019.

Table B1.2
Analysts' Oil Price Forecasts for 2019 and 2020.

Reference	Observed in 2018	Forecast		
		Institution	2019	2020
Oil	68.6	FMI	58.95	58.74
		World Bank	67	67
Brent	71.6	EIA	61.03	62
		Bloomberg[a/]	66.87	70
		IIF	67	n/a
WTI	64.8	EIA	54.79	58
		Bloomberg[a/]	60.47	63
		IIF	59	n/a

n/a: Not available.
a/ Corresponds to the median of analysts' forecasts to 31 January 2019.
Note: the IMF's forecast corresponds to the combination of Brent, Dubai, and WTI.

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02

Domestic Growth: Current Situation and Short-term Outlook

During the third quarter, the Colombian economy grew at a similar pace as had been registered in the first half of the year.

This occurred in a context where domestic demand performed better than expected, mainly due to added investment in construction.

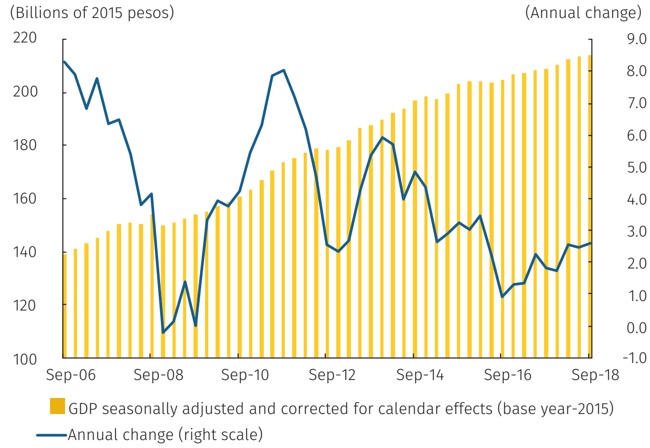
The information available for the fourth quarter points to growth slightly above what was registered in the three previous quarters. The positive shocks to domestic demand observed in past quarters would have faded in the latter part of 2018..

2.1. GDP Performance during the Third Quarter of 2018

According to the results published by the National Bureau of Statistics (DANE), GDP rose 2.7% in annual terms during the third quarter of the year with respect to its original series, and 2.6% annually in the seasonally adjusted series corrected for calendar effects (Graph 2.1). This last figure, which better reflects the growth trend in the economy, coincided with the central point of the forecast range presented by *Banco de la República*'s staff in the last *Inflation Report* (between 2.1% and 3.1%, with 2.6% being the most likely outcome). Between quarters, GDP rose by 0.9%, which corresponds to 3.8% annualized growth.

Although *Banco de la República*'s forecast for the aggregate was correct, a look at the components of economic growth shows a somewhat different situation than expected. Specifically, domestic demand (measured as the sum of total consumption and gross capital formation) accelerated more than anticipated, mainly because of an unexpected boost in investment that exceeded what was contemplated last quarter. Total consumption also contributed positively to the expansion in GDP, more so than was forecast, in terms of both its private and public components. In contrast, exports tended to slow down, exhibiting less momentum than was implied in forecasts. Therefore, the contribution of net exports to growth was more negative than expected. This, in turn, offset the improvement in performance with respect to absorption (Table 2.1).

Graph 2.1
Gross Domestic Product
(Seasonally Adjusted and Corrected for Calendar Effects)



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

Table 2.1
Real Annual GDP Growth, by Type of Expenditure (Seasonally Adjusted and Corrected for Calendar Effects, Base year-2015)

	2017				2017	2018		
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.	Full year	I Qtr.	II Qtr.	III Qtr.
End consumption expenditure	1.8	2.3	2.6	2.2	2.2	2.9	3.2	3.6
Household consumption	1.7	1.6	2.1	1.6	1.8	1.9	2.9	3.3
Non-durable goods	0.4	1.3	3.3	2.9	2.0	4.2	4.5	3.7
Semi-durable goods	-1.3	-4.1	-3.2	-0.8	-2.4	0.1	3.0	3.4
Durable goods	0.0	1.4	4.6	-3.0	0.7	5.9	4.0	2.0
Services	3.1	2.6	1.9	1.6	2.3	1.8	2.4	2.4
End government consumption	2.5	4.2	4.8	4.5	4.0	6.6	5.0	4.6
Gross capital formation	-2.5	-1.2	3.5	2.8	0.6	-3.0	1.0	4.5
Gross fixed capital formation	0.6	7.0	4.3	1.5	3.3	-2.0	-1.0	4.0
Housing	9.3	6.5	-0.4	-9.5	1.2	-5.8	1.8	1.5
Other buildings and structures	2.1	1.7	0.5	-3.1	0.3	-6.3	-4.4	2.1
Machinery and equipment	-5.6	-1.7	1.9	-2.2	-2.0	4.9	3.7	4.9
Cultivated biological resources	7.9	-11.1	-5.0	7.1	-0.6	-4.7	1.2	5.5
Intellectual property products	4.7	14.6	18.7	20.7	14.6	6.1	4.4	2.2
Domestic demand (consumption + investment)	0.8	1.5	2.8	2.3	1.9	1.6	2.8	3.8
Total exports	-4.2	2.3	3.5	-4.1	-0.7	-0.3	2.5	1.6
Total imports	0.2	4.2	0.1	-3.2	0.3	-1.5	4.8	5.4
GDP	1.3	2.2	1.8	1.7	1.8	2.6	2.5	2.6

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

As for gross fixed capital formation (GFCF), one of the highlights witnessed during the third quarter of the year was the better-than-expected performance of investment in construction. A positive shock to home building was identified in the second quarter and was expected to be reversed fully during the third quarter; however, the degree to which that happened was less than expected. Additionally, the construction of other buildings and civil works increased between the quarters far more than expected. This would have been due largely to good performance in the non-residential line. The combination of these factors, coupled with the satisfactory momentum in investment in capital goods and the other GFCF components, caused GFCF to expand at a faster pace than was forecast by *Banco de la República*'s staff and one that would contribute positively to GDP growth.

During the third quarter, GFCR increased faster than expected.

Consumption in the private sector accelerated during the third quarter, more so than was implicit in the staff's forecasts. All the components of household consumption posted significant growth between the quarters. However, it is important to note that this GDP item benefited during the period from a sizable increase in the statistical discrepancy, which makes it difficult to analyze the totals based on its components. On the other hand, public consumption slowed, although less than expected, and continued to grow more than the main components of spending.

Exports in constant pesos saw low growth. In fact, it was less than anticipated and below what was observed in the second quarter of the year. The expectation was that these sales would be bolstered largely by non-traditional export performance. However, the technical staff's estimates suggest these exports failed to recover during the period, to the extent that was anticipated, adding to the difficult time for sales of coffee and coal. On the other hand, real imports posted good growth, similar to what was forecast in the previous report. The surge in imports from the rest of the world was the result of good performance with respect to intensive domestic demand for imported goods (mainly investment in machinery and equipment and the consumption of durables).

On the supply side, the most dynamic branches of economic activity during the third quarter of 2018 were public administration and defense; education, health and social services; construction; and information and communications, in that order. In contrast, the agricultural sector and mining reported little growth. No branch of the economy experienced annual reductions during this period (Table 2.2).

The low growth witnessed in the agricultural sector during the third quarter is explained largely by poor performance in terms of coffee production. According to the National Federation of Coffee Growers, production was down 13.8% during that quarter. The Federation attributes this to a late harvest. In contrast, livestock activity rose 3.6%

Every branch of the economy experienced growth during the third quarter.

Table 2.2
Real Annual GDP Growth by Branch of Economic Activity
(Seasonally Adjusted and Corrected for Calendar Effects, Base year-2015)

	2017				2017	2018		
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.	Full year	I Qtr.	II Qtr.	III Qtr.
Agriculture, forestry, hunting and fishing	8.2	7.4	5.6	1.6	5.6	3.5	4.3	0.4
Mining and quarrying	-7.0	-2.5	-4.7	-2.8	-4.3	-3.8	-3.2	1.3
Manufacturing industry	-2.0	-2.5	-1.5	-1.9	-2.0	0.5	1.7	2.4
Electricity, gas and water	-0.9	1.0	1.6	1.7	0.8	1.2	2.4	2.9
Construction	0.1	-2.2	-5.4	-0.4	-2.0	-5.6	-5.3	3.7
Buildings	-3.3	-3.9	-9.1	-4.9	-5.3	-3.1	-5.9	4.1
Civil works	6.3	5.2	7.2	11.2	7.5	-6.8	-4.6	-0.9
Specialized construction activities	-3.6	-3.7	-6.3	-3.3	-4.2	-2.0	-6.4	1.3
Retail, repairs, restaurants and hotels	0.5	1.5	1.8	1.0	1.2	2.6	3.3	3.3
Information and communications	-0.6	0.7	-2.3	1.9	-0.1	1.7	2.5	3.7
Financial and insurance activities	6.7	7.1	6.7	6.9	6.9	6.2	3.3	1.1
Real estate activities	3.2	2.8	2.6	2.5	2.8	2.3	2.1	2.1
Professional, scientific and technical activities	1.4	3.0	3.0	6.6	3.5	5.5	5.7	2.9
Public administration and defense, education and health	4.7	4.3	3.4	3.0	3.8	5.6	4.7	5.1
Artistic, entertainment and recreational activities	9.8	2.0	0.7	3.2	3.9	2.2	2.4	1.6
Subtotal –value added	1.3	1.8	1.5	1.6	1.5	2.7	2.7	2.1
Taxes minus subsidies	1.2	4.7	6.0	5.5	4.3	5.7	3.2	2.7
GDP	1.3	2.2	1.8	1.7	1.8	2.6	2.5	2.6

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

during the same period, supported by increases in cattle and hog production (2.5% and 3.8%, respectively).

In the case of mining, the modest growth in oil and gas production (1.6%) contributed to the lack of momentum. Moreover, coal production experienced a new setback (-4.1%), although it was less than the one observed in the first half of 2018.

In contrast, the manufacturing industry continued to consolidate its recovery during the third quarter of 2018, growing 2.4% annually. When oil refining is excluded, one sees the rest of the manufacturing sector expanded by 1.9%. The high point within this last group was the positive performance witnessed in basic metallurgical products (11.9%) and in the manufacture of textile products (4.0%). Oil refining was up 7.0% annually.

On the other hand, the fact that construction performed well during the third quarter came as a surprise and was the result of important growth in the "buildings" category (4.1%) and much less of a decline in civil works (-0.9%) than during previous quarters. The growth in the first case, according to the DANE, was mainly in the non-residential line, where production was up by 7.2% (while growth in the residential line came to 2.0%). As for the construction of civil works, delays in building several of the highways that are part of the country's so-called fourth generation (4G) road projects continued to contribute to its poor performance, due to delays in financial closure that have affected investment in these projects. As a result, the subsector comprised of specialized activities for construction reported only moderate growth (1.3%).

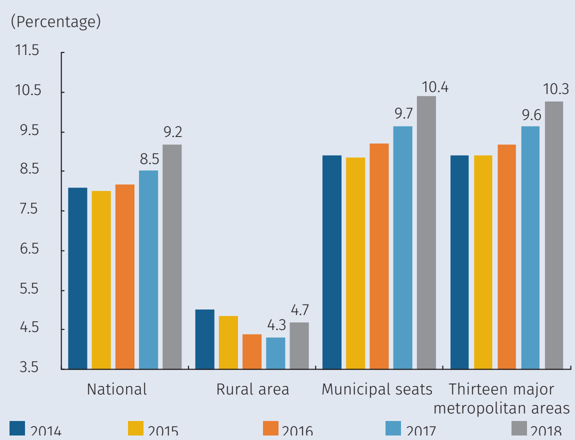
The good performance in the construction industry was due mainly to growth in the building category.

Finally, several service-related sectors contributed a great deal to growth during July-September. Public administration and defense, education, health and social services did the most in that respect, accounting for nearly 15% of GDP and having grown at a substantial rate (5.1%). The dynamism apparently was related to activity generated by the anti-corruption consultation and the population census, which was finished in the third quarter. Growth in the information and communications sector also accelerated during the third quarter, expanding at a rate of 3.7%. However, growth financial and insurance activities continued to taper off, expanding at an annual rate of 1.1%.

Job Market Performance in the Fourth Quarter of 2018

The unemployment rate (UR) increased during the fourth quarter of 2018 in every geographic domain, compared to the same period in 2017 (Graph A). The seasonally adjusted series also deteriorated with respect to what was observed in the third quarter of 2018 for both the national total and the thirteen major metropolitan areas: the national UR was 10.1% and the rate for the thirteen major metropolitan areas was 11.3%. These are higher than the third-quarter 2018 figures for both domains (9.5% for the national UR and 10.4% for the UR in the thirteen major metropolitan areas) (Graph B).

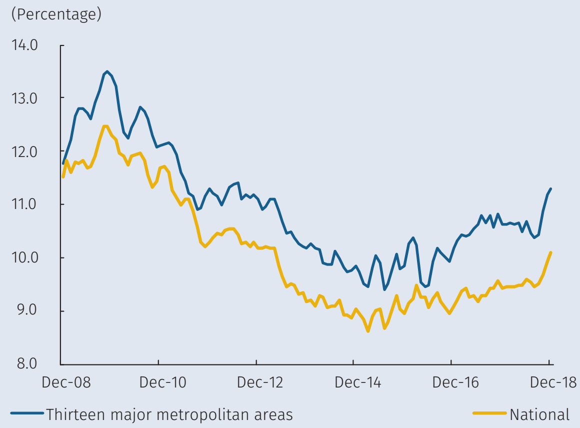
Graph A
Unemployment Rate
(October-November-December Moving Quarter)



Source: DANE (GEIH).

The growth in the UR for the thirteen major metropolitan areas was accompanied by downward trends in both the supply and demand for labor. The average urban occupation rate (OR) declined compared to the figures for the third quarter of 2018 and the

Graph B
Unemployment Rate
(Seasonally adjusted moving quarter)



Source: DANE (GEIH).

fourth quarter of 2017. The overall participation rate (OPR) also saw quarterly and annual reductions, but they were less than those in the urban OR (Graph C), which explains the rise in the UR for the thirteen major metropolitan areas.

The downward trends in urban labor supply and demand were evidenced by a drop in the level of employed persons and by increases in the figure for inactive and unoccupied persons. The number of unoccupied persons had been stable since mid-2017, with some reductions at the start of 2018, but rose significantly at the end of the year. On the other hand, there were quarterly and annual reductions in occupied persons, both at the national level and in the thirteen major metropolitan areas.

At the national level, with the seasonally adjusted series, the average number of occupied persons in the fourth quarter fell by -1.5% compared to the figures for the third quarter; in the thirteen major metropolitan areas, the decline was -1.4%. A look at the annual variations in the moving quarter ended at December shows a decline of -0.1% in both geographic domains (Graph D, panels A and B).

The positive momentum in urban employment witnessed during past months suffered a setback in the fourth quarter, which largely explains the downward trend in the municipal seats. This poor performance may be due to the reversal of the positive shock these indicators experienced at the start of the year, and that would have been associated largely with the behavior of public consumption, given the electoral process and completion of the census, as highlighted in previous reports.

Construction was the branch that performed best in terms of job creation with respect to the national total, while commerce and real estate activities were the sectors that deducted the most from the number of occupied persons.

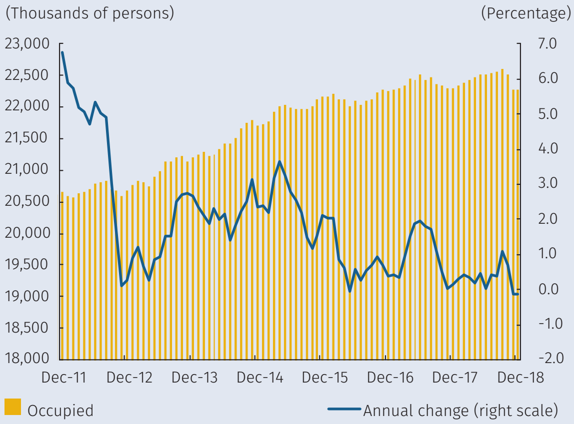
The decline in employment in the urban areas was reflected in the number of salaried and non-salaried workers. However, the seasonally adjusted series registered larger quarterly declines in non-salaried employment (-2.2%) than in the number of salaried workers (-1.1%). This contrasts with the performance observed during the past three quarters, when there were positive changes in non-salaried employment, which is the fastest growing segment of urban

Graph C
Overall Participation Rate and the Occupation Rate
(Thirteen major metropolitan areas, seasonally adjusted)

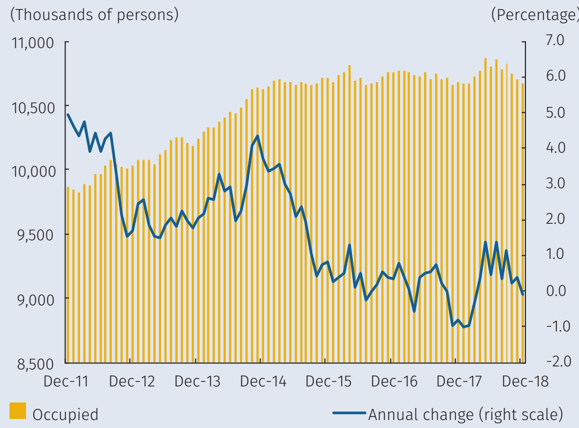
Source: DANE (GEIH).

Graph D
Number of Occupied Persons
(seasonally adjusted and annual change)

A. National total



B. Thirteen major metropolitan areas

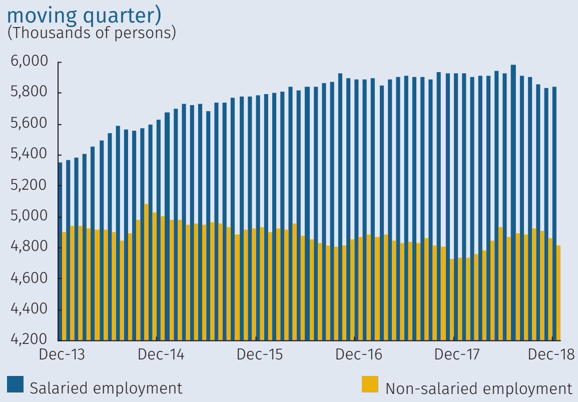


Source: DANE (GEIH); calculations by *Banco de la República.*

employment (Graph E). Likewise, the classification of employment according to formality, [1] with figures up to November, shows negative quarterly changes in both formal and informal workers (Graph F).

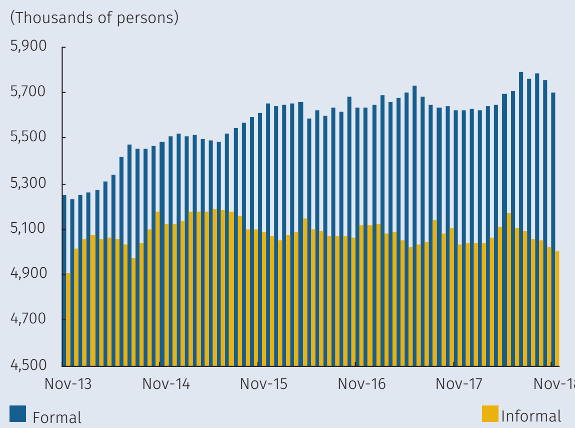
The quarterly averages for the OPR and the OR in the thirteen major metropolitan areas declined, the UR increased, and the number of occupied persons declined. However, this could be the result of the reversal of the positive shock experienced at the beginning of 2018, associated with elections and the population census. The coming months could see moderate reductions in the UR, given the prospect of economic recovery; however, a strong recovery in the job market is not expected.

Graph E
Employment by Type of Occupation
(thirteen major metropolitan areas, seasonally adjusted moving quarter)



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

Graph F
Employment According to Formality
(thirteen major metropolitan areas, seasonally adjusted moving quarter)



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

1 According to the definition used by DANE, which is based on resolutions adopted by the United Nations International Labor Organization (ILO), employers and workers in companies with up to five workers, unpaid family workers, unpaid workers in other household companies or businesses, domestic workers, day laborers or unskilled farm workers, and independent laborers who work in establishments of up to five people, with the exception of independent professionals, are regarded as informal workers (DANE, 2009).

2.2 GDP in the Fourth Quarter of 2018

GDP growth in the fourth quarter is expected to be slightly higher than the increase registered during the three previous quarters.

The data at hand for the fourth quarter of 2018 point to an increase in GDP during that period (seasonally adjusted and corrected for calendar effects) that would have been slightly more than what was observed throughout the year. It is important to note that the fourth-quarter figure for annual growth would be influenced, to some extent, by a low base of comparison in the same period of 2017. There would have been an increase between quarters as well.

This forecast assumes that the positive shocks to domestic demand witnessed in previous quarters would have dispelled somewhat during the last part of the year. In that sense, public consumption would return to levels consistent with the trend it had exhibited since the beginning of 2016, considering that the effects of the electoral process, the anti-corruption vote and the population census would have passed. Moreover, investment in construction is unlikely to show satisfactory performance in the margin, since the technical staff's forecast presumes that some of the previous surge in building construction was temporary, given the large inventories that are still on the real estate market and the limited momentum in the price of these assets.

As such, the technical staff's forecasts for domestic demand in the fourth quarter assume that annual growth will be similar or somewhat higher than in the third quarter and substantially more during the first half of the year. A look at the components of absorption shows the annual increase in total consumption would have slowed to some extent, since there is expected to be less of an increase in public consumption. In contrast, household spending on goods and services would have accelerated slightly in the margin, particularly given the expectations for durable goods consumption.

Gross capital formation would have expanded significantly and beyond what was observed in the previous quarters. As part of this GDP item, the performance of investment in machinery and equipment stands out and would more than offset the limited growth forecast for investment in construction (housing as well as other buildings and structures).

With respect to the foreign trade accounts, the technical staff's forecast for the fourth quarter implies better performance than the average for the year. However, this would be more in the case of imports than exports. The foregoing assumes a larger trade deficit in constant pesos and, consequently, a negative contribution from net exports to GDP growth.

Net exports will contribute negatively to growth in the fourth quarter.

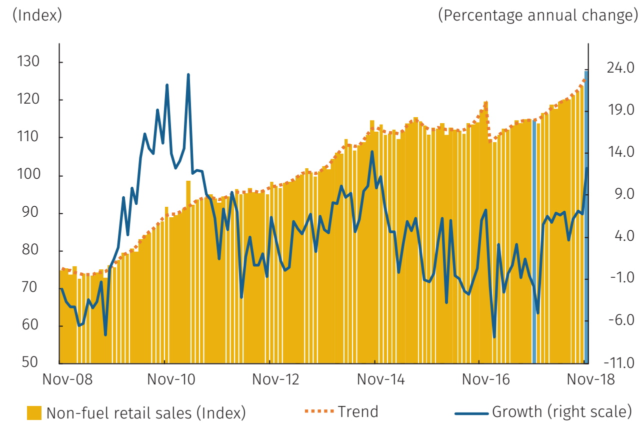
The results for the short-term indicators support the scenario described above. On the one hand, the data up to November show the performance of domestic trade in goods is satisfactory, mainly due to reports of healthy vehicle sales. According to figures from the Monthly Retail Trade Survey (EMCM) conducted by DANE, non-fuel retail sales were up 12.3% annually in November (Graph 2.2). The aggregate of this index for the two-month period that includes October and November was 9.7% compared to the same timeframe in 2017, having accelerated with respect to the 5.6% for the third-quarter aggregate. Excluding vehicle sales, the remaining aggregate shows an annual increase of 6.7% for November (Graph 2.3) and 6.1% for the two-month period (versus 4.8% for the second quarter of 2018).

According to the same survey, retail sales of motor vehicles were up by 43.4% in November, compared to the same month in 2017 (Graph 2.4). This performance was justified by the 16th Motor Show in Bogotá, a biennial event that bolsters sales of personal and work vehicles. The expansion indicated in the aggregate for the two-month period was 29.4%, which is higher than the third-quarter figure (10.3%). The series of registration records published by the National Federation of Entrepreneurs (Fenalco) confirms the good performance of vehicle sales. The figures up to November show they rose 24.4% annually, and an equally important expansion is projected for December, with which, when added to the October figure on record (9.2%), means the entire fourth quarter would register significantly better performance than in the third quarter (5.6%).

The figures for the seasonally-adjusted sales balance series from the Monthly Survey of Economic Expectations (EMEE) conducted by *Banco de la República* point to similar performance with respect to private consumption. As of October, this indicator points to a slight acceleration in the rate of growth in household spending towards the end of 2018.

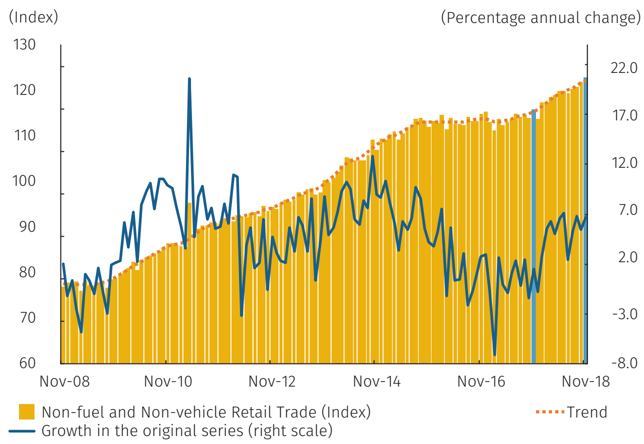
In contrast, *Fedesarrollo*´s consumer confidence index (CCI) for the period between October and December 2018 was at levels well below those on record for the first nine months of the year, and far from the average calculated since 2001

Graph 2.2
Monthly Retail Trade Survey
(Total Non-fuel Retail Sales, Seasonally Adjusted and Corrected for Calendar Effects)



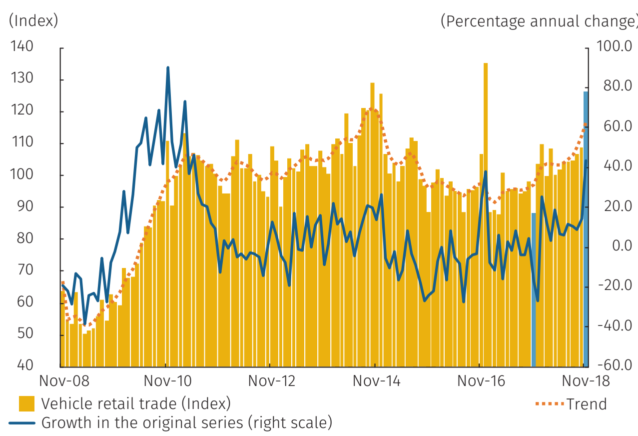
Sources: DANE; calculations by *Banco de la República*.

Graph 2.3
Monthly Retail Trade Survey (Total Non-fuel and Non-vehicle Retail Trade, Seasonally Adjusted and Corrected for Calendar Effects)



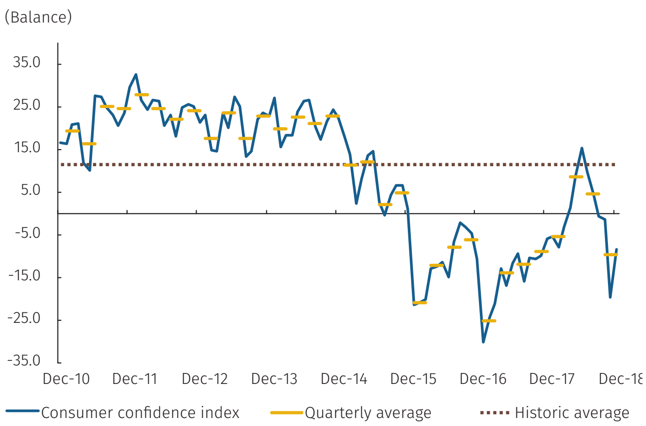
Source: DANE; calculations by *Banco de la República*.

Graph 2.4
Monthly Retail Trade Survey
(Automotive Vehicle Retail Trade, Seasonally Adjusted)



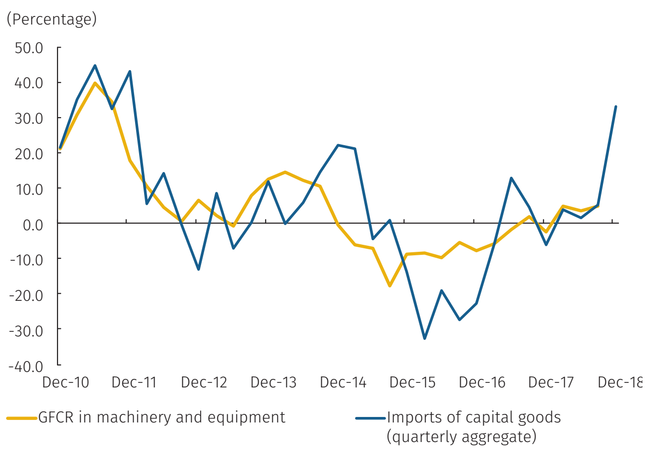
Source: DANE; calculations by *Banco de la República*.

Graph 2.5
Consumer Confidence Index and Quarterly Average



Source: Fedesarrollo.

Graph 2.6
Imports of Capital Goods (Real) and GFCF, Excluding Construction Machinery and Equipment
(Annual change)



Sources: DANE (national and foreign trade accounts) and DIAN; calculations by *Banco de la República*.

(Graph 2.5). It should be noted that the sharp decline in the CCI was due mainly to deterioration in the expectations component of the index, rather than to current household economic conditions. This suggests that the low levels observed recently for the CCI could be temporary and respond to short-term events that do not necessarily affect the consumption patterns or decisions of Colombian families.

With respect to the GFCF forecasts, the different series on imports of capital goods (in constant pesos) point to important momentum in investment in machinery and equipment during the fourth quarter, more so than in previous quarters (Graph 2.6). Added to this is the increase in license plate registrations for cargo and passenger vehicles, which are regarded as an investment in transport equipment. The seasonally adjusted balance of investment expectations from the October EMEE shows a positive tilt, which also would allow us to anticipate satisfactory performance for this component of GDP.

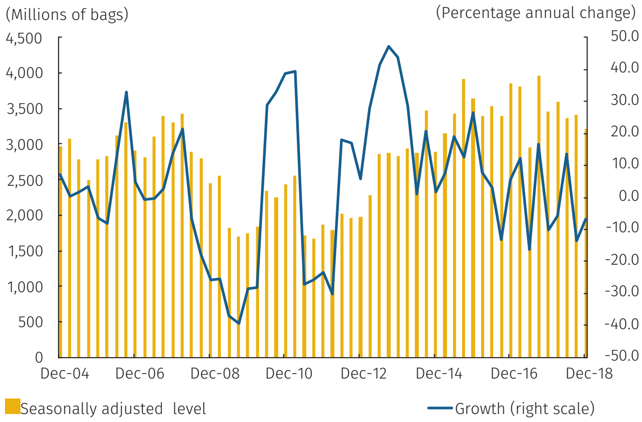
As mentioned already, in terms of GFCF in the construction sector, *Banco de la República*'s technical staff assumes the positive shocks to investment in housing and in other non-residential buildings that were observe respectively in the second and third quarters would be fading.

When it comes to foreign trade, real exports and imports are expected to have increased. However, this growth would have been greater in the case of imports of goods and services, implying more of a trade deficit during the fourth quarter of the year (both in constant pesos and in dollars).

According to figures published by DANE and by the National Bureau of Revenue and Customs (DIAN), the good performance in imports would be driven largely by purchases of durable consumer goods, intermediate goods and transport equipment. This is a reflection of the performance forecast for the fourth quarter of 2018 with respect to consumption of durable goods and investment in capital goods.

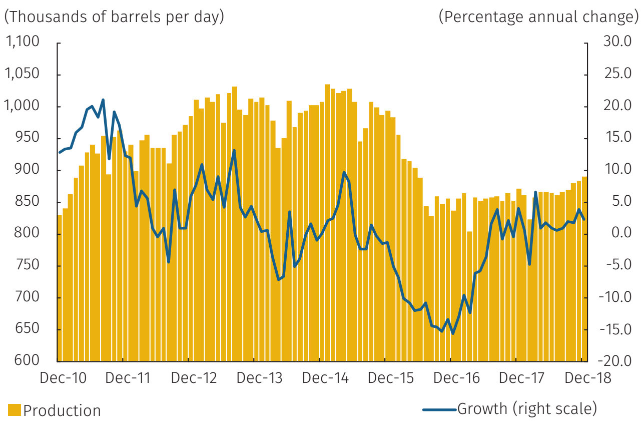
In the case of exports, the available data show that, although sales of services will contribute positively to the increase in GDP, the growth in sales of non-traditional and traditional goods towards the end of the year would not have been very dynamic.

Graph 2.7
Coffee Production
(Quarterly and annual growth)



Sources: *Federación Nacional de Cafeteros*; calculations by *Banco de la República*.

Graph 2.8
Oil Production
(Monthly and annual growth)



Source: *Agencia Nacional de Hidrocarburos* (ANH); calculations by *Banco de la República*.

As for the different branches of economic activity, the indicators at hand also suggest an expansion in GDP that is similar or slightly higher than the increase registered for the third quarter. The fourth-quarter figures for the agricultural sector point to more growth than in the previous quarter, mainly because of performance in the subsector that includes permanent and temporary crops. Although the National Federation of Coffee Growers reported a decline in production during the fourth quarter (-6.6%), it was less than the reduction posted the quarter before (-13.8%) (Graph 2.7). On the other hand, it is estimated that, in general terms, the performance of other crops (such as some cereals and legumes) during the fourth quarter will contribute positively to the growth in this item. In contrast, figures on the slaughter of cattle are indicative of somewhat less growth in this subsector of the economy.

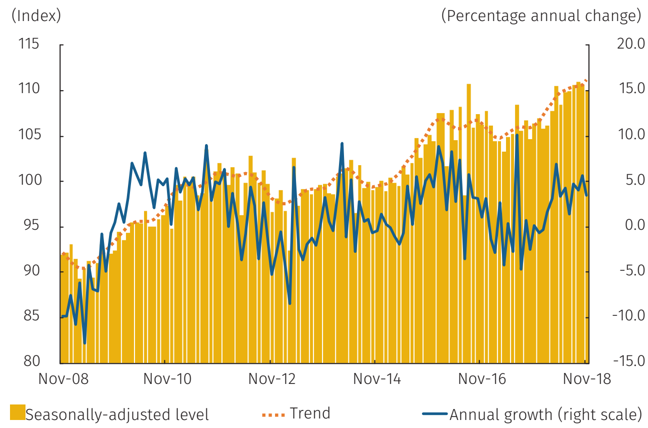
With respect to mining, the sector is expected to slow down, mainly because of coal production, which is not forecast to recover in the fourth quarter and has a high base of comparison. Oil production would offset this effect, in part. Its growth accelerated and was up by 2.6% during the fourth quarter (Figure 2.8).

As for the manufacturing sector, the forecast models used by *Banco de la República*'s technical staff suggest growth was higher during the fourth quarter compared to the figures on record for previous periods. This would be consistent with the good momentum in raw material imports. Moreover, according to the DANE Monthly Manufacturing Survey, with figures seasonally adjusted and corrected for calendar effects, the total for the sector was up 4.5% annually during the October-November period, and the trend component of this series also suggests a recovery (Graph 2.9). The commerce, transport and accommodation sector also is expected to post a major surge during the fourth quarter, especially in light of the good performance in vehicle sales, as mentioned above.

The construction sector is expected to see a reversal in the fourth quarter of the sizeable growth it experienced during the third. This is because the positive shock to building construction would tend to disappear, since this item would continue to suffer hard times, as suggested by the number of construction licenses and by home prices. On the other hand, the gradual recovery in civil works would have continued, although at very modest rates. These would be associated with budget spending by local administrations and, to a lesser extent, with some of the 4G projects. However, it is important to clarify that the bulk of production in this line of construction is expected to be postponed until 2019.

Finally, fourth-quarter growth in some service-related sectors is estimated to have been less than during the quarter before. The financial activities and insurance sector is a case in point, having reported slowdowns during the first three quarters of the year. The public administration and defense sector also would have grown less, in keeping with the anticipated momentum in public consumption that has been described already.

Graph 2.9
Total Real Manufacturing Industry Production
(Seasonally adjusted series, trend component and annual growth)



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

Based on the results of the forecast models, and taking into account all of the above, the technical staff estimates that GDP growth in the fourth quarter of 2018, seasonally adjusted and corrected for calendar effects, would be 2.7%. This is the more probable figure within a range of low and high growth scenarios of 2.2% and 3.2%, respectively. As usual, the breadth of the forecast range is consistent with the uncertainty surrounding the performance of investment in civil works and public consumption.

2.3 GDP in 2018 as a Whole

The foregoing figures imply 2.6% projected GDP growth in 2018 as a whole, within a range of 2.5% to 2.7% (compared to the range of 2.3% to 2.8% noted in the last edition of this *Report*). The central point, the floor and the ceiling of the forecast range are consistent with the balance of payments scenarios for all of 2018, as outlined in Chapter I of this *Report*.

Generally speaking, growth in domestic demand would have surged in 2018 compared to 2017, thanks to positive contributions from both total consumption and investment. The momentum in public consumption stands out in the first case, having benefitted from various positive shocks that occurred between the first and third quarters and were related to more spending, primarily because of elections, the hiring of personnel for the population census, and more budget spending by regional and local government administrations. Private consumption also picked up speed in 2018, with better momentum in the consumption of durable, semi-durable and non-durable goods.

In 2018, domestic demand would have grown more than in 2017

Gross capital formation, for its part, registered mixed performance. On the one hand, investment in capital goods increased at a faster rate than investment in all the other items that make up GDP, after having posted reductions in 2017. In contrast, investment in construction, both housing and non-residential buildings and civil works, exhibited mediocre performance with respect to the aggregate for 2018. Even though there were positive shocks during several quarters, these would have been temporary and would not have been enough to compensate for the sector's structural limitations, which are related primarily to surplus inventory, in the case of residential and non-residential buildings, and to the lack of execution in various G4 road projects, in the case of civil works.

The foreign trade accounts (in real terms) registered positive growth rates for the aggregate in 2018, contrary to what was observed in 2017. Although real exports recovered somewhat, the increase in traditional exports was limited by a number of supply shocks, while non-traditional exports of goods were affected by the mediocre momentum in external demand observed throughout the year. Imports, on the other hand, rose in conjunction with the performance of intensive domestic demand for goods and services from abroad. This being the case, the trade deficit in 2018 constant pesos grew compared to the figures for 2017.

03

Recent developments in inflation

Annual consumer inflation closed out 2018 near the target and below the forecast. It also was less than at the end of 2017.

Likewise, the core inflation indicators declined during the year, including the fourth quarter, and ended near the inflation target.

The performance of inflation in 2018 is explained by continued weak demand, limited exchange rate pass-through, and diminishing supply shocks.

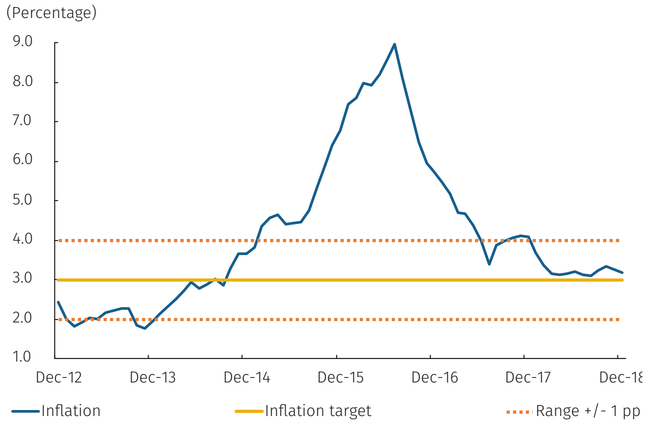
3.1 General Performance

Annual consumer inflation was 3.18% at the end of 2018, which is slightly above the target for inflation (3.0%) (Graph 3.1 and Table 3.1). This outcome is less than what was anticipated in previous reports and by most market analysts.

Following a sharp decline at the start of 2018, annual inflation stabilized at around 3.2% until the end of that year. As explained at the time, the decline during the first quarter was largely the result of the disappearance of upward shocks caused by the increase in indirect taxes at the beginning of 2017.

A similar momentum was observed in the average of core inflation indicators, although it experienced an additional decline in the last two months of 2018 (going from 3.32% in October to 3.03% in December), which was not fully anticipated. As for the different indicators up to December, the highest increase was in the consumer price index (CPI) excluding food (3.48%), while the lowest was in the CPI without food and regulated items (2.64%) (Graph 3.2).

Graph 3.1
Consumer Price Index (CPI)
(Annual change)



Sources: DANE and *Banco de la República*.

Besides the fact that the temporary shock associated with higher taxes is disappearing, the good outcome for inflation during the past year also was accompanied by surplus production capacity in the economy, given a demand that is recovering but remained relatively weak throughout the year. These circumstances helped to limit the rise in consumer prices, especially in the non-tradable segment of the family basket of goods and service, but also in the case of tradables.

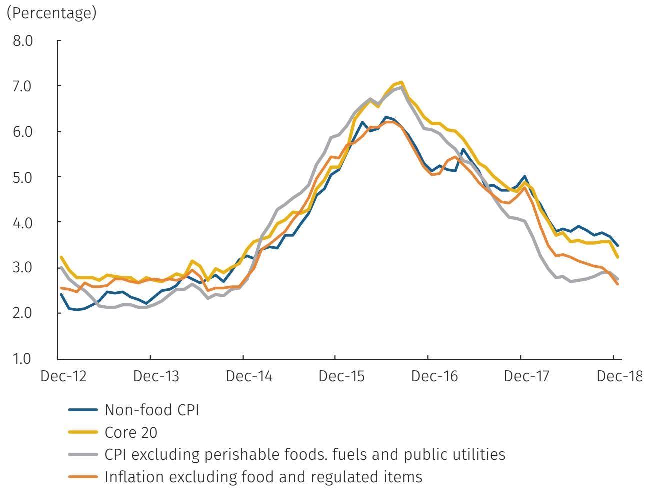
Additionally, limited exchange rate pass-through to consumer prices in 2018 became evident. For a good part of the year, depreciation of the peso did not affect the adjustments in prices for tradable goods and services in the CPI, which are usually those most sensitive to movement in the exchange rate. It is possible that this pass-through has been contained by the relative weakness of demand and by the drop in international prices for fuels and other raw materials. The latter helped to lower production and transport costs.

Table 3.1
Consumer Inflation Indicators
(At December 2018)

Description	Weighted	Jun-17	Sept-17	Dec-17	Sept-18	Oct-18	Nov-18	Dec-18
Total	100.00	3.99	3.97	4.09	3.23	3.33	3.27	3.18
Non-food	71.79	5.12	4.71	5.01	3.71	3.78	3.70	3.48
Tradables	26.00	4.41	3.41	3.79	1.57	1.52	1.29	1.09
Non-tradables	30.52	5.21	5.21	5.49	4.13	4.13	4.05	3.79
Regulated	15.26	6.01	5.68	5.86	6.03	6.41	6.53	6.37
Food	28.21	1.37	2.22	1.92	2.05	2.25	2.22	2.43
Perishables	3.88	-14.72	-0.32	5.84	9.51	9.66	7.96	8.88
Processed	16.26	3.29	0.84	-0.91	-0.72	-0.54	-0.15	-0.08
Meals outside the home	8.07	7.62	6.01	5.21	3.32	3.52	3.55	3.68
Core inflation indicators								
Non-food		5.12	4.71	5.01	3.71	3.78	3.70	3.48
Core 20		5.31	4.87	4.87	3.56	3.58	3.57	3.23
CPI excluding perishable foods, fuels and public utilities		5.07	4.31	4.02	2.81	2.89	2.90	2.76
Inflation excluding food and regulated items		4.87	4.44	4.76	3.04	3.02	2.88	2.64
Average of all indicators		5.09	4.58	4.66	3.28	3.32	3.26	3.03

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

Graph 3.2
Core Inflation Indicators



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

Upward pressures last year focused on the regulated component of the CPI, particularly public utilities. Added investment to improve distribution and, more recently, hikes in prices traded on the stock market explain these increases.

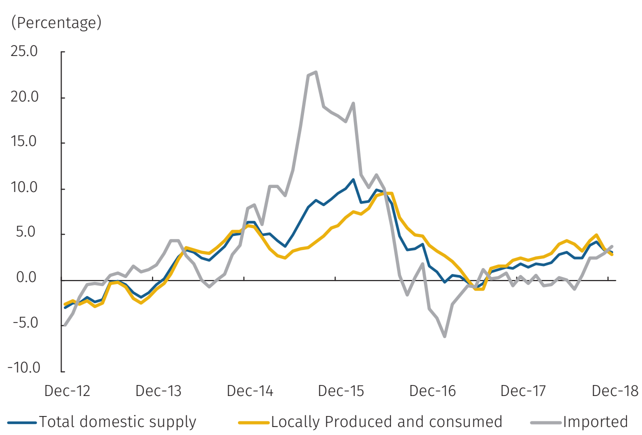
Some inflationary pressure also originated with food excluding meals outside the home, especially during the second half of the year. However, the pace of adjustments in these prices has remained below the inflation target, without any reduction observed in the food supply.

Judging by the performance of the producer price index (PPI), non-labor costs in 2018 tended to adjust at a rising rate, but without exceeding the 3.0% target or hindering compliance with it. Accordingly, annual inflation in the total PPI for domestic supply ended the year at 3.09%, which was higher than the level observed twelve months ago (1.85%), but lower than last September (3.77%) (Graph 3.3).

In contrast to what was observed in the tradable component of consumer prices, exchange rate depreciation pass-through to the imported PPI in 2018 was evident. In fact, the annual change in this component went from 0.37% in December 2017 to 2.47% in September and to 3.67% at the end of 2018. In the case of the IPP, a good many of the prices are fixed directly in US dollars, so pass-through usually is contemporaneous. In the case of the CPI, exchange rate pass-through to prices typically is delayed for several quarters, making it more easily mitigated by the performance of demand.

On the other hand, the local component of the PPI (2.85%) ended below the inflation target, but also rebounded compared to December 2017 (2.50%). However, it declined with respect to September 2018 (4.34%).

Graph 3.3
PPI, by Origin
(Annual change)



Source: DANE.

As for labor costs, the data up to November and December 2018 indicate performance was mixed. With the figures up to November, we see wages in home building construction (3.6%) and heavy construction (3.7%) fell throughout 2018, while those in commerce (6.3%) increased and industrial wages gave up ground (5.2%). In all cases, the adjustments were above the target for inflation, but were not necessarily incompatible with that goal, if the usual gains in productivity are taken into account (Graph 3.4).

The rise in the minimum wage, which was 6.0% in 2018, did not prevent the reduction in inflation, although it could have contributed to price adjustments above 5.4% for a number of services, which usually have a high level of indexing.

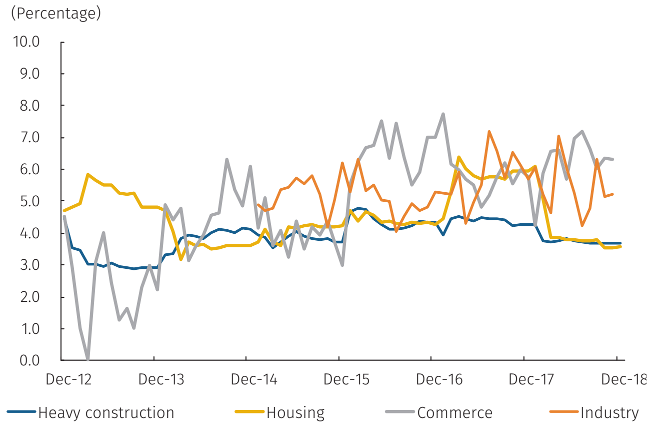
3.2 Performance by Components

A look at the main components of the CPI (tradables, non-tradables, regulated items and food) shows the emergence of two opposite trends that determined the performance of consumer prices in 2018. The first one explains the drop in annual inflation during 2018, which focused on the tradable and non-tradable segments of the CPI basket of goods and services. The second, which exerted upward pressure, was led by the regulated items in the CPI (especially public utilities) and by food excluding meals away from home.

The annual adjustment in the tradable CPI brought downward pressures to bear throughout 2018, having gone from 3.79% in December 2017 to 1.57% in September and 1.09% in December (Table 3.1 and Graph 3.5).). The annual change in tradables was relatively stable as of last April, but resumed a downward trend in the last two months of the year, even though the peso depreciated. The decline in the pace of adjustments in prices for tradables throughout the year was widespread, although the segments for communications, clothing, medicines and certain transport items, such as airline tickets, stand out. Weak local demand and a slight downward trend in international prices for raw materials during the past year would explain this performance. Even though disappearance of the shock created by the increase in indirect taxes, especially at the beginning of the year, and other short-term phenomena were contributing factors as well.

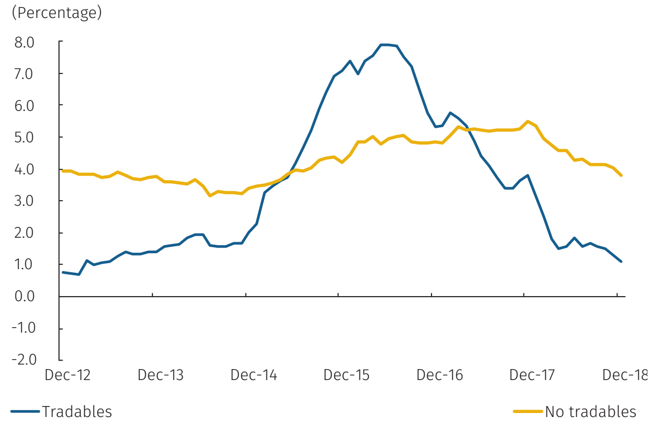
The performance of the non-tradable component of the CPI during 2018 also explains the decline in annual inflation. The annual variation in this component gradually went from 5.49% in December 2017 to 4.13% in September and 3.79% in December (Table 3.1, Graph 3.5). As in the case of tradables, this bearish performance is associated with weak demand, but also importantly with a lower level of indexing compared to 2017, since inflation that year ended at a much lower rate (4.09%) than in the previous year (5.75%). Although disappearance of

Graph 3.4
Nominal Wages
(Annual change)



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

Graph 3.5
CPI for Tradables and Non-Tradables Excluding Food and Regulated Items
(Annual change)

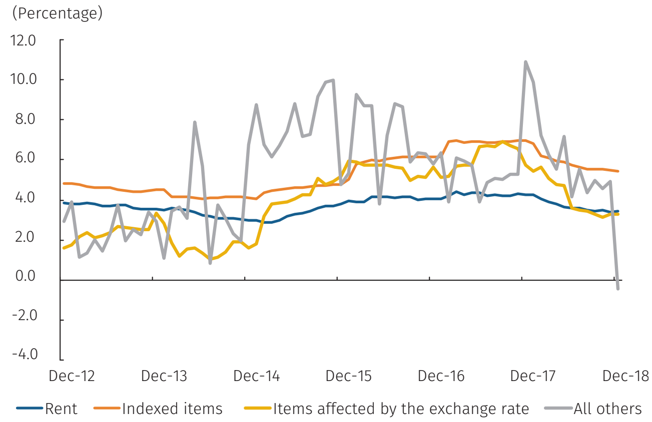


Source: DANE; calculations by *Banco de la República.*

the shock from indirect taxes also played a role, it actually was less than in the case of tradables.

An analysis of the performance of the different subgroups that make up the non-tradable sector shows that the decline in the annual variation was widespread. However, leases stand out the most, given their weight in the basket of goods and services (18.6%). The annual variation in this item went from 4.28% in December 2017 to 3.45% in September and 3.42% in December 2018. The same was true of the subgroup comprised of indexed items (especially education and health services), which went from 6.96% in December 2017 to 5.54% in September and 5.43% at the end of 2018. The rate of adjustment in this sub-basket is still high, demonstrating its high inflationary inertia (Graph 3.6).

Graph 3.6
CPI for Non-Tradables, excluding Food and Regulated Items
(Annual change)



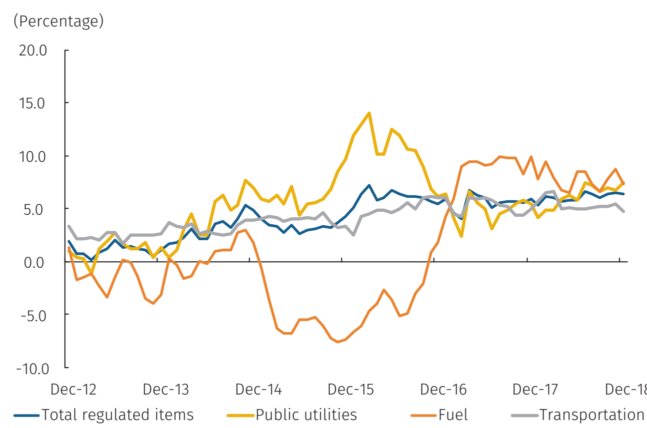
Source: DANE; calculations by *Banco de la República.*

For the non-tradable items most affected by the exchange rate via costs, the annual variation was downward during the first three quarters of 2018 (from 5.72% in December 2017 to 3.27% in September 2018), before it stabilized and ended the year at 3.29%. This momentum suggests there was very little exchange rate pass-through to consumer prices, especially during the episode of depreciation at the end of the year.

The non-tradable subgroup that saw the most decline in its annual variation was the so-called "all others" segment (which includes soccer tickets), having gone from 10.88% in December 2017 to 4.97% in September and -0.42% in December 2018. A decisive factor in this case was the very high base of comparison at the end of 2017, mainly because of the way soccer tickets performed, a situation that was not repeated in 2018. It is important to point out that this item will not be part of the basket of goods and services scheduled to take effect when the new method for calculating the CPI is implemented in 2019. Accordingly, this source of volatility would disappear.

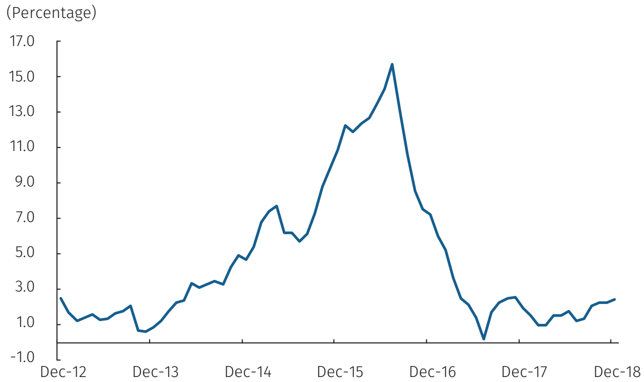
Unlike tradables and non-tradables, the regulated group pushed up consumer inflation throughout 2018, maintaining an adjustment rate well above the 3.0% target. In this case, the annual change went from 5.86% in December 2017 to 6.03% in September and to 6.37% in December (Table 3.1 and Graph 3.7). This upward performance in regulated items is due entirely to public utilities, which posted an annual variation that went from 5.39% in December 2017 to 6.57% in September and 7.47% by the end of 2018. In contrast, transportation (4.76%) and fuel (7.28%),

Graph 3.7
CPI for Regulated Items and Components Thereof
(Annual change)



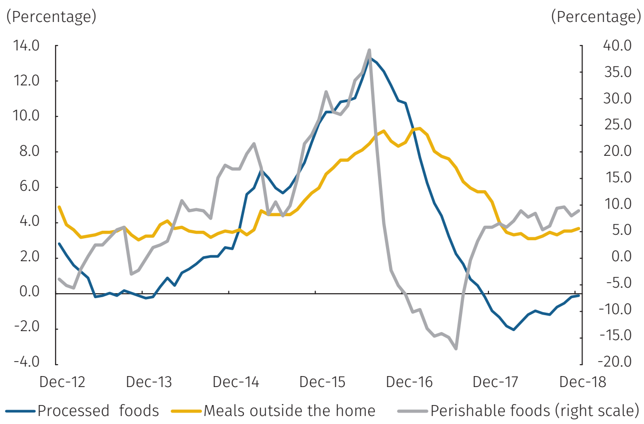
Source: DANE; calculations by *Banco de la República.*

Graph 3.8
Food CPI
(Annual change)



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

Graph 3.9
Food CPI, by Groups
(Annual change)



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

which are subgroups of tradable component of the CPI, pushed down inflation.

The inflationary stimulus from public utilities concentrated mainly on energy. The rates for this item included increases due to the expansion of infrastructure for distribution. Also, it is possible that the delay in the startup of operations at *Hidroituango* has begun to affect power rates, by limiting growth in the supply of electricity at a time when demand is growing at a good pace. This situation is coupled with the financial problems that have plagued some companies in the sector.

In addition to the regulated component of the CPI, food was the other subgroup that brought upward pressure to bear on inflation. It is important to note, however, that this trend is not due to serious problems with the agricultural supply and is probably related more to the normal production cycle, in response to the very low relative prices witnessed last year.

Accordingly, the annual variation in the CPI food group showed an upward trend, having gone from 1.92% in December 2017 to 2.05% in September and 2.43% in December (Table 3.1 and Graph 3.8). However, for the second year in a row, these adjustments remained relatively low and below the inflation target. The indicator of food supply at Colombia's supply centers remained high in the latest six-month periods, suggesting the agricultural supply has continued to expand at a good pace.

The food prices that increased the most in 2018 were those for perishables. The annual adjustment in this segment rose to 5.84% in December 2017 and ended at 8.88% one year later (Graph 3.9). In addition to the agricultural cycle, another factor that cannot be ruled out as a reason for these hikes is the announcement several months ago of the possibility of El Niño weather. This could affect decisions on investment and planting, even without a significant change in the climate. However, as mentioned in the next chapter, in the event of a weak bout of El Niño weather, as is predicted, these effects would end up being sparse and of very short duration.

The annual change in food prices has been below the inflation target since April 2017 (2.49%), particularly because of processed foods. In the past year, this subgroup stayed in negative territory, having gone from -0.91% in December 2017 to -0.08% one year later. Despite the depreciation of the peso against the dollar in 2018, the downward trend in the set of international food prices allowed processed foods to close out 2018 in negative territory.

Finally, food away from home exerted downward pressure on inflation during 2018, having fallen from 5.21% in December 2017 to 3.68% in December 2018. The upward pressure on this food component was contained, in part, weak demand and less inflationary inertia. The downward trend broke in the fourth quarter of the year, possibly due to specific increases in certain costs.

Box 2
The new shopping basket and its implications

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Edward G. Gómez
Ramón Hernández*

Since January 2019, the *Departamento Administrativo Nacional de Estadística* (National Administrative Department of Statistics, DANE) adopted a new methodology to calculate the consumer price index (CPI), which will replace the CPI basis December 2008 = 100, in force since January 2009. The purpose of this box is to describe the main changes introduced in the new shopping basket (CPI December 2018 = 100 base) and make some remarks on the implications of the new CPI to be considered by the monetary authority.

1.1 The importance of the CPI

The CPI is a statistical, periodical research, the contents of which allow to calculate the variations in prices experienced by a representative set of final goods and services consumed by households in a specific geographic area. Given its importance, it is considered to be one of the most relevant and most analyzed macroeconomic indicators globally. The spectrum of use of the CPI is broad: for example, the monetary authority follows and studies the CPI in order to implement policies to control consumer inflation[1]. Besides, the CPI is also an input for setting the rates of several services as well as to determine the adjustment of wages and tax rates in the economy. In Colombia, it is used to fix the real value unit (UVR) and to adjust the consolidated financial statements of the companies for inflation, among many other uses. Due to its statistical transcendence and its economic and financial importance, the agencies responsible for it and its dissemination worldwide periodically review its methodology.

1.2 A Brief History of the changes in the CPI in Colombia

The first advances to measure the evolution of consumer prices began in 1923 with the creation of the Central Bank of Colombia and the office of the Comptroller General of Colombia. With the creation of the issuer, the importance of developing a CPI as a tool to make follow-up and thus exercise the control of prices became clear. In this way, the task of structuring a number of statistical research was assigned to the office of the Comptroller General, one of which was the construction of a CPI. In 1937, the first steps were taken to define a shopping basket for the working class in Bogotá. This initiative was extended to other cities individually, but no national CPI was calculated.

Only since 1954, the National Administrative Department of Statistics (DANE) built the first national CPI, which (included seven cities: Bogotá, Medellín, Cali, Barranquilla, Bucaramanga, Manizales, and Pasto), defining their basis for calculation as the average from July 1954 or June 1955 = 100. This first basket, called "IPC20," was in force since July 1954 to December 1978. Since then, DANE has been updating the CPI methodology every ten years. For the methodology based on December 1978 = 100, DANE maintained the same seven cities. A decade later, with the new update (CPI December 1988 = 100), geographical coverage was extended to 13 cities, including Pereira, Cartagena, Montería, Villavicencio, Cúcuta, and Neiva. Subsequently, the CPI based on December 1998 = 100 maintained the same geographical coverage. The penultimate basket (CPI based on December 2008 = 100) expanded the number of cities to twenty-four, including Riohacha, San Andrés, Valledupar, Santa Marta, Quibdó, Popayán, Armenia, Tunja, Ibagué, Sincelejo, and Florencia[2].

1.3 The new basket

For the calculation of the CPI based on December 2018 = 100, DANE defined a new basket from the most recent *national household budget survey*, 2016-2017 (ENPH). The new basket excluded 71 articles, as they are currently not representative of the consumption habits of Colombians. At the same time, it included 84 new items that are part of the consumption patterns of households today. Based on the ENPH, the weights of the goods and services selected were defined. Besides, such a survey allowed to include the major demographic changes observed in the country in the last few years. As a novelty, single-person households will begin to be included in the measurement, whereas the

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1 When the monetary authority estimates that inflation is diverting from the long-term target not due to transitory shocks, it decides to change its monetary policy stance, adjusting its main instrument, which is the benchmark interest rate of intervention in the money market. This ensures price stability and helps to maintain a sustained economic growth rate that generates employment and improves the standard of living of the population.

2 In this regard, see: DANE (2009). *Metodología índice de precios al consumidor, actualización* 2009, Colección Documentos, núm. 62, Bogotá, Colombia.

previous methodology only took into account households with more than one person (so-called *traditional*).

The new methodology expanded the geographical coverage from 24 to 32 departmental capital cities by adding Leticia, Arauca, Yopal, Puerto Inírida, San José del Guaviare, Mocoa, Mitú, and Puerto Carreño, in addition to six priority municipalities: Barrancabermeja, Buenaventura, Rionegro, Soledad, Tumaco, and Yumbo. It is important to note that DANE will only disseminate the CPI for twenty-three geographical areas, namely: twenty-two capitals and other urban areas (which will include the six priority municipalities, along with San Andrés and Quibdó). Additionally, DANE updated the criteria for the formation of the population groups following international guidelines. Thus, they went from three groups (low, medium, and high) to four (poor, vulnerable, middle class, and upper class)[3]. With these changes, low income, if the poor and vulnerable segments of the new basket are assumed as such, now represent 17.42% (before, 31.6%), the medium income 57.50% (54.0% before), and the high 25.08% (previously 14.4%).

Despite the importance of these changes in the new CPI, the main innovation was in the field of nomenclatures. The new family shopping basket abandoned the traditional classification of nine groups of expenditure (food, shelter, clothing, education, etc.), and adapted the classification nomenclature for individual consumption by purpose of 1998 (Coicop-1998, by its acronym in English)[4]. This classification, endorsed by the United Nations (UN), will allow the international comparison of our CPI, which is now conformed by 12 divisions for spending, 42 groups, 84 classes, and 188 subclasses (Table A.2.1).

Table B2.1
Levels of Disaggregation

Previous CPI		New CPI	
Level	**Amount**	**Level**	**Amount**
Groups	9	Divisions	12
Subgroups	34	Groups	42
Class	88	Classes	84
Basic Expenditures	181	Subclasses	188
Items	483	Items	443

Source: DANE.

3 DANE follows the methodology by López-Calva, Luis F.; Ortiz-Juárez, Eduardo (2011). "A Vulnerability Approach to the definition of the Middle Class," Policy Research Working Paper, No. WPS 5902, World Bank; which allows to perform international comparisons and characterize the expenditure of each group.

4 See: https://unstats.un.org/unsd/iiss/Classification-of-Individual-Consumption-According-to-Purpose-COICOP.ashx; The UN is currently developing a new revision, the COICOP-2018, which, according to that institution, is partially completed, so unfortunately DANE could not adapt this classification to the new CPI.

The Coicop nomenclature allows structuring the CPI baskets based on the classification of types of expenditure on services, which weigh 57.46%, and in goods, which weigh the remaining 42.54%. According to the Coicop nomenclature, the latter are subdivided into durable goods (weighing 4.92%), durables (5.19%), and non-durables (32.44%). Compared with the previous CPI, services earn participation in the new basket (from 51.25% to 57.46%), while goods lose importance (from 48.75% to 42.54%).

When comparing the divisions of the new basket with the expenditure groups of the previous one, other changes of great importance can be identified (Table B2.2). In the first place, the new methodology excludes meals outside the home from the group *food*. The latter are incorporated to *restaurants and hotels*. As a result, the weight of food in the CPI is reduced from 28.21% to 15.05%. The second noticeable change is on housing, which is now split into two divisions: *accommodation, water, electricity, gas, and other fuels* (weighing 33.12%), and *furniture and household items* (with a weight of 4.19%). With this, the items that had been grouped under *housing* won participation in the new CPI basket, increasing from 30.1% to 37.31%. Also, it is important to note that leases won participation in the new family shopping basket. Now, actual rentals—paid by tenants—plus imputed rentals make up 25.16% of the total CPI, compared to 18.58% before.

1.4 Implications of the new CPI

By analyzing the changes in the structure of the old and new basket weights, it may be seen that the CPI calculation will be more sensitive to price movements in services. Housing, restaurants, and information technologies contributed with a greater relative importance to services in the new CPI. These items tend to incorporate the inflationary inertia of the past in their prices with greater force, which may have an impact on the formulation of the monetary policy stance. Also, the volatility that food prices usually bring to total inflation will tend to be reduced, on account of the lower weight of this group in the new consumption basket. Additionally, soccer tickets will be excluded from the new basket, thereby reducing the inflationary impact that this item imprints on the CPI each semester with the finals of the national tournament. For example, due to this over-valuation, the inflationary shock for the tournament at the end of 2017 was estimated close to 13 basis points (bp)[5].

Finally, it is important to note that periodic updates of the CPI reduce the different biases in the measurement of inflation that accumulate over the years (new goods, new retail outlets, quality, and substitution in consumption). For example, every time the basket is updated, the bias

5 See Caicedo, Edgar and Salazar, Andrea (2018), "Soccer in Inflation", in *Inflation Report*, June 2018, *Banco de la República*, Bogotá, Colombia.

for substitution decreases, which limits the increase in consumer prices[6]. In this sense, not attempting to calculate the true cost of life (e.g., by means of a superlative index), the calculation of yearly inflation can be approximated with the old basket. In order to accomplish this, identical baskets[7] were compared in terms of the number of basic expenses (or subclasses). Then, the CPI for January 2019 was calculated with the old methodology and the new methodology. The exercise shows that, in January 2019, the annual CPI variation would not have been 3.14%, in those baskets, but 3.23%. In other words, not changing the basket, annual consumer inflation in January would have been 9 bp higher.

Table B2.2
Comparison between CPI weights for 2008 and 2018.

<table>
<tr><th>Division (COICOP)</th><th>2018 CPI Weights</th><th>Groups</th><th>2008 CPI Weights</th></tr>
<tr><td>Food and Non-Alcoholic Beverages</td><td>15.05</td><td rowspan="2">Food</td><td rowspan="2">28.21</td></tr>
<tr><td>Restaurants and Hotels</td><td>9.43</td></tr>
<tr><td>Clothing and Footwear</td><td>3.98</td><td>Clothing</td><td>5.16</td></tr>
<tr><td>Housing, Water, Electricity, Gas and Other Fuels</td><td>33.12</td><td rowspan="2">Housing</td><td rowspan="2">30.1</td></tr>
<tr><td>Furnishings, Household Equipment and Routine Household Maintenance</td><td>4.19</td></tr>
<tr><td>Health</td><td>1.71</td><td>Health</td><td>2.43</td></tr>
<tr><td>Transport</td><td>12.93</td><td>Transportation</td><td>15.19</td></tr>
<tr><td>Information and Communication</td><td>4.33</td><td>Communications</td><td>3.72</td></tr>
<tr><td>Recreation and Culture</td><td>3.79</td><td>Recreation</td><td>3.1</td></tr>
<tr><td>Education</td><td>4.41</td><td>Education</td><td>5.73</td></tr>
<tr><td>Alcoholic Beverages and Tobacco</td><td>1.7</td><td rowspan="2">Other goods and services</td><td rowspan="2">6.35</td></tr>
<tr><td>Miscellaneous Goods and Services</td><td>5.36</td></tr>
<tr><td>Total</td><td>100.0</td><td>Total</td><td>100.0</td></tr>
</table>

Source: DANE.

6 See Box 1 of the September 2018 *Inflation Report*, entitled: "The measurement bias in the CPI: An update", available at http://repositorio.banrep.gov.co/bitstream/handle/20.500.12134/9535/Informe%20sobre%20Inflaci%C3%B3n%20septiembre%20de%202018.pdf?sequence=8&isAllowed=y

7 For this exercise, subclasses of the new basket corresponding to basic expenses in the old CPI were identified. With this, the CPI for January 2019 was calculated using the old methodology (without changing the statistical base nor the weights). Then, the CPI was estimated for the same basket with the new methodology, i.e., updating the weights and the statistical base. The official annual inflation in January 2019 was 3.15%, while the one calculated with identical items in the old CPI, but with the new weights and the new basis for calculation was 3.14%. This was done to compare identical baskets.

04 Medium-term Forecasts

In this *Report*, the GDP growth forecast for 2019 changed slightly.

Investment during 2018 is expected to be more dynamic than was anticipated last quarter.

Inflation in 2019 and 2020 would remain slightly above its target, partly due to the pressure from additional actual depreciation that is beyond what was anticipated, and because of the gradual disappearance of surplus production capacity.

4.1 Economic Growth in 2019

The forecast outlined in this *Report* for GDP growth during the full year is not much different than the one published last quarter. Although some of the downside risks that were identified earlier have materialized, there are domestic factors that would be having a positive compensatory impact, such as entry into force of the Financing Act, the effects of which are included in the forecasts for the first time.

Accordingly, the forecast for growth during 2019 contemplates the following changes in the external variables: 1) a downward revision of the international price forecasts for Colombia's oil and other commodities exports, which implies a faster decline than anticipated, and 2) somewhat weaker global economic activity than what was considered, as discussed in Chapter 1 of this *Report*.

In the first case, the downward revision of prices for the country's main traditional exports assumes a drop of around 8.0% in terms of trade during 2019,

A reduction of around 8.0% in terms of trade is forecast for 2019.

compared to 2018. As has been discussed in the past, this type of phenomena will tend to reduce the momentum in national revenue in the medium and long term and, therefore, limit possibilities for growth in domestic demand. However, on this occasion, these negative effects may be less, since the terms of trade (and particularly the price of oil) will remain at relatively favorable levels. In fact, the increase in 2018 was always regarded as temporary by the markets and by investors in the sector.

With respect to the growth in external demand, signs of a slowdown have been observed in recent months and this trend is expected to continue throughout the year. It would mean less dynamism in Colombian exports of non-traditional goods and services. On the other hand, less growth in the world economy also will slow the normalization of monetary policy in the advanced economies. Accordingly, there still would be a great deal of international liquidity and the country would continue to have access to international financing. This, however, would occur in an environment of considerable uncertainty, with biases to the downside.

On the domestic front, somewhat more of a recovery in the momentum in investment is anticipated, compared to what was contemplated last quarter. This applies to both civil works and machinery and equipment. In the first case, and contrary to what was noted in previous editions of this *Report*, the impulse would come largely from better performance with respect to budget spending on the part of regional and local government administrations. Although investment in the construction of highways that are part of the so-called fourth generation (4G) projects will increase annually, it will continue to face bottlenecks in terms of financial closure and environmental, land, social and law-and-order issues that will hinder spending and its contribution to economic growth in 2019.

In the case of investment in machinery and transport equipment, this year also is expected to see an increase in momentum. It would be due largely to the positive effects of tax benefits for investment in assets of this type, as contemplated in Law 1819/ 2016 and in Law 1943/ 2018 (Financing Act), which was passed recently. Nonetheless, it is important to note there are still prospects for stagnation in investment in building construction. In fact, the momentum in the demand for medium and high-income housing is expected to remain low, and the surplus supply of non-residential buildings will continue, to a large extent.

Growth in public consumption is expected to be less in 2019 than it was in 2018.

Public consumption is forecast to increase by nearly 3.5% in 2019, which is less than what would have been observed in 2018. This figure, which is similar to the government's estimates, implies compliance with the deficit levels permitted under the fiscal rule, mainly through an adjustment in the central government's operating expenses.

Accordingly, the contribution to GDP growth from public consumption would be reduced this year.

The technical staff anticipates a surge in domestic demand during 2019.

Considering all the above, *Banco de la República*'s technical staff forecasts an upswing in domestic demand during 2019, propelled mainly by added momentum in gross capital formation. Total consumption would register growth similar to what would have been observed in 2018. Contrary to the forecast for public consumption, the private component would continue to exhibit a moderate trend towards recovery, as was observed throughout 2018. This would occur in a context marked by controlled inflation near the long-term target of 3.0%, a monetary policy stance that will remain slightly expansive for most of the year, and a gradual recovery in household confidence.

Net exports will continue to detract from growth during 2019. Although expansion rates for exports and imports are expected to surge, they would be higher in the case of the latter. Foreign sales would be favored, above all, by a likely partial reversal of the negative shocks to the sectors that produce traditional goods, particularly coffee, coal, gold and ferronickel. Services, on the other hand, will contribute positively to the increase in this GDP item, given the effects of exchange-rate depreciation. In contrast, exports of non-traditional goods would report moderate growth, given the outlook for weaker external demand. Imports will post important growth, owing to added momentum in the intensive domestic demand for goods and services from abroad. Therefore, the trade deficit (measured in constant pesos) would widen in 2019.

On the supply side, the estimates developed by *Banco de la República*'s technical staff suggest growth of the Colombian economy would continue to recover in 2019, mainly due to performance by the manufacturing industry and the gradual revival of construction.

Industrial production is expected to continue to recover in 2019, given the accumulated effects exchange-rate depreciation in recent months will have on the sector's competitiveness. On the other hand, the momentum in agricultural production is expected to be similar to what it was in 2018. As forecast by international agencies, El Niño weather would not have much of an impact on the country's agricultural supply. The National Federation of Coffee Growers is forecasting better coffee production in 2019 (thanks to more favorable weather conditions and high levels of coffee-tree flowering), especially during the second half of the year.

The recovery process with respect to industrial manufacturing would continue during 2019.

The forecast for GDP in mining contemplates production similar to what it was in 2018. On the one hand, a moderate recovery in coal production during 2019 is anticipated, partly because of a low base of comparison in 2018 and in keeping with the momentum forecast

The momentum in mining production is expected to be similar in 2019 to what it was the year before.

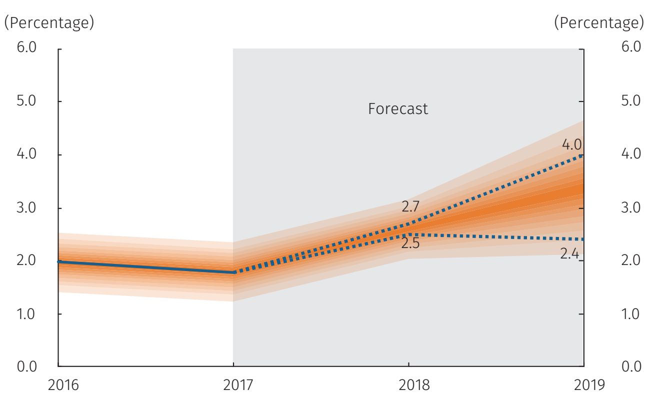
for coal exports, as outlined in Chapter 1 of this *Report*. However, the price of oil is expected to be lower as well, which could offset the foregoing, due to less investment in mining and energy projects. Lastly, the forecasts by the trade associations allow us to anticipate good momentum in the production of other metals, such as gold and nickel.

Finally, growth in construction should be positive in 2019, after declining for two years in a row. This would be due mainly to the recovery forecast for civil works associated with budget spending by local governments and, to some extent, with financial closures and the onset of several 4G projects. It is important to note that construction is linked closely to other branches of economic activity, such as industry and transport, so its recovery should contribute to better momentum in those groups as well.

Based on all of the above, *Banco de la República*'s technical staff is forecasting 3.4% GDP growth in 2019. This is the most likely figure and is slightly below the one published in the previous *Inflation Report* (3.5%). The central point and forecast range for growth (between 2.4% and 4.0% in this case) are within the fan Graph of economic growth derived from the medium and long-term models used by the technical staff and are consistent with the balance of payments scenarios outlined in Chapter 1. On this occasion, the intervals are still wide and, as illustrated in Graphs 4.1 and 4.2, there is no perception of significant biases weighing on the baseline scenario. The risk analysis considers the performance of domestic demand and the external context to be the most relevant sources of uncertainty regarding the baseline forecast. Table 4.1 shows the probability ranges in the GDP growth Graph.

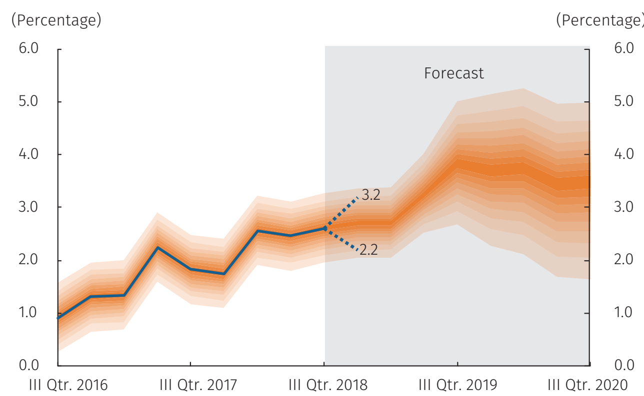
The main upward risk is a scenario of better external liquidity conditions than those considered in the baseline scenario, due to larger flows of capital into the country. The main downside risks would be related to lower terms of trade, as a result of a lower oil price; weaker

Graph 4.1
Fan Graph of Annual GDP Growth



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

Graph 4.2
Fan Graph of Annual Growth in Quarterly GDP



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

external demand, due to less growth on the part of Colombia's trading partners; and less performance than is forecast for domestic demand in the baseline scenario.

Table 4.1
Probability Ranges in the Fan Graph of Annual GDP Growth (Percentage)

Range	2019	2020
<-1.0	0.00	0.01
-1.0 - 0.0	0.00	0.21
0.0 -1.0	0.09	1.88
1.0 - 2.0	3.46	9.09
2.0 - 3.0	27.39	23.75
3.0 - 4.0	47.77	33.41
> 4.0	21.28	31.65
Between 3 & 5	67.18	56.70
Between 2 & 4	75.16	57.16
Between 1.5 & 3	30.25	29.74

Source: Calculations by *Banco de la República.*

4.2 Inflation

The central path of the inflation forecast for 2019 is somewhat higher in this *Report,* compared to the forecast presented last quarter. By 2020, however, this situation would be reversed and inflation would end a bit closer to 3.0% than what was expected. In general, the baseline forecast suggests that headline inflation would remain slightly above the 3.0% target in the next two years, with somewhat larger temporal deviations during part of 2019 with respect to this value, but moderate in any case. On the other hand, core inflation, measured with the CPI excluding food and regulated items, would increase in the coming quarters to somewhere above 3.0%, a level that would continue throughout the rest of the forecast horizon.

The partial impact of possible El Niño weather; the 6.0% increase in the minimum wage for 2019, as authorized by the government; and the Financing Act, which took effect at the beginning of this year (and is expected to stimulate investment and growth) are included in this *Report* for the first time. These shocks tend to bring upward pressure to bear on inflation, as explained below.

The forecast path now considers that inflation at the end of 2018 (headline and especially core inflation) was below the forecasts presented in previous reports. As explained in Chapter 3, this was partly due to the fact that the pass-through from depreciation to consumer prices was less than anticipated. Also, an ample food supply has kept these prices relatively low for the second year in a row, which was fairly unusual in the past.

The output gap is expected to close gradually during the next eight quarters.

As has been the case for several quarters, inflation in Colombia over the next two years is expected to continue to face low demand-pulled pressure, given surplus production capacity in the economy and a negative output gap. Although the central path contemplates an increase in the output growth rate in this forecast horizon, at levels slightly above the economy's natural output level, it would not be enough to eliminate these surpluses entirely. This situation would make it possible for non-tradable CPI inflation to continue to converge gradually from levels near 4.0% at the end of 2018, to 3.0% in the next eight quarters.

However, it is important bear in mind that the output gap should close gradually, if the medium-term growth forecasts presented in this *Report* are borne out and, in this sense, it would be near zero towards the end of 2020. Therefore, demand will gain importance as a source of inflationary pressure in the future, especially towards that year.

On this occasion, the forecasts imply a more devalued exchange rate than previously expected. The recent drop in the price of oil and the downward revision of the forecast for that commodity partly explain this result and offset the effects of lower anticipated increases in foreign interest rates (see Chapter 1). Accordingly, inflation in Colombia is expected to be subject to upward pressures during the coming quarters, more so than those contemplated in the past and originating with a sharper trend towards depreciation of the peso.

Additionally, the depreciation witnessed in the second half of last year should have passed through completely by the start of 2019. As indicated in various sections of this *Report*, that process up to December was unusually low, showing results below those forecast with respect to tradable inflation and contributing to the surprise drop in inflation excluding food and regulated items to less than 3.0%.

Accumulated and projected depreciation will push up tradable inflation in the coming months from the low levels achieved recently. This situation also should produce an upward trend in inflation excluding food and regulated items, which would more than offset the decrease that would be observed in non-tradable inflation.

Inflation in 2019 also will be affected by the readjustment in the minimum wage, which was raised this year by a percentage that exceeds the inflation target, plus the labor productivity gains that are considered normal in Colombia (around 1.0% per year). The minimum wage in Colombia is an extremely important reference price for the local job market, given the high percentage of employees who are minimum wage earners. Different salaries in a variety of markets may be

Depreciation of the peso will bring upward pressure to bear on inflation in 2019.

tied implicitly or explicitly to readjustments in this wage. Consequently, it also constitutes an important part of a company's labor production costs.

It is to be expected that the change in the minimum wage will affect primarily prices for certain services, such as home management and security, and those of restaurants, hotels and bars, because they are unskilled labor intensive. The prices in these sectors, which are usually indexed to past inflation, also can move according to adjustments in the minimum wage, since they establish a guideline for setting wages in their markets.

However, the fact that the unemployment rate is still relatively high compared to what could be its non-inflationary level, and which also tended to rise towards the end of the year, limits the impact that adjustment might have on a wider range of salaries. Therefore, the effect on headline and core inflation, which is reflected in the central path of the forecast outlined in this *Report*, is small because of this adjustment.

A weak bout of *El Niño* weather, as is being predicted, tends to have a slight and temporary impact on food inflation.

In addition to the factors mentioned already, the impact a possible weak bout of *El Niño* weather could have on food prices is added to the baseline forecast in this *Report* for the first time. When this *Report* was written, the likelihood of this phenomenon was quite high and much more than what was estimated three months ago, although its occurrence was still not entirely certain. A phenomenon with these characteristics tends to have very little effect on food inflation, and also is usually limited to one year.

The assumption in this *Report* is that *El Niño* would result in moderate food price hikes during the first half of the year, but they would return to lower levels by the second half, once the weather begins to normalize. No upward impact on energy prices due to the climatic was contemplated on this occasion.

This shock to food prices will have a temporary impact on headline inflation, tending to raise it during the first two quarters of 2019. However, any such increase would decline during in the second half of the year. Accordingly, the impact of this phenomenon should be restricted to 2019.

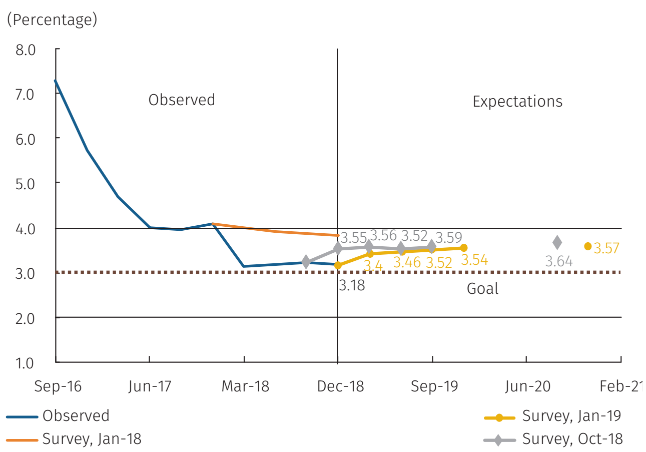
Inflation in 2019 also will be affected by readjustments in regulated prices above the 3.0% target.

In addition to the slight upward effect produced by the weather, there will be further readjustments in the prices of regulated goods and services that are well above the 3.0% target, as has happened for some time, although with a downward trend. As in 2018, the highest increases during the year thereafter will be in electricity prices charged to the consumer. Besides, 2019 is expected to continue to see further growth associated with the need for more investment in the sector. Also, some readjustments are contemplated for dismantling subsidies

Graph 4.3
Annual Inflation Forecasts by Banks and Brokerage Firms

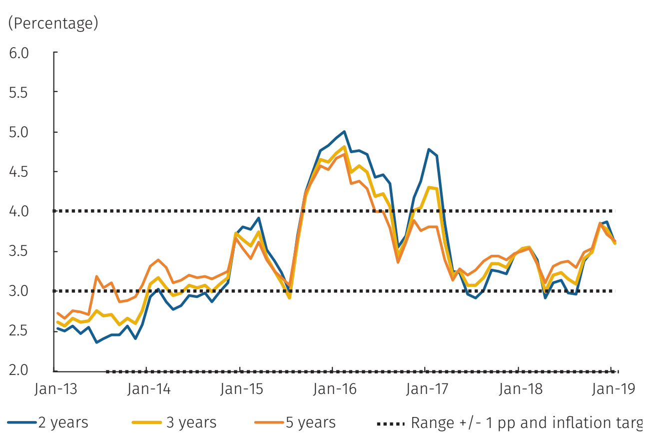
Source: *Banco de la República.*

Graph 4.4
Observed Annual Headline Inflation and Inflation Expectations (at three, six, nine, twelve and twenty-four months)



Sources: DANE and *Banco de la República* (Quarterly Survey of Expectations).

Graph 4.5
Break-Even Inflation Expectations
(At two, three, five and ten years)
(Monthly average)[a/]



a/ Nelson & Siegel Method
Sources: *Banco de la República* (Quarterly Survey of Expectations).

and for the delay in the startup of operations at *Hidroituango*.

Similarly, increases of over 3.0% are anticipated in the case of gas, considering that supply is expected to grow less than demand. In terms of gasoline and diesel, the drop in the international price of oil should result in minor adjustments to the prices witnessed last year, although somewhat above the inflation target, taking into account the effect of the upward path forecast for the exchange rate.

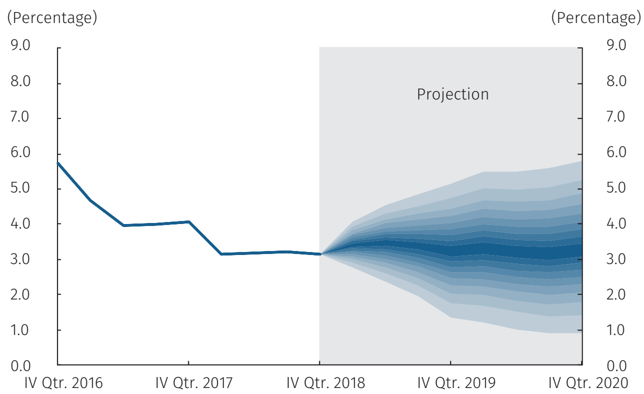
The way inflation expectations have behaved recently suggests that inflation will be slightly above the target in the coming years. According to the surveys conducted at the beginning of January 2019, when this *Report* was being prepared, expectations for different horizons were around 3.5%. In particular, those obtained from the monthly survey of market analysts and operators conducted by *Banco de la República* were between 3.3% and 3.5% at one and two years, respectively. These values are slightly higher than those obtained in October (Graph 4.3). The expectations reported mainly by companies in the quarterly survey, at twelve and twenty-four months, were 3.54% and 3.57%, in contrast to 3.6% for both horizons, as noted in the report for the previous quarter (Graph 4.4). Finally, with the data for January, the expectations derived from public debt securities maturing in two, three and five years were between 3.47% and 3.61%. These levels are very similar to those observed three months ago (Graph 4.5).

In summary, total consumer inflation should increase slightly at the start of 2019, responding to the effects of observed and anticipated depreciation, and temporary and minor weather shocks, readjustments in the relative prices of some regulated goods, and the relatively high increase in the minimum wage. However, the existence of significant surplus production capacity will limit these increases and, as a result, inflation at the close of this year should end at somewhat above 3.0%; although, it would be converging towards that level. No significant changes in these numbers are expected by 2020, bearing in mind that the anticipated recovery in economic growth and demand should help to close the output gap to a large extent.

4.3 Risk Balance

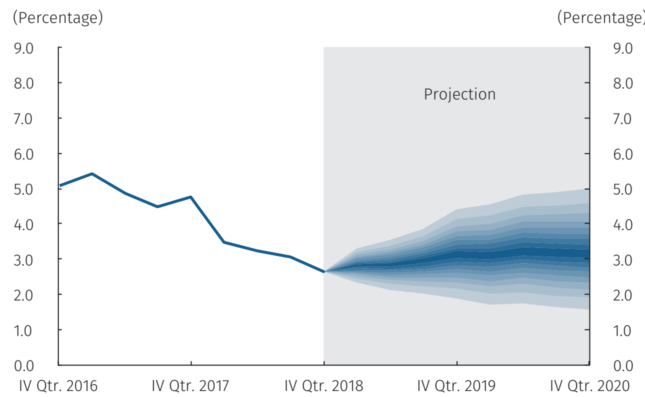
The risk balance (fan Graph) for total consumer inflation and inflation excluding food and regulated is illustrated in fan Graphs 4.6 and 4.7. It was constructed on the basis of the central path for both these variables, derived from the unified forecast developed by the technical staff. A fan Graph of headline inflation was estimated for this *Report* without biases for 2019, but with slight upward biases for 2020, although lower than those reported in the previous edition. This was done particularly since the actual baseline forecast path is a bit higher, mainly because, as explained in the previous section, some effects attributed to the 6.0% minimum wage hike and the possibility of *El Niño* weather were included. These events were not taken into account for the baseline scenario outlined in the September 2018 report.

Graph 4.6
Fan Graph of Headline Inflation



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

Graph 4.7
Fan Graph of Headline Inflation, Excluding Food and Regulated Items



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

Headline inflation risks considered in this *Report* are related mainly to the uncertainty surrounding the exchange rate, specifically how it will behave in the future. There are important risks in the external context that could cause depreciation as well as appreciation, leading the Colombian peso down a path against the dollar other than what is contemplated in the baseline forecast scenario. This would have a subsequent impact on consumer inflation via exchange rate pass-through to prices, by way of different channels. The magnitude of this pass-through will vary in each situation, depending on the origin, circumstances and intensity of the shock. These and the other risks that were considered to construct the fan Graph are outlined below.

Colombia's external demand faces several downside risks.

The following are the main risks to the upside:

A more depreciated exchange rate than the one included in the baseline forecast scenario.

Two possible events would result in a more depreciated exchange rate: 1) less external demand, and 2) a lower international price for oil.

1) The baseline forecast path outlined in this *Report* contemplates somewhat of a slowdown in growth in external demand during 2019 and 2020, responding to the reduced momentum anticipated for several economies in the region, the United States, Europe and China. However, one could see lower growth rates than those being considered, since when this *Report* was written there was uncertainty about some of the forces driving global growth. For example, the positive effects of the economic stimuli related to tax and investment issues in the United States could dissipate faster than expected. Also, there are risks to the levels of household and corporate borrowing in that country, which are increasing significantly and could have repercussions relevant to growth. On the other hand, economic performance might not be as good in China (due to financial stability risks) and Europe, compared to the baseline forecast, as has been the case in recent quarters. Finally, there is the uncertainty that exists with respect to trade tensions, especially between the United States and China, and in the wake of Brexit.

If this scenario were to materialize, it would have consequences for inflation in two directions. However, the upward effect likely would dominate, because pass-through pressures (generated by the depreciation that would come from reduced inflows of foreign currency) would not be offset entirely by the weakness in demand.

2) Included in this *Report* is a stable course for the international price of oil during the entire forecast horizon, with an average of around USD 63 per barrel for the Brent reference, which is less than in 2018 (USD 71.6). This decline, which went to USD 50 at the end of 2018 and partially recovered in 2019, moving to USD 60 at the time this *Report* was written, does not have a serious impact on the baseline forecast for inflation, since the high levels witnessed last year were regarded as temporary.

A weaker external context for Colombia could bring upward pressures to bear on inflation, through depreciation of the exchange rate.

The price of crude oil anticipated in the baseline forecast path is based on a strong global supply, both in terms of production and inventories, which is being tapered in part by the discipline in complying with the agreements on export quotas reached by the OPEC countries. In addition, the demand for crude oil is expected to continue to show some weakness, owing to the reduced forecasts for global growth, as mentioned already.

There are still downside risks weighing on the international price of oil.

However, this scenario has intrinsic risks. There is the possibility that economic growth on the part of the world's large oil consumers, such as China, Europe and the United States, might be less than forecast, due to the circumstances explained in previous paragraphs. Moreover, one cannot rule out an increase in world supply, hand in hand with added production from non-OPEC countries, such as the United States and Russia, and even from partner countries, fracturing the current agreement.

Given these factors, the coming quarters could see a lower price for oil than is contemplated in this *Report*. In this scenario, there would be two paths whereby consumer inflation would be affected: on the one hand, there would be depreciation and an upward effect on consumer prices would be expected, via the pass-through mechanism; on the other, there would be compensation from the reduction in various costs, especially those of some raw materials and transport. However, judging from similar events in the past, the upward effect is expected to prevail.

Prices of regulated goods and services that exceed those projected in the baseline forecast path.

The baseline forecast outlined in this *Report* contemplates a downward path with respect to the annual variation in regulated prices, partly in view of the fact that no relevant shocks are anticipated in association with the probable bout of *El Niño* weather. This is because it is expected to be a weak phenomenon and should not affect energy prices, as has occurred in the past in response to climate events with similar characteristics.

However, the baseline forecast path faces upward risks associated, on the one hand, with possibly more of an impact from *El Niño* and, on the other, with the announced (apparently partial) dismantling of subsidies for public utilities, specifically electricity and gas subsidies for customers in socio-economic brackets 1, 2 and 3. In addition, there are problems with the startup of operations at *Hidroituango*, which would represent an important supply of low-cost energy, and the fragile financial situation of some companies in the sector, which prevents them from accessing long-term energy contracts with cheaper prices.

***El Niño* weather and possible regulatory changes can generate increases in the price of energy during 2019 that would be higher than those contemplated.**

Finally, it is important to note that if any of the aforementioned risks were to materialize, not only would the behavior of headline inflation be directly and temporarily affected, it also could be impacted indirectly and, to some extent, permanently due to the effect these events can have on expectations and the activation of indexing mechanisms.

The following are the main downside risks considered in this Report:

A more appreciated exchange rate than the one incorporated into the baseline forecast scenario.

Higher increases than those foreseen in the country's sovereign risk premia cannot be ruled out.

At the time this *Report* was written, external financing costs for Colombia were subject to a complex scenario in which the risk-free interest rate would grow less so than was anticipated in recent months, due to the latest announcements by the Fed (which is expected to ease the contractionary adjustment in its policy rate and balance sheet). Also, there is the position taken by the European Central Bank to halt hikes in its interest rate, at least until mid-2019. On the other hand, the country risk premium rose at the end of 2018 and is expected to continue with to increase slightly, coming close to its historical average by the end of 2019. Although these events have opposite effects on Colombia's financing costs, the central path of the forecast outlined in this *Report* expects the surplus global liquidity originating with lower-than-previously-expected external interest rates to dominate.

However, there is the possibility of a faster and/or higher than anticipated increase in the risk premium, since the downward risks weighing on terms of trade, external demand and the country's fiscal and external balance would lead to a reduction in foreign currency inflows, if those risks were to materialize. However, the main scenario associated with this risk is that such a reduction would be more than offset by a large inflow of capital to emerging economies, particularly the Colombian economy, due to surplus global liquidity, causing the peso to appreciate in the aggregate, contrary to what is implied in the baseline forecast scenario. This would have a downward impact on consumer inflation due to the expected decline in prices for some imported goods and costs.

Less growth in internal demand than what has been considered in the baseline forecast path:

Due to the Financing Act passed at the end of 2018, positive effects are forecast for investment in the country. Consequently, the baseline forecast path contemplates an upswing in this variable for 2019 and 2020. However, there is the possibility that the consequences of this law are being overestimated, especially for 2019, since the response from investment may take longer than expected.

Considering the linkages generated by investment, less dynamic performance on the part of this variable would lead to a scenario with weaker domestic demand than what is contemplated in the baseline forecast path described in this *Report*. This would tend to generate downward pressure on inflation.

Finally, it is important to point out that the baseline forecast path and the current risk exercise were constructed following the CPI, with December 2008 as the reference base. As a result, they do not incorporate the changes associated with the new methodology being used to calculate this index (base December 2018). Therefore, these exercises are subject to further uncertainty in addition to that stemming from the economic environment.

In keeping with the set of risks described in this *Report*, the fan Graph implies that the likelihood of inflation being between 2.0% and 4.0% by the end of 2019 rose to 59.9%, and was 48.9% for 2020 (tables 4.2 and 4.3). The extent of the forecast density function shown in Graph 4.8, according to the shaded area, only includes 90% of it. The results, like the central forecast, assume an active monetary policy in which the policy interest rate set by *Banco de la República* is adjusted to ensure the inflation target is met.

Table 4.2
Estimated Probability of Inflation between 2.0% and 4.0% by December 2018
(Percentage)

Report	Probability
March 2018 report	51.7
June 2018 report	52.8
September 2018 report	54.2
December 2018 report	59.9

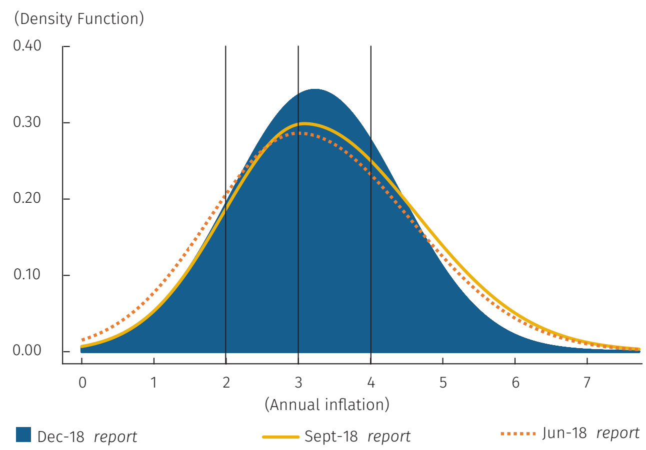
Source: Calculations by *Banco de la República.*

Table 4.3
Probability Ranges in the Fan Graph of Headline Inflation
(Percentage)

Range	2019	2020
<2.0	14.1	18.2
2.0 - 2.5	11.9	10.4
2.5 - 3.0	15.6	12.5
3.0 - 3.5	17.0	13.3
3.5 - 4.0	15.4	12.7
>4.0	26.0	33.0
Between 2 & 4	59.9	48.9

Source: Calculations by *Banco de la República.*

Graph 4.8
Cross-section of the Fan Graph of Headline Inflation for December 2019



Source: *Banco de la República.*

Annex
Macroeconomic Forecasts by Local and Foreign Analysts

This annex offers a summary of the latest forecasts by local and foreign analysts on the main economic variables for 2019 and 2020. At the time they were consulted, the analysts in question had access to data up to February 1, 2019.

1. Forecasts for 2019

On average, the local analysts expect 3.2% GDP growth, which is slightly less than the estimate in the *Inflation Report* for the previous quarter (3.3%). Similarly, the foreign analysts who were consulted forecast 3.1% GDP growth, on average, which also is less than what was estimated in the report on inflation last quarter (3.4%).

As for prices, the local analysts estimate 3.5% inflation by the end of the year, which is higher than their forecast in the previous report. Foreign analysts expect it to be 3.6% by the end of the year. Both forecasts are within the range of

Table A1
Forecasts for 2019

	Real GDP growth (Percentage)	CPI inflation	Nominal exchange rate End of	Nominal DTF (Percentage)	Fiscal deficit (Percentage of GDP)	Unemployment rate in the thirteen major metropolitan areas (Percentage)
Local analysts						
Alianza Valores[a/]	3.2	3.8	3,300	5.1	2.7	9.0
ANIF [a/]	3.3	3.5	n.d.	5.2	2.4	10.6
Banco de Bogotá [a/]	3.0	3.4	3,100	5.0	2.9	10.0
Bancolombia [a/]	3.2	3.4	3,130	4.9	2.4	9.4
BBVA Colombia [a/]	3.0	3.2	3,150	4.7	2.4	9.7
BTG Pactual [a/]	3.4	3.3	3,074	5.0	2.8	9.8
Corficolombiana	3.2	3.8	2,980	5.0	1.8	n.d.
Corredores Davivienda [a/ b/]	3.2	3.6	3,100	4.5	2.6	9.8
Credicorp Capital [c/]	3.3	3.6	3,000	5.1	2.1	10.0
Davivienda [a/]	3.2	3.6	3,100	4.5	2.6	9.8
Fedesarrollo [a/]	3.3	3.6	n.d.	n.d.	2.4	n.d.
Itaú [a/d/]	3.3	3.4	3,180	4.9	2.7	10.3
Ultraserfinco [a/e/]	3.3	3.6	2,970	5.3	2.9	9.5
Average	3.2	3.5	3,099	4.9	2.5	9.8
Foreign analysts						
Citigroup Global Markets	3.1	3.7	3,025	n.d.	2.1	n.d.
Deutsche Bank	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Goldman Sachs	3.2	3.3	3,000	n.d.	2.4	n.d.
JP Morgan	3.1	3.7	3,200	n.d.	2.6	n.d.
Average	3.1	3.6	3,075	n.d.	2.4	n.d.

a/ The forecast for the deficit pertains to the central government (GNC).
b/ Formerly Corredores Asociados
c/ Formerly Correval
d/ Formerly Corpbanca, up to June 2017
e/ Antiguo 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	2.0	3.5	3,300
ANIF	3.5	3.6	n.d.
Banco de Bogotá	3.5	3.0	3,125
Bancolombia	3.4	3.2	3,260
BBVA Colombia	3.3	3.2	3,020
BTG Pactual	3.5	3.0	3,000
Corficolombiana	3.5	3.5	3,010
Corredores Davivienda[a/]	n.d.	n.d.	n.d.
Credicorp Capital[b/]	3.2	3.3	2,900
Davivienda	n.d.	n.d.	n.d.
Fedesarrollo	3.5	3.0	n.d.
Itaú[c/]	3.6	3.0	3,180
Ultraserfinco[d/]	3.5	3.1	2,950
Average	3.3	3.2	3,083
Foreign analysts			
Citigroup Global Markets	3.5	3.3	2,950
Deutsche Bank	n.d.	n.d.	n.d.
Goldman Sachs	n.d.	n.d.	2,800
JP Morgan	3.1	3.4	n.d.
Average	3.3	3.4	2,875

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

2.0% to 4.0% and are near the inflation target set by the Board of Directors of *Banco de la República* (BDBR) for 2019, but above the long-term target for inflation (3.0%).

In terms of the exchange rate, the local analysts expect the market exchange rate (MER) to average COP 3,099 by the end of the year. The estimate in the survey for the previous *Report* was COP 3,007. Foreign analysts are forecasting a MER close to COP 3,075 by the end of the year.

With respect to the rate on fixed-term deposits (DTF, in Spanish), local analysts are forecasting 4.9%, on average. They also anticipate unemployment at 9.8%.

2. Forecasts for 2020

For 2020, both the local and foreign analysts anticipate 3.3% economic growth. As for inflation, the local analysts are forecasting 3.2% and the foreign analysts, 3.4%. In terms of the nominal exchange rate, the local analysts expect COP 3,083, on average, while the average forecast by the foreign analysts is COP 2,875.

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