
BOARD OF DIRECTOR'S REPORT TO THE CONGRESS OF COLOMBIA

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BOARD OF DIRECTOR'S
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Banco de la República

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Bogota, 27 March 2020

**HONORABLE CHAIRMEN AND MEMBERS
of the Third Standing
Constitutional Committees
of the Senate of the Republic
and the House of Representatives**

Dear Sirs:

In compliance with Article 5, Act of Congress 31/1992, the Board of Directors of *Banco de la República* hereby submits to the Congress of the Republic of Colombia a report on the macroeconomic results for 2019 and the measures *Banco de la República* has recently taken to provide the economy with the necessary liquidity for its consideration. Furthermore, the breakdown of the foreign reserves and their performance, the financial position of the Bank and its forecasts, and the Bank's environmental management are described.

Cordially,



**Juan José Echavarría
Governor**

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Introduction

The main purposes of the first *Report* that the Board of Directors of *Banco de la República* (BDBR) submits to Congress at the beginning of its regular meetings each year are: to examine the performance of the country's economy during the immediately preceding year; to explain the actions for monetary policy and its contribution to the implementation of the inflation target; to report on the administrative management of the Central Bank and the management of the country's foreign reserves; and to discuss the economic outlook for the current year. While undergoing the preparation of this *Report* according to these guidelines, the pandemic of coronavirus arose and the collapse in oil prices took place. The strong reaction of capital and exchange markets reflect the stress and the bewilderment of economic agents in the face of this situation. The BDBR is aware that due to the timing of this *report* it will not be possible to provide all the answers that the Congress and the country are expecting. Market volatility and uncertainty about the future evolution of the pandemic and of oil prices demand caution when analyzing the new economic outlook resulting from this unexpected event.

At the time of writing this *Report*, the Board of Directors had taken measures to ensure the liquidity of the economy in both pesos and US dollars. Regarding liquidity in pesos, the total allotment for liquidity operations (repos) with public and private debt instruments was increased up to COP 23.5 trillion (t); the group of institutions with access to the auctions and the liquidity window of the Central Bank was expanded; the use of private debt instruments eligible to be used in repo operations was allowed; the maturities for liquidity operations were extended from thirty to ninety days with private debt instruments, and from one to sixty days for liquidity operations with public debt instruments. Also, the permanent injection of liquidity into the economy was authorized through the purchase of public debt instruments and securities issued by credit institutions to a wide group of financial agents. As for liquidity in US dollars, a new mechanism of intervention in the foreign exchange market to sell dollars through non-delivery forwards (NDF) was announced, originally offering USD 1,000 million (m). Additionally, it decided to carry out FX swaps auctions in dollars for USD 400 m, in which *Banco de la República* sells US dollars in cash and purchases them as futures (at 60 days). These measures facilitate the flow of enough credit resources

and the proper operation of the payments system, also helping to alleviate the pressures in the foreign exchange market.

Banco de la República has deployed all available resources to tackle this emergency. The analysis tools developed by the Central Bank, along with the experience of the technical staff, will continue to be of great assistance to develop a complete diagnosis of the situation that will serve as a basis to take further policy measures as may be required. The results of these analyses will be announced in the upcoming *Monetary Policy Reports* and will be collected in the July edition of the *Report of the Board of Directors to the Congress of Colombia*.

Complying with its initial objectives, this *Report* analyzes the performance of the Colombian economy during the past year. In 2019, the country's economy grew 3.3%, consolidating the recovery started in 2018, when it grew 2.5% after the adjustment of the economic activity to the fall in oil prices in late 2014, which resulted in a slowdown in the country's economic growth rate to just 1.4% in 2017. This recovery took place thanks to domestic factors and contrasted the slowdown in the region. GDP growth in 2019 was higher than that of our peers in the region, and widely surpassed the average from Latin America and the Caribbean, which mainly remained stagnant, growing only 0.1% in 2019, as reported by the International Monetary Fund (IMF).

The growth of the Colombian economy during the previous year occurred within a context of a weakening of the external demand and lower terms of trade, which shows that domestically originated factors played in favor of maintaining economic dynamism. Among the latter, the strengthening of private consumption and private investment stands out, both of which expanded to rates over 4.0%, surpassing the records for 2018 and prior years. The good performance of the aforementioned items was reflected in the dynamics of domestic demand, which grew at a 4.5% rate. Weak external demand led to a growth of real exports that was far below that of imports (3.1% vs. 9.2%), which widened the country's trade imbalance.

The expansion of economic activity in 2019 coincided with an increase of headline consumer inflation from 3.18% in 2018 to 3.8% in 2019. However, this acceleration of inflation was not due to demand pressure, as the economy continued to operate below its potential despite its larger GDP growth. The upward pressure came, to a large extent, from transitory factors such as deterioration in food supply or modifications in the *ad valorem* tax to liquor. The increases in food prices were concentrated in the group of perishable items, originated by *El Niño* and other weather phenomena that affected several regions of the country. At the end of 2019, these shocks began to fade as the supply returned to normal. On the other hand, the pass-through of peso depreciation, which averaged 11% in 2019, pressed upwards the prices of processed foods. Similarly, it affected the basket of tradable goods (excluding food and regulated items), whose annual variation accelerated to 2.2% by the end of 2019 compared to 1.0% by the end of 2018. As for regulated goods and

services, although the annual variation in this group remained relatively high, its adjustment pace decreased, mainly due to the performance of fuel prices.

Given the transitory nature of price increases and the existence of spare capacity, the Board decided to maintain the policy rate constant at 4.25% throughout the year. On the one hand, the spare capacity continued to exercise a moderating effect on inflation; on the other hand, transitory increases in prices due to deterioration in supply must not be confronted with increases in interest rates, unless these result in a significant increase in inflation expectations that may threaten to feedback on inflation in subsequent periods. Yet, this did not happen. The increase in inflation expectations was moderate, as monitored monthly by the technical staff through the expectations survey carried out by *Banco de la República*, in addition to other sources of information. This was possible since the economic agents foresaw the transitory nature of the price shocks and continued to trust the inflation target. Inflation results for January and February (3.62% and 3.72%, respectively), both less than the figure for inflation recorded in 2019 (3.8%), are consistent with the expectations of economic agents that the figure for inflation will approach the 3.0% target by the end of 2020.

Banco de la República's policy rate plays a key role in determining the rates for savings and credit in the economy. Since 30 April 2018, it has remained unchanged at a nominal 4.25%. By subtracting from that nominal interest rate the average value of inflation expectations to twelve months recorded since April 2018 (3.36%), an (*ex ante*) real interest policy rate of 0.89% is obtained. The monetary policy stance is determined by comparing this real policy rate with the neutral real interest rate. Estimates for the last 22 months suggest that the neutral real rate has fluctuated between 1.4% and 1.25%. The real policy rate of 0.89% has remained under that range all the time. Consequently, it can be stated that the monetary policy stance has been moderately expansionary during that period.

The BDBR began to reduce the policy interest rate starting in December 2016 from a 7.75% peak, and continued to do so until 30 April 2018, when it reached a level of 4.25%. It has remained unchanged since then. This reduction was transmitted to market interest rates with different lags. The first to react was the interest rate for commercial credit, which exhibited sharp falls in its different modalities during 2017 and 2018. The benchmark interest rate for consumer credit took longer to respond. Its decline concentrated in 2019, when it moved from 19.01% at the end of 2018 to 15.15% by the end of 2019. This context of low interest rates stimulated the demand for credit, especially that for consumption, whose portfolio closed last year with an annual 15.8% variation (real: 11.6%), which contributed to boost domestic demand via increased household consumption. The portfolio aimed at enterprises (commercial + microcredit) increased 4.2% in nominal terms (real: 0.4%) at the end of December 2019. The slow recovery of this type of credit, albeit low interest rates, shows that the demand for financing by firms continues to be weak.

The following is a summary of the main issues addressed in the *Report* with the purpose of providing an overview before delving into each one of them in subsequent chapters.

External Context

During 2019, global economic activity was affected by trade tensions and the imposition of tariffs between the United States and China, the risks of a disorderly *Brexit*, and social protests in several countries. Trade volumes decreased, business and consumer confidence weakened, volatility of the financial markets increased, and global economic activity slowed down. While global growth reached 3.2% in 2017 and 3.0% in 2018, the figure for 2019 would have been 2.4%, according to estimates by the IMF and The World Bank (WB). Among advanced economies, in 2019 the Euro zone grew 1.2% and the United States 2.3%, which meant a reduction of 80 bp and 60 bp *vis-à-vis* 2018, respectively. Regarding emerging economies, China recorded a GDP variation of 6.1% in 2019, below the figure observed in 2018 (6.4%). Latin America and the Caribbean exhibited a substantial slowdown, reducing their growth from 1.0% in 2018 to 0.1% in 2019, according to the Economic Commission for Latin America and the Caribbean (ECLAC).

Faced with a scenario of low growth and absence of inflationary pressures, some central banks from advanced economies and emerging markets continued with a process of monetary relaxation. The Fed lowered its policy rate on three occasions, reducing the range from 2.25% - 2.50% to 1.50% - 1.75%, while the European Central Bank (ECB) cut the interest rates to historical lows and resumed its asset-purchase program in November in amount of EUR20,000 million a month. The central banks of Japan and England maintained their rates stable, but continued with their asset-purchase programs. As for emerging economies, the People's Bank of China lowered its interest rates three times, cutting them by 20 bp in total; on the other hand, Brazil, Mexico, Peru, and Chile reduced their rates in order to provide a greater monetary stimulus.

The weakening of external demand pressed downwards the prices of raw materials, while geopolitical and idiosyncratic situations led to greater volatility. As for oil, the implicit prices per barrel for Colombian crude decreased from an average of USD 62.9 in 2018 to USD 58.4 in 2019 as a result of the fall in the international prices of Brent oil, which is used as a reference in Colombia. Similarly, international prices of coal declined from an average of USD 85.9 per ton in 2018 to USD 75.8 in 2019. As a result, the country's terms of trade suffered a deterioration that contributed to widen the trade imbalance in 2019, as will be explained later in this *Report*.

For 2020, the initial forecasts by international agencies suggested a slight upturn in global growth, sustained in the recovery of some emerging economies that experienced adversities in 2019 and in a lower risk perception following the signature of the first phase of the trade agreement between the United

States and China. However, global circumstances have changed dramatically. The great concern is the health of humanity. The pandemic of the new coronavirus could bring a decline in global economic activity of a still unpredictable but significant magnitude. Added to this is the sharp fall in the prices of international oil prices, which are already close to being the minimum of the last decade due to the contraction of the demand for crude oil and to the excessive supply generated by the recent failure of negotiations by the OPEC and its allies. In this environment, the stock exchanges have recorded great losses. Value chains, most of which involve parts manufactured in China, have begun to be interrupted, and the movement of people has declined. On the economic front, the greatest concerns are the prospects of a global recession and its negative effects on employment. Some central banks, such as the Federal Reserve of the United States as well as those in Canada, Australia, and England have reacted with strong cuts to their interest rates and with provision of liquidity to the economy. The central banks from the region have started to act similarly, as is the case with Chile, Mexico and Peru, among others. As mentioned, at the time of writing this *Report*, the Board of Directors had taken extraordinary measures to ensure the liquidity of the Colombian economy in both pesos and US dollars.

Economic Activity

As already noted, the 3.3% expansion of GDP in 2019 originated in the strengthening of domestic demand. Regarding total consumption, the main contribution came from households, whose aggregate consumption grew to 4.6%, compared to 3.0% in 2018. Consumption of durable and semi-durable items stands out for its dynamism, with growth figures of 6.7% and 5.7%, respectively. The reduction of the interest rate for consumption loans may have influenced this result. The increases in consumption of non-durable items (4.6%) and services (3.9%) were also relatively high, especially when compared with their low records in 2018 (2.0% and 2.6%, respectively). This suggests that other factors played in favor. It is worth noting here the strong increase of external remittances by workers that increased the available income of households, and immigration, which has increased consumption of goods and services in the country. Finally, public consumption increased 4.3% along the year, which, despite being lower than the figure recorded in 2018 (7.0%), may still be seen as a positive outcome, considering the Central Government's limitations in expenditure necessary to comply with the fiscal rule.

Gross capital formation grew 4.3% in 2019, twice the pace observed in 2018 (2.1%), which boosted economic activity. The most dynamic item was that of investment in machinery and equipment, thanks to the stimulus by the Financial Act of 2018 (*Ley de financiamiento*) and the renewal of public transport fleets in different cities. Investment in construction exhibited a heterogeneous behavior. On the one hand, there was a contraction in housing investment due to the significant excessive supply that has not yet adjusted via prices. On the other hand, investment in other buildings and structures exhibited a

significant recovery after the fall observed in 2018, thanks largely to increased investment in civil works.

From the standpoint of the productive sectors, the greatest contribution to economic growth came from branches of economic activity that can be characterized as services such as trade, repair, transportation, and accommodation; together with public administration and defense, education and health, and financial and insurance activities, whose annual growth rates revolved around 5.0%. Contrastingly, primary activities such as agriculture and mining exhibited low growth (2.0% or less). Even so, it should be noted that mining grew again in 2019 (2.1%) after five consecutive years of contraction after the oil shock in 2014.

Inflation

Annual consumer inflation in 2019 closed at 3.80%, surpassing the figure of a year before (3.18%). The increase in inflation was explained to a large extent by transitory supply shocks due to unfavorable weather conditions that pressed food prices upwards. The annual increase in this item (5.66%) was the largest contributor to headline inflation in 2019. Also, the pass-through of depreciation of the peso to the prices of tradable goods contributed to this. The dynamics of domestic demand had little impact on prices largely due to the persistence of spare capacity and a slack labor market. Credibility in the monetary policy stance also contributed to this, maintaining inflation expectations close to 3.0%.

On the other hand, core inflation, which provides useful information for monetary policy by reflecting the state of aggregate demand better, recorded lower increases than headline inflation and from levels that were lower than the target. Particularly, inflation excluding food and regulated items, which had stood at the end of 2018 at 2.6%, gradually converged to the target throughout the year, closing 2019 at 3.1%. The other core inflation indicators monitored by the Central Bank followed a similar trend, albeit with higher values, with which the average of the four indicators was 3.3% at the end of 2019.

Employment

Although in 2019 the pace of economic activity continued to recover vis-à-vis 2018, the unemployment rate (UR) maintained a growing trend both for the national total as for all other geographical domains. The increase in the unemployment rate was partially mitigated by a widespread reduction in labor supply. Among the factors that could have influenced this behavior are the increase in remittances from abroad and the downward pressure that migration from Venezuela could have exerted on labor income of less skilled and informal workers, discouraging them from participating. Thus, the impact

of migration on the UR would have been low, and this new population would be being absorbed mainly by the informal market.

The national UR stood at 10.5% in December 2019, a level higher than observed both in the second quarter of the year (10.3%) as in December 2018 (10.1%). In general, this has been the result of a labor demand (as measured by the occupation rate, OR) that has been contracting faster than the labor supply (measured by the global participation rate, GPR)¹. Thus, for example, the OR exhibited an annual contraction of 0.8 percentage points (pp) in the moving quarter of October-December and remained relatively stable *vis-à-vis* the first half of 2019. The annual declines in this indicator are explained by higher growth in the working-age population *vis-à-vis* the figure for occupied individuals. The annual deterioration of the OR is due to the contraction in employment of the other municipalities and rural areas, where there is evidence of a weak agricultural labor demand. In turn, during the same period, the national GPR continued its downward trend, falling 0.6 pp with respect to the records from a year before. The largest reductions in the labor supply have taken place in rural areas, mainly in secondary household workers (not chiefs) and young people with no higher education, who during this period became inactive. By economic branches of economic activity, agriculture, which accounts for about 16% of the total number of employed individuals in the country, exhibited the worst performance regarding employment generation. Particularly, it is evident that in the agricultural sector crops from non-specialized units showed the biggest fall in the number of occupied individuals during 2019. The sectors of trade, construction, and services are leading job creation in the national total. The last two positively contributed the most to the increase of occupied individuals in the thirteen major urban areas, while the branches related to services to enterprises such as real estate, renting and business, recorded less job generation in this domain.

External Balance

The current account deficit of the balance of payments in 2019 amounted to USD 13,800 m, greater by USD 753 m to the records in 2018. As a share of GDP, it rose from 3.9% in 2018 to 4.3% in 2019. Several factors explain this increase. Firstly, the dynamics of domestic demand (driven by a higher household expenditure) and gross capital formation thrust the imports of goods, which reached the amount of USD 50,821 m, with an annual 2.5% increase (USD 1,237 m) along the year. Secondly, the lower export prices and the slowdown of the country's main trading partners were reflected in a 4.6% fall of exports of goods, reaching USD 42,374 m, lower by USD 2,066 m than the amount exported in 2018. As a

¹ These relationships are better understood with the following formulas:

$$UR = 1 - [\text{occupation rate (OR)} / \text{participation rate (GPR)}]$$

$$OR = \text{occupied} / \text{working-age population (WAP)}$$

$$GPR = \text{economically active population} / \text{working-age population (WAP)}$$

result, the trade deficit in 2019 totaled USD 8,447, with a USD 3,303 m increase (64.2%). In contrast, the remaining items of the current account contributed to moderate the imbalance originated in the trade of goods. Thus, the deficit in primary income lowered USD 1,455 m; that of the balance of services USD 62 m; and the surplus of current transfers increased by USD 1,033 m.

As detailed in the *Report*, the decline in exports originated mainly in lower sales of coal, oil, and industrial products abroad. In the case of coal, the fall in external sales was due to the combined effect of lower volume exported (14%) and falling prices (11.7%). Something similar happened with exports of crude oil, whose selling prices were lower by 7.2%, although on this occasion the fall in prices was partially offset by the increase in the quantities sold (1.3%). Regarding imports, their increase is explained mainly by the increase of foreign purchases of fuels and lubricants (28.3%), transportation equipment (13.4%), and consumer goods (5.3%). As for the reduction of the deficit in factor income, this was mainly due to the decrease of the profits obtained by companies with foreign direct investment (FDI), particularly those dedicated to mining, quarrying, and oil exploitation. Regarding current transfers, a net income of USD 8,676 m was received during 2019, i.e., 13.5% more than in 2018. This result is explained particularly by the largest amount of workers' remittances, which amounted to USD 6,744 m in 2019, with an annual 6.7% increase (USD 422 m). The main increases in income from remittances came from the United States, Spain, Canada, and Australia.

The current account deficit in 2019 increased the external financing needs, which, according to the financial account of the balance of payments, came from net capital inflows for USD 13,102 m (4.1% of GDP), higher by USD 687 m to a year ago, when it amounted to USD 12,415 m (3.7% of GDP). FDI continued to be the main source of external resources reaching a value of USD 14,493 m (4.5% of GDP), higher by USD 2,958 m (25.6%) to the amount received a year before. Close to one-third of these resources from FDI were directed toward the mining-energy sector in order to sustain or increase production levels. Other areas that received significant amounts from FDI were financial and business services, trade and hotels, and manufacturing industry. Additionally, access to other sources of external financing continued (USD 5,156 m), such as indebtedness and portfolio flows, within a context where both international interest rates and risk premia remained relatively low.

Foreign Reserves

Net foreign reserves as of December 2019 totaled USD 53,167.2 m, amount higher by USD 4,774.3 m to the balance recorded in December 2018. This increase resulted from the purchase of foreign currency and the profitability of the country's foreign reserves. The Board of Directors decided to increase the amount of foreign reserves at its session in September 2018, considering the temporary nature of the Flexible Credit Line (FCL) with the IMF. The accumulation mechanism was put option auctions. This program extended until 31 May

2019, when the Board decided to suspend it in order to assess its incidence on the behavior of the foreign exchange market. Through that program, USD 1,878 m were accumulated (of which USD 1,478.1 m were in 2019). Seeking to strengthen the accumulation of reserves and considering that the National Government planned to perform some monetization operations in US dollars in its financial programming of 2019, *Banco de la República* bought USD 1,000 million from the National Treasury on 1 February 2019 at the representative market rate in force on that day.

During 2019, USD 2,322.76 m were received from the profitability of the reserves, an amount higher than in the past few years. This increase is explained by the increase in the prices of portfolio bonds facing the fall in the interest rates (valorization factor), while interest accrual remained at relatively high levels compared to the average in the decade (interest factor).

The amount of net foreign reserves is complemented with a line of contingent financing with the IMF which was renewed on 25 May 2018 and was reaffirmed by the IMF on 20 May 2019, for USD 7,848 million special drawing rights (SDR), which at the end of 2019 amounted to approximately USD 10,800 m. Access to this credit line only is granted to member countries with good economic performance, prudent policies, and a strong economic policy framework. The country has never used these resources, but it has considered prudent to count on them in the event of an abrupt cut to external financing.

The methodology adopted by *Banco de la República* to determine the adequate level of foreign reserves has the same rationale as the reason for the Liquidity Coverage Ratio (LCR, by its acronym in English) proposed within the Basel III surveillance framework for banks. This establishes that the liquid assets must be enough to cover liquidity needs within a predetermined term and considering a stressed scenario. Thus, the foreign reserves should at least cover the projection of the current account deficit plus external debt repayments over the next twelve months. With information to December 2019, the foreign reserves exceeded these items by close to USD 7,000 m. Besides, the foreign reserves, along with the LCF from the IMF, should cover such external financing needs and feasible capital outflows by residents and non-residents, a criterion that was also fulfilled at the end of 2019.

Profit of the period

In 2019, *Banco de la República* obtained an operational result of COP 7,149 billion (b) as a result of income by COP 9,447 b and expenditures by COP 2,299 b. *Vis-à-vis* the previous year, income exhibited a COP 5,381 b increase (132.3%) and expenses showed a COP 474 b increase (26%).

Income earned during 2019 is explained mainly by yields from the country's foreign reserves, from the investment portfolio in national treasury bonds (TES), and from liquidity operations through expansion repos. The greatest

income from foreign reserves took place mainly by the fall of the interest rates in US Government bonds during the year, which caused a valorization of the assets that make up the foreign reserves portfolio.

On the other hand, the higher expenses are explained mainly by the increase in the remuneration to the National Government's deposits at *Banco de la República* as a result of the greater volume of these deposits.

01

International Context: Results of 2019 and Outlook for 2020

During 2019, global economic activity was less dynamic in comparison to previous years amidst trade and political tensions as well as low levels of investment, industrial production, and trade. In response to the weakness of productive activity, central banks generated broader financial conditions which counteracted the contraction in demand abroad and increased the risk appetite for instruments issued by emerging countries.

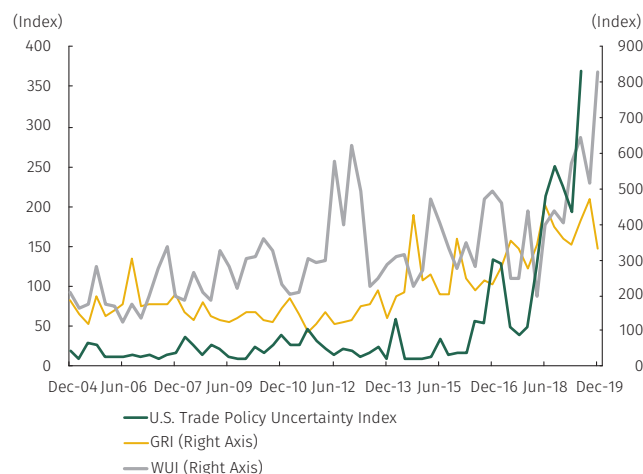
The beginning of 2020 pointed to an economic recovery in some emerging countries, positive effects on real activity from monetary stimulus by different central banks, and greater trade stability resulting from the signing of the first round of the trade agreement between the United States and China. All of the above would suggest a slight improvement in global growth. However, the spread of coronavirus (Covid-19) and its potential effects have considerably raised the level of uncertainty about not only public health but also real and overall financial activity. The effect on global value chains, the deterioration in the terms of trade, the potential impact on Colombia's external demand and foreign direct investment, and the increased risk aversion threaten the international environment this year. The response of central banks in the developed world points to looser financial conditions compared to those in 2019. Nevertheless, the uncertainty about the effects of the pandemic and the responses of the economic authorities suggest an increase in the volatility of asset prices and exchange rates.

1.1 Performance during the Second Half of 2019

1.1.1 Economic Growth

In the second half of 2019, overall economic activity slowed down and continued the slowing trend that has been registered in recent years. While the overall growth stood at 3.2% in 2017 and at 3.0% in 2018, the International Monetary Fund (IMF) and the World Bank (WB) suggest that global growth in 2019 may have been 2.4%. Tensions between the United States and China, the risks of a no-deal *Brexit*, and social protests in some emerging economies at the end

Graph 1.1
Geopolitical Risk Index (GRI),^{a/} World Uncertainty Index (WUI),^{b/}
and US Trade Policy Index^{c/}



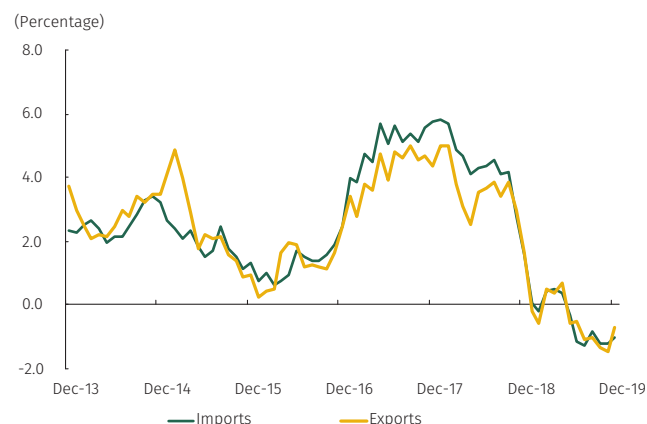
a/ The Geopolitical Risk Index (GRI) is built by calculating the number of articles (as part of the total number of news items) regarding the geopolitical risk that are included in eleven national and international newspapers.

b/ The World Uncertainty Index (WUI) has compiled quarterly indices of economic uncertainty generated for 143 countries since 1996. The latter is constructed from the "uncertainty" tallies (and their variants) of the quarterly country reports and is published by the Economic Intelligence Unit (EIU).

c/ The Index of US Trade Policy is part of the group of specific indices of economic policy uncertainty (EPU), and they reflect the frequency of articles in US newspapers that discuss economic uncertainty and contain references to trade policy.

Sources: Ahir, H.; Bloom, N.; Furceri, D. (2018). "World Uncertainty Index" [on line], available at: https://www.policyuncertainty.com/wui_quarterly.html; Baker, S.; Bloom, N.; Davis, S. (2016). "Measuring Economic Policy Uncertainty" [on line], available at: http://www.policyuncertainty.com/media/EPU_BBD_Mar2016.pdf; Caldara, D.; Iacoviello, M. (2017). "Measuring Geopolitical Risk", International Finance Discussion Papers, No. , Board of Governors of the Federal Reserve System.

Graph 1.2
Annual Growth in Volumes of World Trade^{a/}



a/ Annual growth of the Quarterly Moving Average of Import and Export Volumes
Source: CPB-Bureau for Economic Policy Analysis.

of the year generated high uncertainty (Graph 1.1). This had major repercussions for investments, market volatility, and trade volumes.

Business confidence and global investment climate deteriorated during 2019 in both advanced and emerging economies.¹ Uncertainty associated with trade tensions and the levying of tariffs were factors that contributed to making companies be more cautious about acquiring capital goods and prompted people to delay purchases of durable goods. Moreover, residential investment has also been slowing down in some countries.² Last of all, the volume of international trade deteriorated (Graph 1.2).

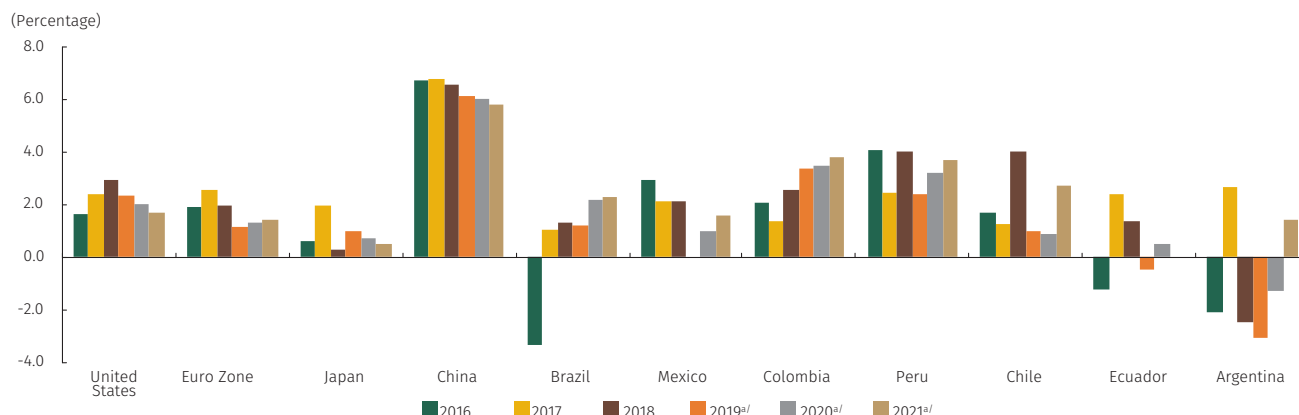
In this context, within the group of advanced economies, the euro area grew at a rate of 1.2 % and the United States at a rate of 2.3% in 2019. This implied a reduction of 80 basis points (bp) and 60 bp respectively compared to what was seen a year earlier (Graph 1.3).

With respect to emerging economies, China registered a 6.1% change in the GDP in 2019, a result that is lower than the 6.4% seen in 2018. Latin America and the Caribbean have also experienced lower growth with respect to 2018. According to the Economic Commission for Latin America and the Caribbean (ECLAC) the growth of the region probably stood at 0.1% in 2019 thus reflecting more sluggishness with regard to what was seen a year ago (1%) (Graph 1.3). In contrast, Colombia showed an expansion in economic activity that was greater than the growth in the rest of the countries in the region. The variation in the GDP in 2019 was 3.3% which represented an annual increase of 80 bp. The fact that the growth momentum came from strong domestic demand in an environment of ample overall liquidity and weak foreign demand implied a deepening of the current account deficit as will be explained later in this *Report*.

1 See the note "Recent Developments in the Global Economy," prepared by the BIS for the January 2020 governors' meeting.

2 In its latest *Economic Outlook* report, the Organization for Economic Cooperation and Development (OECD) noted that this weakness has been evident in countries such as Canada, Australia, and South Korea while, in the euro area, the construction sector has been particularly affected.

Graph 1.3
Annual GDP Growth



a/ Estimated.

Sources: International Monetary Fund and central banks.

Another factor that is important for Colombia and other countries in the region has been the persistent contraction of the Venezuelan economy which has been accompanied by a fall in crude oil production³ and large migration flows. The migration crisis poses a challenge for the recipient countries since a rapid increase in inflows of migrants increases fiscal expenditures⁴ and, possibly, external imbalances although it could favor productive capacity and domestic demand in those economies.

1.1.2 International Financial Conditions and Prices in 2019

Given that inflation and inflation expectations remained at low levels,⁵ some central banks continued the process of monetary easing during the second half of the year to deal with the low growth scenario for 2019. In 2019, the Federal Reserve (Fed) lowered their policy rate three times and dropped the range from 2.25%-2.50% to 1.50%-1.75% while the ECB cut interest rates to historical minimums (-0.5% in the rate applied to deposits) and in November, resumed their purchase program of EUR 20.000 billion in assets per month. Although the Bank of Japan and the Bank of England kept their rates stable, both kept

During the second half of 2019, some central banks continued a process of monetary easing to cope with the low growth scenario.

3 According to the latest report by the Organization of Petroleum Exporting Countries (OPEC), production was 706,000 barrels per day in the last quarter of the year, a figure that shows a substantial reduction from the amounts reported during the same period in 2018 and 2017 when the production was 1.2 and 1.8 million barrels per day respectively.

4 According to the October 2019 IMF *Regional Economic Outlook* report, the impact of the migration crisis compared to a baseline scenario in which there is no migration will be to increase public spending for 2023 by 0.6% of the GDP in Colombia and 0.3% in Ecuador and Peru, and raise the potential average GDP growth for 2017-2030 by between 0.2 and 0.3 pp in Colombia, Panama, Peru, Chile, and Ecuador.

5 As of December 2019, inflation in the United States was 2.3% and in the euro area inflation was 1.3%.

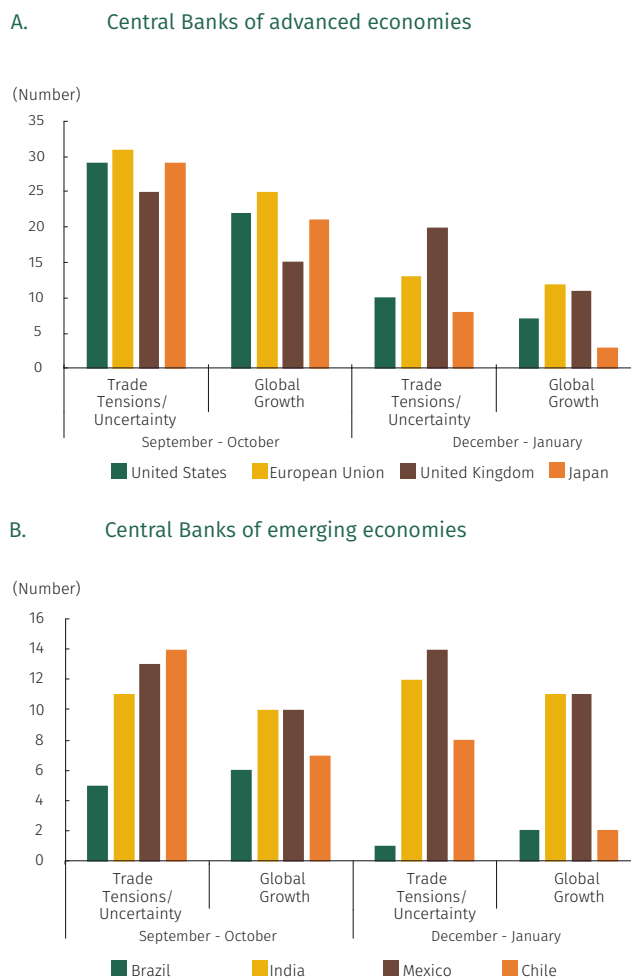
their asset purchase programs unchanged. In the case of emerging economies, the People’s Bank of China lowered interest rates three times during this period by cutting rates a total of 20 bp. Brazil, Mexico, Peru, and Chile, in turn, reduced their rates in order to provide greater monetary stimulus.

According to central bank communiqués, some of the most important reasons behind interest rate decisions were associated with international uncertainty and trade tensions. However, there have been decreasing mentions of trade tensions, uncertainty, and global growth in minutes put out by the central banks of advanced economies in recent months, a fact that has not been so clearly evident in the minutes of the central banks of emerging countries (Graph 1.4).

This low interest rate environment led to liquidity conditions remaining at historically ample levels⁶ in 2019. Long-term sovereign bond yields in the major advanced economies reached historical lows⁷ and went into negative territory in the cases of Japan and Germany (Graph 1.5). Also, the yield curves in this group of economies flattened significantly, and in some countries such as the United States, they reversed at a few points in 2019.

Flexible financial conditions in advanced economies in 2019 allowed portfolio flows to emerging economies to remain relatively stable during the second half of the year (Graph 1.6). However, differences between regions were evident (Graph 1.7). While the emerging economies in Asia were

Graph 1.4
Number of Mentions in Central Bank Minutes Associated with Trade Tensions, Uncertainty, and Low Global Growth^{a/}

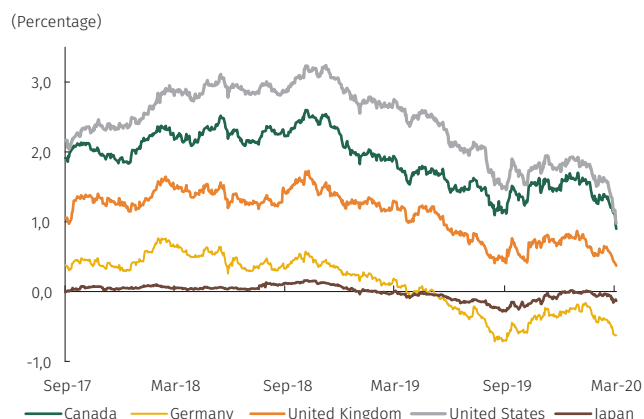


a/ The graph shows the number of mentions related to commercial or political uncertainty (e.g. trade tensions, trade war, uncertainty, geopolitical tensions, Brexit, etc.) and perceptions of a downturn (e.g. downward risks, weak, weakness, etc.) in the minutes of central bank monetary policy meetings in advanced and emerging economies. Source: calculations by Banco de la República based on the minutes of the central banks.

6 One way to calculate international liquidity is through the growth of transnational bank credits; this information is reported by the Bank for International Settlements (BIS). The level of growth of these loans, including credit and debt instruments suggests that global liquidity has increased in recent quarters. Cross-border lending to the non-financial private sector, in particular, grew at an annual rate of 7.6% as of September 2019, a level that is higher than the average for the last five years (3.98%) and higher than the average for 2018 (2.4%) and 2017 (0.09%).

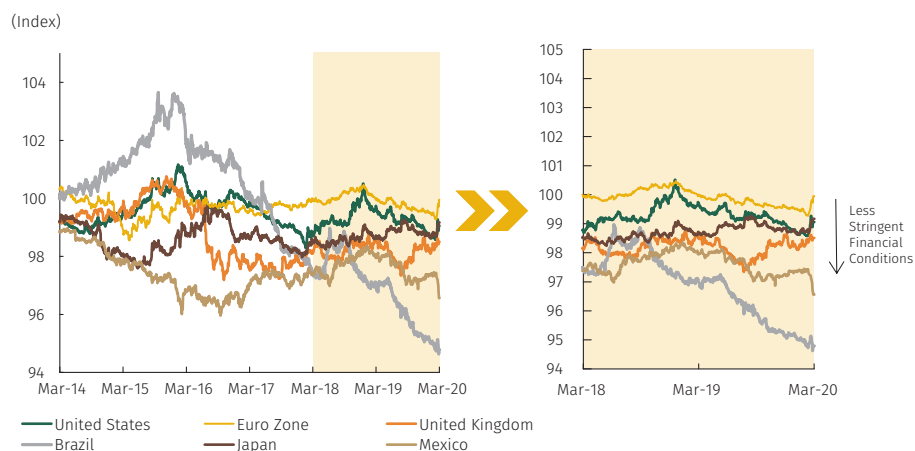
7 Between January and September 2019, U.S. and German sovereign bond yields registered an average fall of 102 bp and 78 bps respectively.

Graph 1.5
Returns on 10-year Sovereign Bonds for Advanced Economies



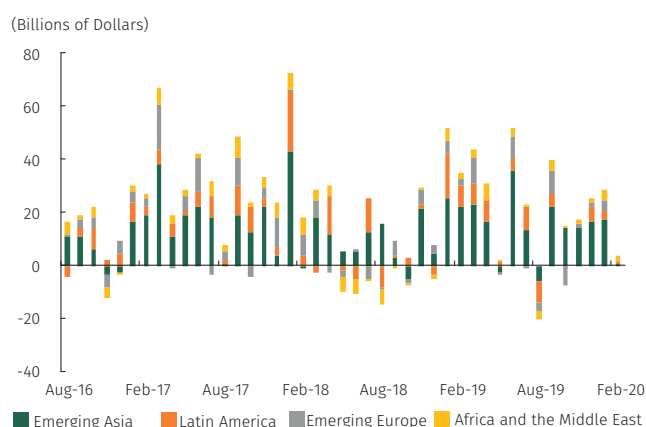
Source: Bloomberg.

Graph 1.6
International Financial Conditions^{a/}



a/ Index of Goldman Sachs financial conditions. Higher values indicate more stringent financial conditions. The index includes daily data on short-term rates, yields on sovereign bonds, corporate spreads, stock prices, and exchange rates. Source: Bloomberg.

Graph 1.7
Portfolio Flows to Emerging Markets by Region^{a/}



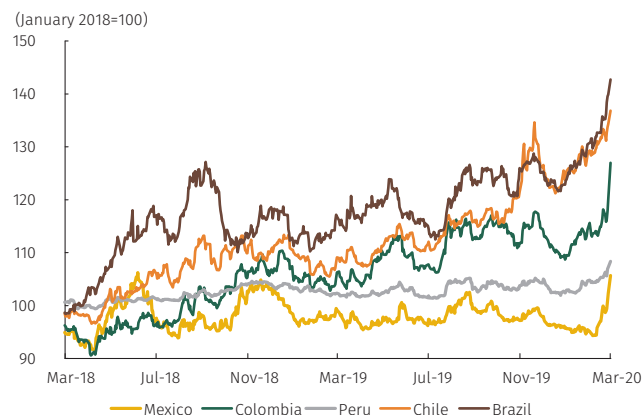
a/ Estimates as of October 2019. Source: Institute of International Finance.

the major recipients of this capital, the European ones experienced a significant decline.⁸ Latin America, in turn, first registered a contraction and then a significant inflow of investment in December. In Colombia, significant outflows were seen during some of the months in the second half of the year with flows that showed a more volatile behavior compared to previous years. A similar situation was seen in the flows to Brazil and Peru where there were portfolio outflows during the second half of 2019. Risk premia, in turn, measured by *credit default swaps* remained at historically low levels.

Despite the stability of international financial conditions, the exchange rate movements of emerging market currencies were particularly volatile during the ending quarters of 2019 (Graph 1.8) thus reflecting a decoupling of sovereign credit risk measures from exchange rate dynamics.

8 The flows to Asia can be explained, in part, by the inclusion of Chinese assets in international financial indices. In April 2019, it was announced that the Chinese public debt denominated in renminbi would be included in the Bloomberg Barclays Global Aggregate Index at a weighting of 6.0%. In addition, the announcement was made in September that China would be included in the JP Morgan public debt indices for emerging markets (GBI-EM). This is in addition to the process of including large-cap Chinese stocks in the emerging markets variable income index, MSCI Emerging Markets index that began in May 2018.

Graph 1.8
Nominal Exchange Rate Indices for some Economies in the Region



a/ Higher values imply depreciation of the currencies with respect to the dollar.
Source: Bloomberg.

Graph 1.9
International Price of Oil (Brent and WTI)



Source: Bloomberg.

1.1.3 Prices of Commodities and Terms of Trade

In 2019, the international developments also had an effect on the international prices of commodities. In general, the weakness of demand pushed those prices down and the geopolitical and idiosyncratic situations fostered an environment of greater volatility. In the case of oil, rapid growth of production in the United States and a lower demand for crude oil outweighed supply cuts by OPEC and its allies as well as the declining production in Venezuela and Iran. This resulted in crude oil prices declining and standing at an average of USD 64.2 per barrel for Brent crude in 2019 (Graph 1.9). This, together with the decline in international prices for coal contributed to the decrease in the terms of trade for this country⁹ and other countries that export these types of goods.

1.2 Recent developments and outlook for 2020

1.2.1 Economic Growth

By 2020, international agencies expected a slight upturn in global growth compared to the previous year based mainly on the recovery of some emerging economies that experienced adversity in 2019 and a lower perception of risk exposure following the signing of the first phase of the trade agreement between the United States and

China. However, from the economic point of view, the propagation of Covid-19 has become a risk to global growth, overall macroeconomic policy, and the foreign context of the Colombian economy.

In January before the spread of the virus, the IMF, World Bank, and UN forecasts suggested a global growth of between 2.5% and 2.7% in 2020. Advanced economies would probably grow 1.6%¹⁰ in 2020 according to the IMF. The United States was expected to reach a rate of 2.0% and the euro zone 1.3% this year. Moreover, the growth of emerging economies was expected to be 4.4% in 2020, and China was expected to grow at a rate of 6.0% based on the IMF forecasts. With respect to

⁹ In 2019, oil and its derivatives, and coal held a 40.4% and a 14.3% share respectively of the country's total exports.

¹⁰ These projections correspond to the updates in the January 2020 *World Economic Outlook (WEO) Report*. The forecasts are expressed in Purchasing Power Parity - PPP.

Latin America and the Caribbean, the UN expected a growth of 1.3% in 2020 (Table 1.1). All these forecasts were made before the pandemic spread due to which significant downward revisions are expected in the next few weeks.

Table 1.1
Growth Rates of the Regions Based on the World Bank, the International Monetary Fund (IMF),
and the United Nations (UN)
(percentage)

	World Bank						IMF						UN					
	PPP ^{a/}			Market Prices			PPP ^{a/}			Market Prices			PPP ^{a/}			Market Prices		
	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}	2019 ^{b/}	2020 ^{b/}	2021 ^{b/}
World	2.9	3.2	3.3	2.4	2.5	2.6	2.9	3.3	3.4	2.4	2.7	2.8	2.9	3.2	3.4	2.3	2.5	2.7
Advanced Economies				1.6	1.4	1.5	1.7	1.6	1.6							1.7	1.5	1.7
Euro Zone				1.1	1	1.3	1.2	1.3	1.4							1.2	1.4	1.5
Emerging Economies				3.5	4.1	4.3	3.7	4.4	4.6							3.4	4	4.3
Latin America and the Caribbean				0.8	1.8	2.4	0.1	1.6	2.3							0.1	1.3	2.0

a/ Purchasing power parity

b/ Estimated

Sources: World Bank, IMF, and the UN.

The spread of the Covid-19 pandemic has generated an outlook of greater uncertainty and high risk for worldwide economic activity. Its impact on the global economy could be produced through a variety of channels. Given China's increasing integration into the world economy¹¹ and its major importance as a producer of intermediate goods, the delay in the production of goods following the closure of factories in this Asian country has led to disruptions in global value chains with respect to supply. A prolongation of this situation would represent a risk for the global manufacturing sector and slow down the expected recovery with clear consequences for international trade.

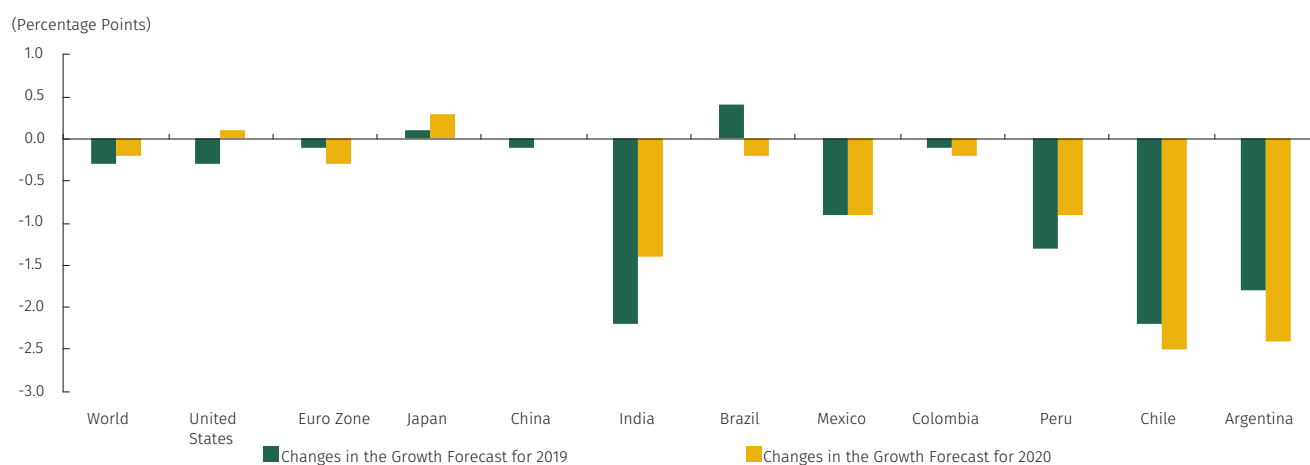
With regards to demand, the restrictions on mobility imposed by several countries to curb the spread of the virus have significantly undermined the services sector and tourism especially. International trade could, likewise, be affected by the pandemic. The weakness of demand in China will probably cause a negative shock for economies exporting commodities since the export prices and quantities are likely to fall. In addition, the uncertainty generated by the coronavirus could have a significant impact on consumer confidence and

11 In 1999, China's share of the global GDP was 3.3% while that figure was probably 16.9% in 2019.

investment decisions, and this could bring about a deterioration in domestic demand in several countries.

In that respect and in spite of the fact that growth projections had been going through a downward correction in recent months (Graph 1.10), the new international scenario suggests there will be stronger future cuts in the growth forecasts made by international organizations for, at least, 2020.

Graph 1.10
Change in the IMF's Growth Forecasts ^{a/}



a/ The changes for 2019 and 2020 correspond to the WEO forecasts published in their January 2020 update minus the outlook for growth for the same years published in the July 2019 WEO. A negative value on the bars means that the forecasts have been adjusted downwards.
Source: IMF, calculations by Banco de la República.

1.2.2 Financial Conditions and International Prices in 2020

The emergence of new downward risks associated with the spread of coronavirus has led the central banks of the major economies to take measures. Between the 3rd and the 15th of March, the Fed cut their benchmark rate two times and lowered the range from 1.50%-1.75% to 0.0%-0.25% as a measure to deal with the risk that the pandemic represents for this economy. Although the ECB, in turn, has kept their interest rates the same, they announced the launching of the Pandemic Emergency Purchase Program (PEPP) with EUR 750.000 b. With this, they will purchase public and private assets to deal with the global health crisis. The Bank of Japan likewise reported that it will take measures to facilitate corporate financing and will carry out market operations and asset purchases to provide liquidity in order to ensure the country's financial stability.

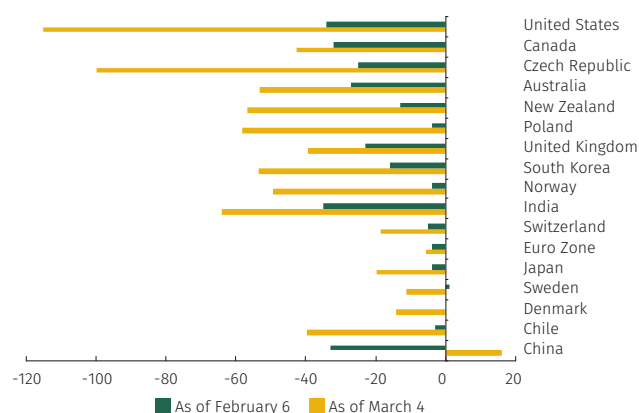
The central banks of the countries in the region have also begun to implement measures in response to the pandemic and its possible

effects on the economy.¹² Multilateral agencies, in turn, have announced that they will provide tools to help countries cope with this shock.¹³

In this situation, the expectations arising from the financial instruments and the surveys regarding the policy interest rates of the central banks indicate a more expansionary monetary policy in the next twelve months. Furthermore, in the majority of the countries, the expectations of reductions in interest rates have risen in comparison to what had been expected a month ago (Graph 1.11). This scenario suggests that a strong policy reaction is expected as a result of the health crisis.

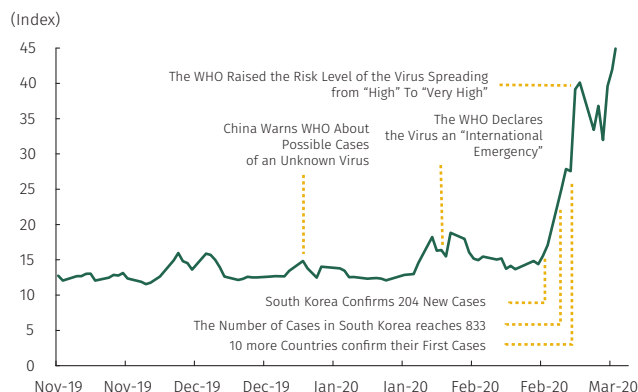
Moreover, the increase in uncertainty due to the spread of the virus to more countries has brought about high volatility in the financial markets, and this has been reflected in some common indicators of the perception of international risk such as the VIX (Graph 1.12). This situation has led investors to search for higher quality assets and has caused the yields for the 10-year United States Treasury bonds to drop to historical lows. The preliminary estimates of the Institute of International Finance (IIF) with respect to the capital flows to emerging markets

Graph 1.11
Implicit 1-year Monetary Policy Rate minus Current Policy Rate of some Economies ^{a/}



a/ Expectations for the policy rate are obtained from the OIS. A negative value in the graph means that a monetary easing is expected in that country.
Source: Bloomberg.

- 12 The Central Bank of Brazil recently cut their rates 100 bp, from 4.25% to 3.25%, announced measures to repurchase sovereign securities, and more flexibility in the reserve requirements and loan-loss provisions for loans as well as other measures to provide liquidity. Furthermore, the Bank of Mexico lowered its policy interest rate 50 bps to 6.5% and announced an increase in the size of the currency hedging program to keep the foreign exchange market functioning. The Central Bank of Chile cut rates from 1.75% to 1.0% and adopted a series of measures to ensure the functioning of credit markets and the transmission of monetary momentum. The central banks of Peru and Argentina dropped their policy rates 100 bp and 200 bp respectively and have carried out operations to provide liquidity. In addition, the Federal Reserve opened *swap* lines in dollars with the central banks of nine countries for a period of at least six months in order to facilitate access to operations in that currency.
- 13 On March 4th, the IMF announced that they will make about USD 50,000 b available through their emergency funding instruments to support low-income countries and the emerging economies in their management of the recent outbreak of coronavirus. Of this, USD 10,000 b will be available at zero interest for the poorest members through the *rapid credit facility*. The World Bank Group, in turn, made USD 14,000 b available to help countries to deal with the health and economic impact caused by the coronavirus. Of these resources, USD 2,700 b will come from new financing from the International Bank for Reconstruction and Development (IBRD), USD 1,300 b from the International Development Association (IDA) that will be complemented by the reallocation of USD 2,000 b from the Bank's existing portfolio, and USD 8,000 b from the International Finance Corporation (IFC). In addition, after its most recent board meeting, CAF - the Latin American Development Bank reiterated the existence of a contingent credit line of USD 300 m available to its shareholder countries that allows "support for suitable risk management and a timely response to the possible effects that may be associated with the coronavirus in the region."

Graph 1.12
VIX Index

Source: Bloomberg.

There is uncertainty about the net effect of the health emergency and the response of the advanced economies' monetary policy on movements of capital to or from emerging economies during 2020.

in February suggest a significant standstill in this sector (Graph 1.7).

In this respect, a strong injection of liquidity associated with the easing of monetary policy is expected to favor lax financial conditions. Therefore, there is uncertainty about the net effect of the health emergency and the response of the advanced economies' monetary policy on movements of capital to or from emerging economies during 2020.

For Colombia, the recomposition of international financial indices, especially the indices of public debt instruments, could play an important role in portfolio flows during 2020.¹⁴ The performance of the weightings for these indices is an increasingly relevant factor when the greater importance of passive investors compared to active investors is taken into account.¹⁵ Likewise, the uncertainty about local and global economic growth as well as the volatility of the prices for our main exports could have an impact on flows of foreign direct investment into this country.

1.2.3 Prices of Commodities and Terms of Trade

The impact of the pandemic has also started to become apparent in the commodities markets. The volatility of commodity prices caused by the increase in uncertainty together with the deterioration of the demand from China and the expectations of lower global demand has been reflected in the international prices of

14 Last September, JP Morgan announced that, starting in February 2020, Chinese sovereign bonds denominated in renminbi would begin to be part of their family of emerging market public debt indices, Government Bond Index-Emerging Markets (GBI-EM). In the most important index, GBI-EM Global Diversified, the Chinese securities will have a weighting of 10%. The readjustment of the index will be done gradually between February and October of this year. Every month, Chinese securities will rise 1 pp as a share of this index. With this adjustment, Colombia's share in this index will decline approximately 1 pp. Furthermore, last January 30th, Bloomberg announced that starting September 1st, the sovereign debt in local currency of Colombia, Peru, and Romania will be eligible to be part of the Global Aggregate and Global Treasury indices. The providers of these indices expect that Colombia's weighting in each one of them will be 0.1% after the restructuring.

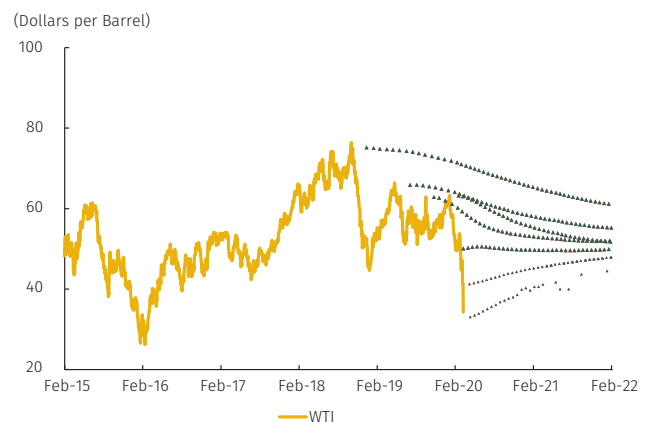
15 An investor follows a passive strategy if his portfolio allocations are guided by the weights that a financial index is made up of. According to the April 2019 IMF Report on Global Financial Stability, the number of investors who follow this type of strategy has risen in the last few years and the assets that are being followed by the most relevant international financial indices have quadrupled since 2009. The IMF states that a stronger presence of foreign investors who follow international financial indices increases the correlation of portfolio flows between countries.

some of these markets. Countries exporting these goods are particularly vulnerable to the impact of this pandemic given the importance of China to the global demand for commodities.

In particular, oil prices have recorded their largest drop since 1991 as a result of the spread of the virus and the failure of OPEC negotiations to rescue the oil market from the effect of the coronavirus.¹⁶ The oil price for the Brent crude oil benchmark has fallen by more than 30% so far in 2020. Moreover, the impact of the pandemic has caused the International Energy Agency's (IEA) crude oil demand forecasts to be significantly reduced,¹⁷ and the uncertainty surrounding prices to be greater. In addition, information from the futures market suggests that prices over the next few months could fall below USD 40 per barrel¹⁸ (Graph 1.13). According to the IEA, the outlook for the oil market will depend on how efficient the measures to contain the spread of the coronavirus are and how persistent its impact on economic activity is.

To summarize, in spite of the fact that growth expectations showed a more dynamic economy in 2020 compared to last year, the performance of global economic activity has become more uncertain mainly due to the spread of the coronavirus and the mitigation and prevention measures implemented by some governments. The worldwide economy could be affected by both supply and demand shocks associated with the pandemic. In this international scenario, central banks have provided monetary stimuli to cope with the negative impacts of the virus. Consequently, while ample liquidity conditions are expected to continue to support capital inflows to emerging economies, an environment of increased uncertainty and risk aversion is expected to negatively affect global growth and the prices of various assets and goods (e.g. raw materials). The volatile situation of the worldwide crude oil market points to a particularly accentuated uncertainty for Colombia.

Graph 1.13
Futures for International Price of Oil (WTI)



Note: the yellow line represents the daily prices for WTI Crude Oil. The dotted green lines show the market forecasts for the prices of WTI futures contracts starting from the contracts with a maturity of 1 month to the latest data available on 2023 and for some dates in recent months (the futures curve is shown with a lag of two months).
Sources: U.S. Energy Information Administration (EIA) and Bloomberg.

- 16 After the meeting between OPEC members last Friday, 13 March, the price of crude oil declined 10%. The following weekend, Saudi Arabia announced its unilateral decision to cut its official sales prices and increase production by more than 2 million barrels per day in a bid to regain market share and increase pressure on Russia to cut oil production.
- 17 In a baseline scenario where the coronavirus continues to spread to more countries and governments impose greater containment measures, the IEA estimates that China's demand for oil will suffer an annual drop of 1.8 million barrels per day, and that global demand for oil will be reduced by 2.5 million barrels per day during the first quarter of the year.
- 18 As of March 9, the futures contracts for Brent crude oil for delivery in July 2020 were trading at USD 35.9 per barrel. Those with a delivery date in December 2020 were trading at USD 39.02 per barrel.

In a context of extreme global volatility, the Board of Directors of *Banco de la República* (BDBR) has recently adopted some measures that are intended to strengthen the liquidity of the payment system in Colombia. For one thing, a new foreign exchange hedging mechanism was established through *non-delivery forwards* (NDF) operations for the sale of dollars that seek to facilitate trading in foreign currency by market participants. In order to strengthen domestic liquidity in the face of possible restrictions arising from external factors, the use of private debt securities began to be allowed, under certain conditions, as eligible securities in the Bank's temporary expansion operations. In addition, access to the Bank's liquidity auctions was extended to a wider group of agents and the amount available for these auctions was raised. In order to strengthen dollar liquidity, the Bank began auctioning dollar *swaps* (*FX Swaps*) in which the Bank sells dollars in cash and buys a futures contract on them in order to alleviate pressure in the foreign exchange market and generate temporary liquidity in foreign currency for a broad group of entities. These measures will be explained in more detail in this *Report*.

The BDBR will do continuous monitoring of the international environment, especially regarding the possible effects of the coronavirus on different variables and the response of global economic authorities. As far as the Bank's policies are concerned, the necessary measures will continue to be taken to deal with this external shock.

The volatile situation of the global crude oil market implies a particularly accentuated uncertainty for Colombia.

02

The Colombian Economy: Results in 2019 and Outlook for 2020

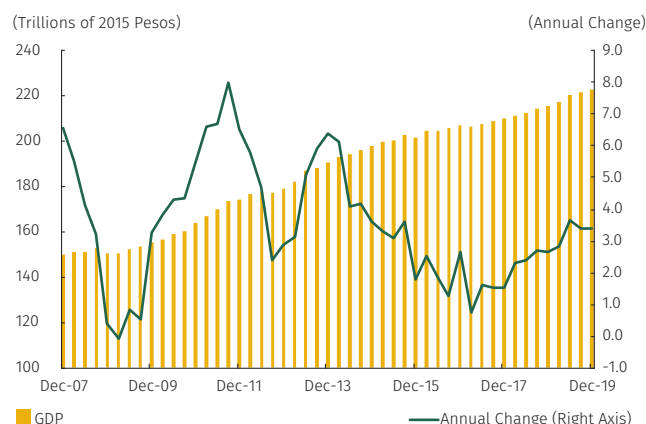
2.1 Economic Activity

After adjusting to the mid-decade terms-of-trade shock, the Colombian economy remained on a path to recovery in 2019 in an environment of weak global growth and with a rate of expansion that was higher than that of the major Latin American economies. Throughout the year, the main stimulus came from private domestic demand, both consumption and investment. Low interest rates, together with ample credit conditions (domestic and foreign), favored the positive performance of demand, which was compounded by other factors such as the strong growth of remittances, public works, immigration, and the positive impact of the Financing Law on investment. The greater domestic demand was accompanied by a rise in the external imbalance. The factors that drove growth last year remained in place at the beginning of 2020, so in principle it would have been logical to expect an equally favorable economic performance with a growth rate that was close to the economy's potential. Thus, excess productive capacity would have been lowered but should not have generated price pressures that were incompatible with meeting the inflation target. However, in recent weeks complex and unprecedented external risks have emerged that are related to the emergence and spread of Covid-19 and could have a negative impact on Colombia's economic growth at magnitudes that, to date, are difficult to quantify.

2.1.1 Change in Economic Activity in 2019

In 2019, the performance of the Colombian economy improved in contrast to what happened in some of the main economies in the world and in the region. According to the National Bureau of Statistics (DANE), the GDP (seasonally and calendar adjusted series) expanded at a rate of 3.3% which is higher than the rate a year earlier (2.5%). Thus, in 2019, the Colombian economy was at its most dynamic point since the end of the upward cycle in prices for raw materials in

Graph 2.1
Gross Domestic Product
(seasonally adjusted and corrected for calendar effects)



Source: DANE, calculations by Banco de la República.

2014, converging, moreover, to what is estimated as the country’s long-term potential rate of expansion (Graph 2.1).

The improved performance was associated with a further expansion of domestic demand. Both total consumption and investment grew at rates greater than 4.0%. In particular, investment accelerated throughout 2019, reaching expansions of over 5.0% in the second half of the year.

In the case of consumption, the main impulse came from the private component which grew at a rate of 4.6% throughout the year. This rate is higher than the one registered in 2018 (Table 2.1). Among the factors that explain the positive

performance of household consumption are the relatively low interest rates in a context of ample credit conditions, the strong growth of external workers’ remittances, which increased disposable household income, and immigration, all of which increased consumption of goods and services within the country.

Public consumption, in turn, showed a significant expansion in 2019 (4.3%) driven by positive local and regional government spending in their last year of government. However, this growth slowed down compared to 2018 in line with the adjustment process required to comply with the guidelines of the fiscal rule.

The dynamic gross capital formation (GCF) also contributed to the rise in the GDP. All investment components registered expansions with the notable exception of the housing component which has been falling since 2016. The investment in machinery and equipment, for which the most important part was the expenditure on transportation equipment, was the one where the performance of the investment was boosted the most during 2019 due to the impulse of the Financing Law and the renewal of the fleets for the public transportation systems in various cities. Investment in construction, in turn, presented a mixed performance. On one hand, there was a drop in housing investment associated with the persistence of oversupply in an environment where prices continued to rise albeit at relatively low rates.¹⁹ On the other, after the fall observed in 2018, investment in other buildings and structures showed a significant recovery in conjunction with the construction of public works.²⁰

19 Although they have slowed down, both the DANE’s new housing price index (NHPI) and its CPI-deflated value are still rising and at historically high levels.

20 Particularly those implemented by regional and local administrations in their last year and those for fourth generation (4G) road projects.

Table 2.1
Real Annual Growth of the GDP by Type of Expenditure
(corrected by seasonal adjustment and calendar effects, base 2015)

	2018	2019				2019
	Full Year	Q1	Q2	Q3	Q4	Full Year
Final spending on consumption	3.7	4.3	4.7	4.7	4.6	4.6
Final spending on household consumption	3.0	4.3	4.5	4.9	4.7	4.6
Non-durable Goods	2.0	4.4	4.4	5.8	5.6	5.1
Semi-durable Goods	3.7	4.7	5.9	6.1	6.2	5.7
Durable Goods	11.6	7.7	6.8	6.3	6.2	6.7
Services	2.6	3.7	4.1	4.5	3.4	3.9
Final spending on general government consumption	7.0	2.4	5.7	4.7	4.4	4.3
Gross Capital Formation	2.1	0.1	3.8	5.4	7.7	4.3
Gross Fixed Capital Formation	1.5	4.3	5.9	6.8	1.3	4.6
Housing	-0.4	-7.0	-8.6	-5.6	-7.6	-7.2
Other buildings and structures	-3.3	1.6	6.6	6.6	3.3	4.5
Machinery and Equipment	9.4	12.9	21.4	14.0	8.8	14.3
Cultivated biological resources	5.6	4.0	2.0	1.1	-4.7	0.5
Intellectual property products	1.5	1.3	0.9	3.3	5.0	2.6
Domestic demand	3.4	4.3	4.2	5.3	4.3	4.5
Exports	0.9	4.2	6.6	1.7	0.2	3.1
Imports	5.8	7.4	9.4	11.6	8.2	9.2
GDP	2.5	2.8	3.6	3.4	3.4	3.3

Source: DANE, calculations by Banco de la República

The growth of domestic demand above and beyond GDP was accompanied by a deterioration in net external demand. Real exports surged along with sales abroad of refined oil products, coffee, and gold as well as exports of services. However, the slower growth of our trading partners did not allow for better results in this component. Imports, in turn, had an upswing and grew at a rate of 9.2%, a trend that is consistent with that of intensive domestic demand for imported capital goods. With this, the trade deficit in constant pesos widened with respect to what was registered in 2018.

With respect to supply, the sectors that performed best in 2019 were commerce, transportation, accommodation, public administration, education, health, and financial activities. In contrast, construction was the only branch of activity that showed a contraction during the year that was due to the sharp fall in the buildings segment (Table 2.2).

The commerce, repair, transportation, and accommodation sector grew 4.9% in 2019 thus registering its highest rate of expansion in a year since 2011. This branch was favored by the increase in the number of tourists and migrants from abroad. Public administration and defense, education, and health exhibited a growth rate of 4.9%, and here, the expansions of

the sub-branches of non-market education (7.0%) and human health (6.3%) stood out. Financial and insurance activities, in turn, spurred by positive portfolio performance, registered the highest growth of all the sectors (5.7%).

The agricultural sector and the manufacturing industry had mediocre results. In the first case, livestock and other farming activities grew very little thus offsetting the good performance of coffee production. The manufacturing industry, in turn, showed limited expansion similar to the one in 2018. The growth of oil refining declined partly due to the effect of the maintenance of the Cartagena refinery.

Although the growth of mining is low (2.1%), it contrasts with the decline observed in previous years. This was made possible by the increase in oil and gas production, and by the extraction of metal ore due to gold mining which was stimulated by a significant increase in its international price. Coal production stagnated as a result of the

Table 2.2
Real Annual Growth of the GDP by Branches of Economic Activity
(corrected by seasonal adjustment and calendar effects, base 2015)

	2018	2019				2019
	Full Year	Q1	Q2	Q3	Q4	Full Year
Agri-business, Forestry, Hunting, and Fishing	2.4	0.4	1.5	2.1	3.9	2.0
Mining and Quarrying	-1.9	5.0	1.7	1.4	0.3	2.1
Manufacturing Industry	1.8	1.0	2.0	1.7	1.6	1.6
Electricity, Gas, and Water	2.5	2.8	3.0	2.9	2.5	2.8
Construction	-0.4	-3.1	1.3	-2.9	-0.6	-1.3
Buildings	-0.6	-7.8	-4.7	-11.0	-7.1	-7.7
Public works	0.4	8.9	11.5	12.3	10.1	10.7
Specialized Construction Work	-0.9	-2.9	0.8	-3.2	-2.5	-2.0
Commerce, Repairs, Transportation, and Accommodation	2.7	4.1	4.9	5.8	4.6	4.9
Information and Communications	2.9	3.3	3.8	-0.3	0.3	1.7
Financial and Insurance Business	3.6	6.1	4.3	8.0	4.5	5.7
Real estate	2.7	3.0	3.1	2.9	2.8	3.0
Professional, Scientific, and Technical Work	3.8	3.5	3.6	4.0	3.7	3.7
Public administration and Defense, Education, and Health	4.6	4.0	5.0	5.0	5.6	4.9
Artistic, Entertainment, and Recreational Activities	2.3	4.0	3.2	4.0	2.5	3.4
Subtotal value added	2.5	2.8	3.6	3.2	3.2	3.2
Taxes minus subsidies	2.9	3.6	4.0	5.1	5.5	4.6
GDP	2.5	2.8	3.6	3.4	3.4	3.3

Source: DANE, calculations by Banco de la República.

lower worldwide demand for this mineral and by various adverse factors in the exploration and mining processes.

In construction, the segment of residential and non-residential buildings saw a sharp drop (-7.7%) that was not offset by the positive trend in public works (10.7%). According to the *DANE Building Census*, there was a significant decrease in the total number of projects completed in 2019 that was explained more by the reduction in residential than non-residential building. In contrast, the public works segment had its greatest expansion since 2014 and was boosted mainly by the construction of roads, bridges, and tunnels associated with fourth generation (4G) projects and concessions and with intercity roads.

Despite the positive growth results of 2019, the economy continued to present excess spare capacity, although less than in 2018. Thus, the technical staff's estimates place the output gap at -0.7% for 2019 compared to -1.2% for 2018. This situation prevented domestic demand from translating into inflationary pressures.

2.1.2 Outlook for Economic Activity in 2020

The unprecedented situation that has resulted from the global public health emergency due to Covid-19 added to the sharp drop in oil prices has considerably increased the uncertainty about Colombia's economic performance in 2020. The figures available as of January and February²¹ on economic activity and consumption suggest that the economy had started the year on a significant upswing, and was at least similar to what was seen at the end of 2019. However, the declaration of a pandemic entails hitherto unknown shocks on different fronts that will affect economic growth trends over a horizon that is still difficult to pinpoint. The impact of these shocks can only begin to be quantified to the extent that the duration and extent of the crisis becomes clearer and with the emergence of relevant statistical information. At the date of this report, this information is non-existent. *Banco de la República* will continue to monitor the changes in the real variables closely to provide an analysis of the 2020 prospects for growth as soon as possible.

Despite the positive growth results of 2019, the economy continued with spare capacity, although less than in 2018.

21 This refers to the most recent data from the ISE, which grew 3.5% annually, as of January; from total retail sales, which grew 7.5% annually, for the same month; and from energy consumption, which grew 8.7% per annum, in February, etc.

2.2 Labor Market²²

In 2019 the labor market continued to deteriorate slowly despite a moderate recovery that was seen in the pace of economic activity. That year the unemployment rate (UR)²³ maintained a rising trend in the national total, and this was particularly notable in the aggregate of “other main cities and rural areas.” As has happened in recent years, in 2019 the increase in the UR was the result of the low dynamism of the demand for labor, and this is reflected in a decline in the number of people employed and a fall in the employment rate (ER). However, this increase was mitigated by a general reduction in labor participation (OPR). This analysis may change when DANE’s General Integrated Household Survey incorporates the results of the 2018 census.

The signs of recovery in job openings and urban hiring registered at the beginning of 2020 suggested a relatively stable labor market without a further deterioration in the unemployment rate. However, the shocks that the world economy is suffering due to the public health emergency and the consequences that these impose on Colombian growth make it difficult to predict employment trends for the rest of the year. The magnitude of the final impact of these shocks on the labor market will depend on the degree to which economic activity adjusts. In any case, it is highly likely that the labor market will remain loose in 2020 and will not be a source of inflationary pressure via wage costs.

2.2.1 The 2019 Labor Market

According to DANE’s Large Integrated Household Survey (GEIH), the national UR held to a growth trend in 2019 as it stood at levels that were relatively higher than those seen in both in the second quarter of the year and in December 2018 (Graph 2.2, panel A). Although the UR rose on average in all the geographic domains, this deterioration was most notable in intermediate cities and small towns including

There was a slow deterioration in the labor market in spite of the recovery of economic activity in 2019.

The annual increase in the national unemployment rate is due to a fall in the employment rate.

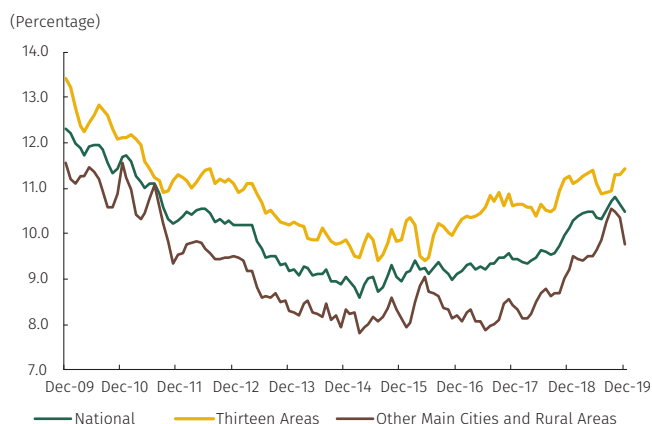
22 The labor market is showing a seasonal adjustment, i.e., its numbers are systematically higher or lower depending on the time of year and, as a result, this has to be corrected through statistical techniques in order to compare different months of the same year. Therefore, the information presented in this section is seasonally adjusted and corresponds to the quarterly moving average given the statistical representativeness of the figures from some geographic domains in the GEIH.

23 UR is defined as the ratio between people who are looking for work and the economically active population (EAP). The trend of the UR is influenced by the interaction between the supply of and demand for labor, which are defined by the overall participation rate (OPR) and the employment rate (ER) respectively. The OPR is the ratio between the EAP and the working age population (WAP) while the ER is the ratio between the employed population and the WAP. Based on the above, the UR could be expressed as:

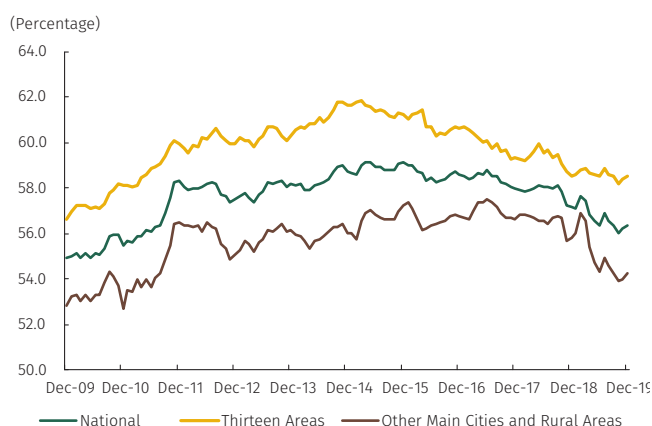
$$UR = \frac{OPR - ER}{OPR}$$

Graph 2.2
Unemployment and Employment Rate by Domain
(seasonally adjusted quarterly moving average)

A. Unemployment Rate



B. Employment Rate



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

the rural areas surrounding them (“other main cities and rural areas”)²⁴ compared to the thirteen major cities.²⁵ In the moving quarter ended in December, the UR for both domains was 0.8 pp and 0.2 pp, respectively, above the figures from a year ago.²⁶

During this period, the annual increase in the national UR was explained by a drop in the ER. The deterioration in this indicator, in particular, is the result of a smaller demand for labor in the “other main cities and rural areas” where the ER stood 2.2 pp below the one registered during the same period in 2018. The ER of the 13 cities, in turn, remained relatively stable and did not show significant losses (Graph 2.2, panel B).

In the moving quarter ending in December, the annual declines of the ER for “other main cities and rural areas are due to a 1.5% yearly drop in employment in this geographic domain (Graph 2.3, panel A). The segments of the population where the greatest falls in rural employment were seen included men under 25 years of age and those without higher education. The fall in demand for labor in this domain has been widespread throughout the various branches of activity, although the agricultural sector (specifically agricultural work associated with crops in non-specialized units) contributed most negatively to the annual variation.

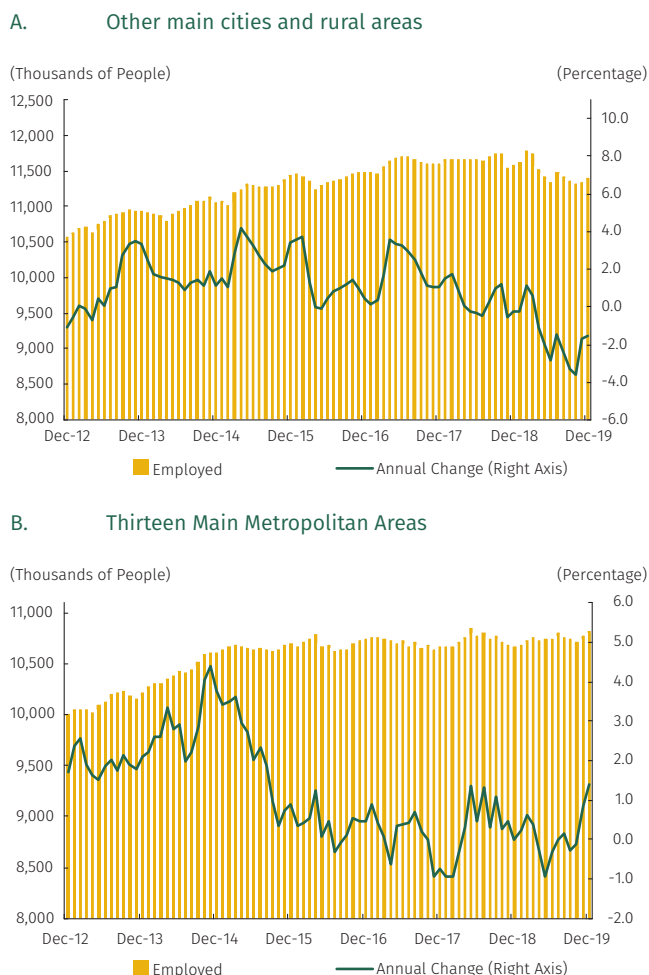
In terms of the demand for labor in the thirteen major cities, there were modest gains in the number of people employed since a 1.4% annual growth was registered compared to what had been seen the previous year (Graph 2.3, panel B). The increase in employment in these places was concentrated in the higher quality segments, i.e., the formally and salaried population. Non-salaried and informal workers, in turn, registered falls, which were more pronounced in the second

24 This domain includes the capitals: Tunja, Florencia, Popayan, Valledupar, Quibdó, Neiva, Riohacha, Santa Marta, Armenia, and Sincelejo as well as other major cities (municipalities or intermediate cities) and scattered rural areas.

25 The thirteen main cities and metropolitan areas (M. A.) are: Bogotá, Medellín M. A., Cali M. A., Barranquilla M. A., Bucaramanga M. A., Manizales M. A., Pasto, Pereira M. A., Cucuta M. A., Ibagué, Montería, Cartagena, and Villavicencio.

26 Based on DANE’s technical bulletin and the non-seasonally adjusted figures, the national UR in the quarterly moving average ending in December stood at 9.5% while the UR for the thirteen major cities, population centers, and scattered rural areas was 10.4%, 10.6%, and 5.3% respectively.

Graph 2.3
 Number of People Employed and Annual Change
 (seasonally adjusted quarterly moving average)



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

segment. Going by branches of economic activity, the growth in the number of people employed was driven by the sectors of construction and services while, in this domain, services to businesses²⁷ were the ones that registered the lowest generation of jobs. The performance of the demand for labor presented by the 13 cities highlights the fact that the deterioration in the national labor market has resulted from lower job creation and not a high rate of job destruction. These figures are consistent with recent signs of recovery in the vacancy and urban hiring rates.

Note that the analysis of those employed was done on the basis of the information published in the GEIH which, as of the time of writing this report, was still using some expansion factors on the sample built based on the 2005 census population projections to calculate the population. These figures could be adjusted during 2020 in accordance with an update consistent with the figures from the new 2018 census and the Venezuelan migration.

In line with the fall in employment, there was a reduction in the labor supply measured by the OPR in 2019. This trend, which has been observed for several years, was more marked at this time and attenuated the rise in the UR. Thus, for the moving quarter ending in December, the OPR was 0.6 pp lower than what was registered in

the same period in 2018 (Graph 2.4). The segments of the population that explain the downward trend in the OPR are secondary household workers (not heads of households) and young people without higher education who became inactive during this period.

From a theoretical point of view, the lower labor supply is associated with discouragement in the search for employment or with increases in the reservation wage.²⁸ With respect to the latter, the growth in remittances has been found to be one of the factors that might explain the recent reduction in the urban OPR, with its strongest effect

27 Real estate, business, and rental.

28 The reservation wage (minimum acceptable wage) is the minimum amount for which individuals are willing to participate in the labor market, and its level is determined by non-labor income such as remittances.

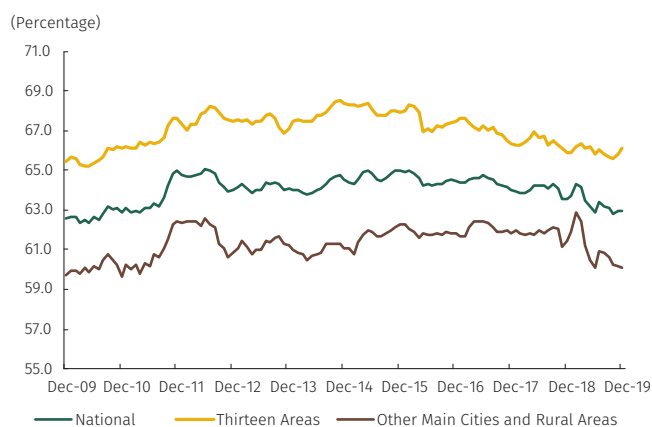
on women, young people, and people without a higher education.²⁹ Moreover, the greater labor supply resulting from migration from Venezuela has probably contributed to reducing the labor income of the non-salaried, and this would have influenced their decision not to participate in the labor market.

With regard to remuneration for work, there was a rising trend in real labor income which, in the moving semester ended in December, grew 1.6% compared to the same period during the previous year (Graph 2.5). This trend has been influenced, to a great extent, by the wage-earning segment, whose real labor income grew continuously in 2019. In general, the trend of the higher quality segment is explained by an increase in the payments made to workers lacking a higher education as a result of the increase in the minimum wage. The real labor income of non-salaried workers, in turn, registered annual falls until August 2019, but this showed a recovery towards the end of the year.³⁰ This income trend is consistent with a labor market that remained loose and, therefore, did not constitute any inflationary pressure.

2.2.2 Outlook for 2020

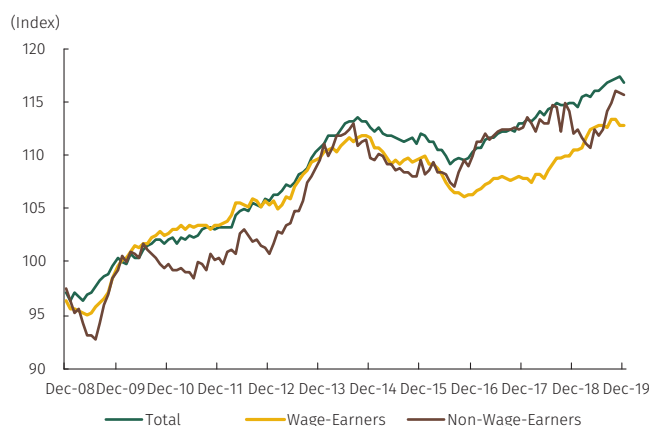
The shocks that the world economy is suffering due to the public health emergency and the impacts that these will impose on Colombian growth significantly increased uncertainty about the development of the labor market in 2020. In principle, the information derived from the labor indicators at the beginning of the year, in particular the signs of recovery in job openings and urban hiring, indicated a labor market that remained stable without a further deterioration in the unemployment rate. However, the recent developments with respect to Covid-19 and the measures in place to counteract it will probably affect economic activity and the excess productive

Graph 2.4
Overall Participation Rate by Domains
(seasonally adjusted quarterly moving average)



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

Graph 2.5
Index of Real Average Labor Income per Hour: salaried and non-salaried
(seasonally adjusted six-month moving average)



Note: series deflated by the CPI, December 2018 base. Index for the thirteen cities
Source: DANE (GEIH), calculations by Banco de la República.

29 To get more detail about the effect of remittances on the OPR, see the February 2020 Labor Market Report, available at: <https://www.banrep.gov.co/es/reporte-mercado-laboral>

30 It should be noted that in the geographical domains of twenty-three cities, and in the domains of other main cities and rural areas, the average real labor income of non-salaried workers maintained a negative trend in 2019. This could explain part of the fall in labor participation in those domains.

capacity and, consequently, the rates of job creation and destruction. These impacts could be predominant in sectors such as services and in the informal segment where much of the employment is self-generated. The magnitude of the final effect of these shocks on the labor market will depend on the degree of adjustment in economic activity which, in turn, will depend on the intensity and duration of the public health emergency. In the event of this scenario, a major risk is the possibility that there will be a negative impact on the pace of job creation. Because of this, it is highly likely that the labor market will remain robust during 2020 and, thus, will not be a source of inflationary pressure through salary costs.

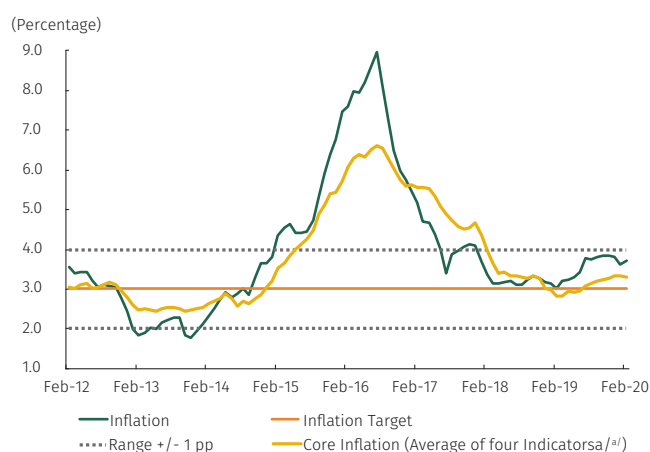
2.3 Inflation

Annual consumer inflation, after showing great stability in 2018 with respect to the target, increased moderately in 2019 without moving away from it to any substantial degree. Domestic demand had very little impact on prices due, in large part, to the persistence of excess productive capacity and a large labor market. The credibility of the monetary policy, which was reflected in inflation expectations that remained close 3.0%, also contributed to this. The increase in 2019 was mainly the result of transitory supply factors and the depreciation of the peso. In 2020, these shocks are expected to be fully diluted, thus allowing inflation to converge towards 3.0%. However, the conditions abroad have changed substantially in recent weeks due to the appearance of Covid-19 and its possible effects on the country’s macroeconomic variables such as growth and the exchange rate, and this has increased the uncertainty regarding this projection. It should therefore be reviewed as the health crisis develops.

2.3.1 Inflation in 2019

Annual consumer inflation closed 2019 at 3.80%, thus exceeding what had been registered a year earlier (3.18%) (Graph 2.6 and Table 2.3). Inflation rose over the course of the first three quarters of the year and was the result of the depreciation of the peso as well as various supply factors that were transitory in nature and had begun to dissipate towards the end of the year. Just as in 2018, demand did not generate significant inflationary pressure in 2019. In spite of an upswing in growth, the Colombian economy continued to operate with excess productive capacity and very little job creation, and this resulted in a comfortable labor market as explained in previous sections.

Graph 2.6
Consumer Price Index (CPI)
(annual change)



a/ The core inflation indicators correspond to inflation excluding food, core 20, excluding perishables, fuel and utilities, and inflation excluding food and regulated items.

Sources: DANE and Banco de la República.

In this environment, core inflation, which is more tightly linked to demand and monetary policy, registered smaller increases from levels below the target than the total did. Inflation excluding food and regulated items, in particular, which had been at 2.6% towards the end of 2018, gradually converged with the target over the course of the year and was at 3.1% at the close of 2019. Other core inflation indicators monitored by *Banco de la República* followed a similar trend although the values were higher, and thus, the average of the four indicators came to 3.34% at the end of 2019 (Graph 2.6 and Table 2.3).

Depreciation affected core inflation as it was ultimately the factor that contributed the most to its rise in 2019. The pass through to these consumer prices was strongest in the tradables basket (excluding

Table 2.3
Consumer Price and Core Inflation Indicators
(as of February 2020)

Description	New CPI Weights ^{a/}	Dec-18	Mar-19	Jun-19	Sept-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20
Total	100	3.18	3.21	3.43	3.82	3.86	3.84	3.80	3.62	3.72
Excluding Food ^{b/}	76.16	3.48	3.26	3.15	3.28	3.23	3.28	3.37	3.30	3.30
Tradables	19.16	1.09	0.90	1.17	1.65	1.89	2.08	2.24	2.49	2.51
Non-Tradables	42.31	3.79	3.29	3.36	3.53	3.44	3.37	3.49	3.33	3.34
Rentals	25.16	3.42	3.16	3.06	3.03	2.80	2.76	2.68	2.70	2.68
Indexed ^{c/}	9.08	5.43	4.38	4.63	5.03	5.04	5.05	5.01	4.87	5.03
Affected by Exchange Rate ^{d/}	6.99	3.29	2.00	3.05	3.35	3.42	3.49	4.55	3.59	3.52
Remainder ^{e/}	1.08	-0.42	3.86	3.48	3.47	4.90	3.70	2.78	3.23	2.82
Regulated Items	14.69	6.37	6.42	5.33	4.74	4.43	4.55	4.48	4.25	4.22
a. Utilities	6.69	7.47	8.80	7.01	5.61	5.51	6.23	6.02	4.90	5.93
b. Fuel	2.91	7.28	5.85	3.18	3.98	2.91	1.97	1.90	2.31	1.81
c. Transportation	5.09	4.76	4.26	4.57	4.20	3.91	3.77	3.92	4.50	3.37
Food ^{f/}	23.84	2.43	3.26	4.46	5.58	5.84	5.61	5.20	4.66	5.05
Perishables	3.15	8.88	9.98	15.46	17.50	17.28	13.59	8.66	4.11	5.36
Processed Food	11.90	-0.08	1.43	2.18	3.57	4.11	4.52	5.04	5.42	6.01
Eating Out	8.79	3.68	3.43	3.80	4.12	4.13	4.24	4.18	3.84	3.65
Core Inflation Indicators										
Excluding Food		3.48	3.26	3.15	3.28	3.23	3.28	3.37	3.30	3.30
Core 20		3.23	3.09	3.28	3.51	3.53	3.46	3.42	3.36	3.25
CPI Excluding Perishables, Fuel, & Utilities		2.76	2.57	2.87	3.21	3.28	3.34	3.46	3.60	3.59
Inflation Excluding Food and Regulated Items ^{g/}		2.64	2.38	2.54	2.87	2.92	2.96	3.10	3.07	3.08
Average Core Inflation Indicators		3.03	2.82	2.96	3.22	3.24	3.26	3.34	3.33	3.31

a/ Weightings by the new methodology used to calculate the CPI starting in January 2019.

b/ Calculations by *Banco de la República* using the new methodology. This excludes the division of food and the subclasses corresponding to eating away from home.

c/ Housing occupancy, education, health, private and health insurance, personal services, and other expenses.

d/ Household furniture, tourism, television services, laboratory tests and images, etc.

e/ Services related to entertainment, games of chance, mail, and banking services, etc.

f/ Calculations by *Banco de la República* using the new methodology and including the division of food and the subclasses corresponding to eating away from home.

g/ Calculations by *Banco de la República*.

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

Annual consumer inflation increased moderately in 2019 without deviating substantially from the target.

food and regulated items) where the annual change surged to 2.2% at the close of 2019 after having registered values close to 1.0% at the end of 2018.

However, this increase in the prices for tradable goods remained relatively low due to declines registered in prices abroad for a wide range of final and intermediate goods imported by our country. Moreover, the excess productive capacity and the limited pressure from demand, which are factors that also limited the activation of the indexing mechanisms, and the effect of the rise in wage costs also contributed to this. Because of all of the above, the annual variation in the consumer price index (CPI) for non-tradable items, a sub-basket that is more sensitive to the demand trend, salary costs, and indexing, went from 3.8% in December 2018 to 3.5% at the end of 2019. Within this group, the trend for rentals stood out. Its change went from 3.4% in December 2018 to 2.7% at the end of 2019 thus reflecting the excess supply in the housing market. It should be noted that rentals account for 59.5% of the weighting in the sub-basket of non-tradables and 25.2% of the total CPI.

The supply shocks mainly affected food prices, the annual variation of which contributed most to the increase in total inflation in 2019 (Table 2.3). These shocks had various origins. First, given the usual cyclical performance of agricultural supply in Colombia, the phase of low relative prices that was seen throughout much of 2017 and 2018 was followed by a period of increases in 2019, which encompassed a wide range of perishable products (including meat, milk, and rice). Secondly, these rises were reinforced by unfavorable weather conditions such as a weak *El Niño* phenomenon (between October 2018 and June 2019) and, after that, a more prolonged and intense dry period in several areas of the country. A third factor is the unusual increases that were registered in international prices for a few, but important, agricultural raw materials and foodstuffs traded in the country (corn, etc.), which pushed up domestic prices through various channels. Finally, the tax reform that came into effect at the beginning of the year led to an increase in indirect taxes on non-alcoholic beverages, which were passed on to consumer prices and thus contributed to a temporary increase in annual inflation.

The above shocks came at a time when the depreciation of the peso was also exerting upward pressure on food prices. As usual, the impact was felt above all in the area of processed food, which contains items that are imports in origin or have a high component of raw materials from abroad. Thus, the annual change in the processed food sub-basket went to 5.0% at the end of 2019 from 0% a year earlier.

Unlike in 2018, in 2019 prices for regulated items did not contribute to raising annual inflation although they continued to register relatively

Depreciation of the peso affected core inflation, as it contributed the most to its increase in 2019.

high annual adjustments. The change in the CPI for this sub-basket fell significantly over the course of the year and stood at 4.5% in December (compared to 6.4% at the end of 2018). The limited increase in domestic fuel prices (1.9% annually as of December) played a predominant role in this situation. This was made possible by the decline in international prices for oil and its derivatives, which was partially offset by the depreciation of the peso. Electricity rates also adjusted at a declining pace which, nonetheless, remained relatively high as of December (5.6%).

In an environment of excess productive capacity with a core inflation that is relatively stable and close to the target and, in the presence of a set of transitory shocks that began to dissipate at the end of 2019, the BDBR decided to keep the nominal interest rate stable at 4.25%. The credibility of monetary policy was reflected in some inflation expectations that rose very little over the policy horizon,³¹ and this contributed to limiting the second-round effects of the above-mentioned shocks.

2.3.2 Outlook for 2020

In the first two months of the year, inflation held to a gradual decline hand in hand with the dissipation of the supply shocks that affected food prices last year. That is what the data on the annual change in food prices as of February suggests. This stood at 5.05%, and the total annual inflation stood at 3.72% (Table 2.3). However, by seriously affecting the supply and demand of the economy and other relevant foreign and domestic variables, the relatively recent emergence of Covid-19 could have significant repercussions on the process of price formation and economic costs as well as expectations for it. This could make it very difficult to extrapolate from this trend for the remainder of 2020. This difficulty is increased by the sharp decline and high volatility shown by the international price for crude oil, a variable with multiple connections to the price formation process in Colombia. A forecast with a reasonable level of certainty will be a feasible task in the future to the degree that the depth of the public health crisis becomes clearer, some stability is generated in the oil market, and statistical information on prices and production emerges.

Domestic demand had little impact on prices because of a persistent spare capacity and ample labor market.

Supply shocks primarily affected food, and the prices for these items contributed most to the increase in inflation in 2019.

31 Based on the results of the *Monthly Survey of Economic Analysts* (EME in Spanish) done by *Banco de la República*, the inflation expectations in 2019 for horizons of twelve and twenty-four months fluctuated between 3.25%-3.41% and 3.20%-3.28% respectively. In the debt market, in turn, inflation expectations derived from *break even inflation* (BEI) at horizons of two, three, and five years fluctuated between 3.0%-3.6%, 3.1%-3.7%, and 3.2%-3.8% respectively.

2.4 Financial System and Financial Stability

The Colombian financial system has experienced the sudden change in macroeconomic conditions caused by the fall in crude oil prices and the spread of the coronavirus in a situation of solid equity, ample aggregate liquidity, stability, and resilience.

Over the course of 2019 and the first two months of 2020, the trend towards an expansion of the balance sheet of credit establishments (CEs) was consolidated spurred mainly by the consumer loan portfolio.

At the same time, liabilities surged and presented a reallocation towards long-term sources. In this environment of higher growth in economic activity and stable policy rates, the indicators of liquidity, capital adequacy, and credit risk of the CEs were kept at appropriate levels.

Throughout 2019 and into to January 2020, deposit rates have remained relatively stable while lending rates have declined, and this has resulted in a fall in the net interest income of the CEs. However, the expansion of the balance sheet meant that the profitability of the CEs' assets was not affected.

The upswing of the consumer loan portfolio together with declines in real interest rates suggests that the financial system's credit supply for this type of loan was ample during the previous year and the first two months of this year. The low growth of the commercial loan portfolio, in turn, coupled with low real interest rates indicates that demand for this type of credit remains weak.

During 2019, the rates of the bonds, in turn, issued by the Colombian Government (TES) decreased as did those of the other countries in the region although there were some episodes of volatility. This occurred in an international context characterized by an expansionary monetary policy stance.

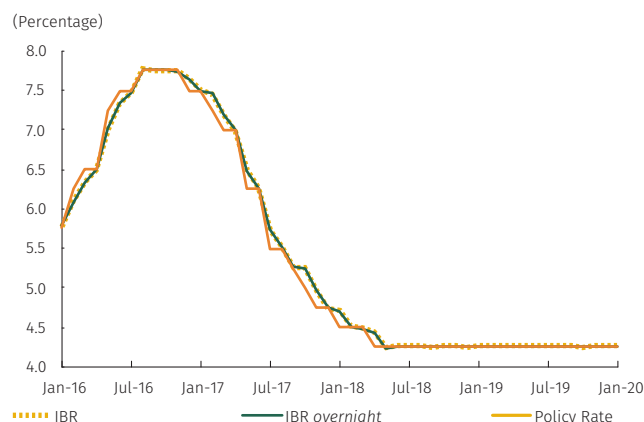
2.4.1 Credit Institutions' Financial Intermediation

During 2019 the trend of the CEs' balance sheet towards growth was consolidated. Over the course of the year, the recovery of credit, which began at the end of 2018, was maintained spurred by the consumer loan portfolio and accompanied by declines in the lending rates, especially for this type of loan. At the same time, the deposits (liabilities subject to reserve requirements: LSRR) grew more than in the previous year and their interest rates remained relatively stable.

The expansion of financial intermediation was characterized by improvements in the credit risk indicators, growth in the sources of funding that are considered as stable, and greater equity. This

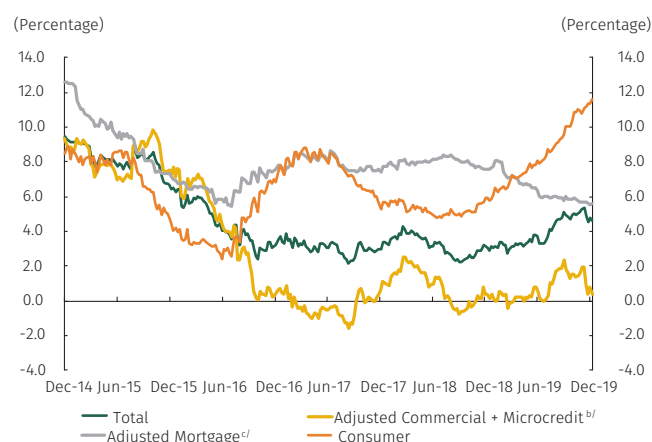
The expansion of financial intermediation was characterized by improvements in the credit risk indicators, growth in the sources of funding that are considered as stable, and greater equity.

Graph 2.7
Banco de la República's Benchmark Interest Rate,^{a/} Reference Banking indicator (Overnight) (IBR)^{b/} Interbank Rate (TIB)^{b/}



Note: information up to January 31, 2020.
 a/ Policy rate based on date of the BDBR meeting.
 b/ Acronym in Spanish. Average monthly rate
 Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Graph 2.8
Real Annual Growth^{a/} of the Loan Portfolio in Legal Currency by Type



a/ The total CPI is used as a deflator.
 b/ The commercial loan portfolio includes adjustments for operational leasing.
 c/ Includes adjustments for securitizations of the mortgage loan portfolio.
 Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

occurred in an environment of stronger economic growth and stability in the policy rate (which has not been modified since April 2018) and in the financial system's short-term funding rates – Reference Banking Indicator (IBR by its acronym in Spanish), overnight, and interbank rate (TIB by its acronym in Spanish) – (Graph 2.7).

2.4.1.1 The Credit Establishments' Main Assets

At the close of 2019, the gross loan portfolio in legal currency had a real, annual change of 4.6% (8.6% in nominal terms). This growth is mainly due to the performance of consumer loans which surged steadily and closed the year with a real growth of 11.6% (15.8% nominal). Within this type of loan, the unspecified use loans grew the most (Graphs 2.8 and 2.9).

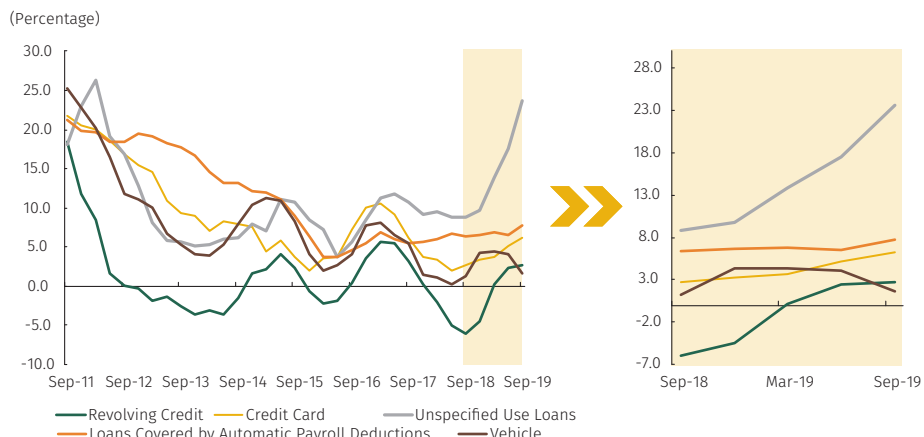
The expansion of consumer loans was accompanied by significant reductions in their interest rates that reached historically low levels in both nominal and real terms³² (Graph 2.10, panel A). The ample supply of funds for this type of credit that CEs had available,³³ together with lower interest rates contributed to the expansion of household consumption. The mortgage portfolio registered a slight slowdown,³⁴ (Graphs 2.8 and 2.10, panel A). Thus, the flow of credit to households was strengthened in comparison to what had been registered in previous years.

32 The historical minimum interest rate for consumer loans was reached in November (since 2002). As of December, the interest rates for consumer loans stood at 15.54% (11.49% in actual *ex ante* terms, i.e., using inflation expectations as a deflator) which is 167 bp lower than the rate for the same month the previous year. The rate for credit cards held by individuals (excluding one payment purchases and advances) also dropped during the year (120 bp) and ended the year at 26.03%. Compared to November 2016, the month before the monetary policy rate began to decrease, the rate for consumer loans dropped 410 bp and the rate for credit cards held by individuals (excluding one payment purchases and advances) fell 541 bp.

33 According to the December 2019 *Report on the Credit Situation in Colombia*, the credit establishments kept the supply of funds for this type of loan ample during the year (see <https://www.banrep.gov.co/es/reporte-de-la-situacion-del-credito-en-colombia>).

34 The mortgage interest rate rose 4 bps during the year and stood at 10.42% as of December 2019.

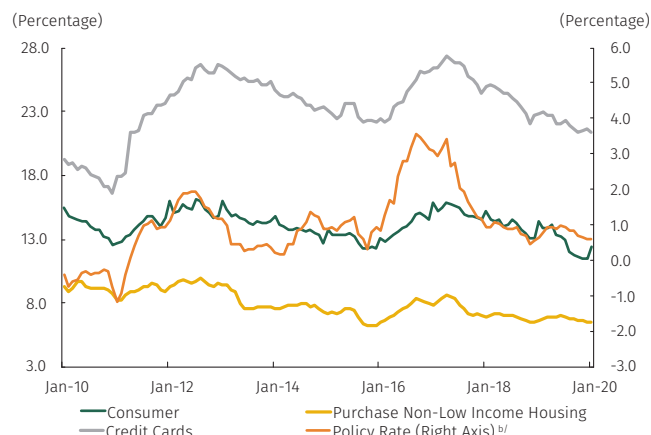
Graph 2.9
Real Annual Growth^{a/} of the Consumer Loan Portfolio by Sub-types



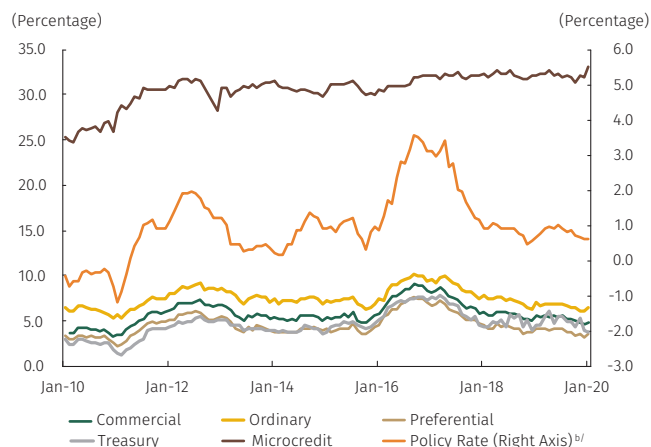
a/ The total CPI is used as a deflator.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Graph 2.10
Real Ex Ante Interest Rates^{a/}

A. Loans to households



B. Loans to Businesses



a/ The average of several measures of inflation expectations are used as a deflator (for 1 year from now obtained from the monthly survey of financial analysts, for 1 year from now obtained from the quarterly survey on economic expectations, the BEI for 2 and 3 years from now, and the forward BEI for 2 and 3 years from now).
b/ The policy rate is the one set by the BDBR at the monthly meeting; the remaining rates correspond to the average for the month (weighted by amount of disbursements).
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

The loan portfolios geared towards companies (commercial + micro-credit), in turn, had grown a real 0.4% (4.2% in nominal terms) at the close of 2019 (Graph 2.8). Even though a slight upswing was seen in the third quarter, it was offset by substantial prepayments that were made at the end of the year. At the same time, the interest rates for commercial loans declined, although less than the rates for loans for households (in 2017 and 2018 the drop in these rates was more pronounced than the one for consumer loans) (Graph 2.10, panel B).³⁵ The slow recovery of loans geared towards companies together with interest rates that are low in nominal and real terms suggests that the demand for this type of financing remains weak.³⁶

Between December 2018 and the same month in 2019, the risk portfolio went from 3.3% to 4.8%

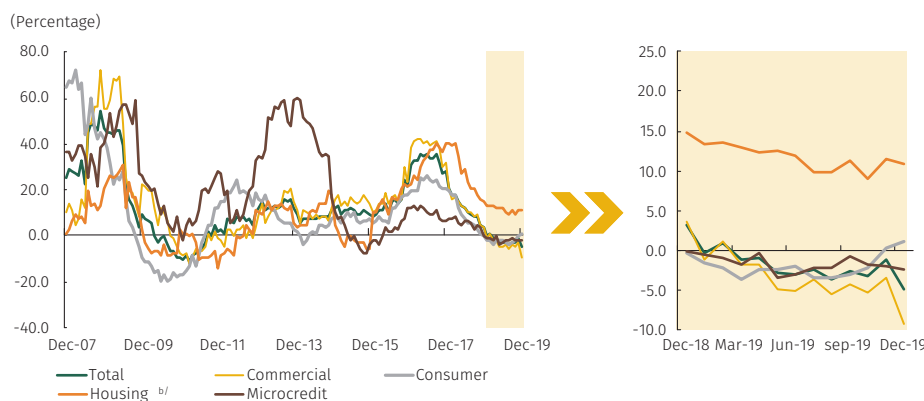
35 As of December, the rate for commercial loans was 8.35% (4.55% in real terms using inflation expectations as a deflator) which is 52 bp lower than what was registered a year ago. For the different sub-types, the decline was 62 bp for preferential, 24 bp for ordinary, and 10 bp for treasury. Compared to November 2016, the month before the monetary policy rate began to decrease, the rate for commercial loans dropped 516 bp. For micro-credit, the rate declined 36 bp in 2019 and 110 bp with respect to November 2016.

36 Moreover, in the Colombian market in 2019, COP 6,858 b in bonds were issued by agents other than credit establishments (without including foreign issuers or portfolio securitizations). This amount is COP 2,178 b higher than what was issued the previous year.

annual growth in real terms. This trend was mainly in response to the commercial loan portfolio which went from presenting rises (3.7% per annum in December 2018) to showing declines (-9.2% per annum in December 2019). The expansion rate of the risky loan portfolio declined in the housing and micro-credit loans while consumer loans surged³⁷ (Graph 2.11).

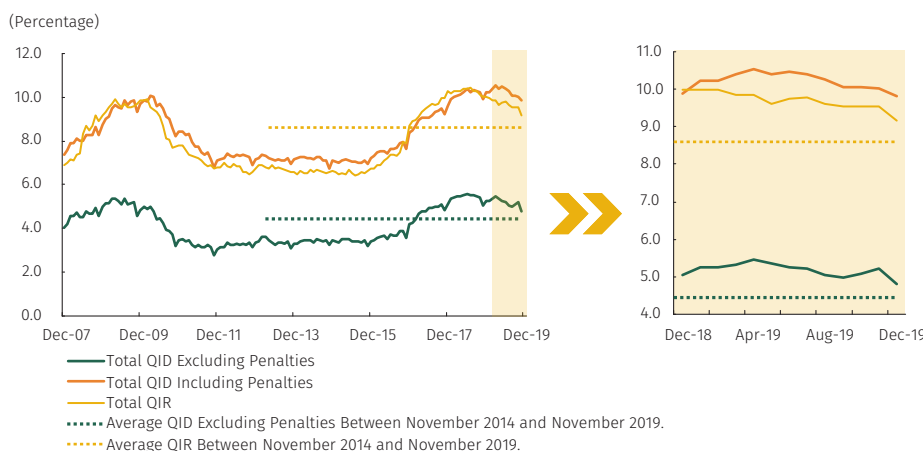
The drop in the risky loan portfolio and the surge in the gross loan portfolio generated a 0.8 pp decline (improvement) in the quality indicator by risk (QIR).³⁸ Thus, it reached a value of 9.2% in December 2019 (Graph 2.12). Going by type, the indicator for the commercial,

Graph 2.11
Annual Real Growth of the Risky Loan Portfolio ^{a/}



a/ The total CPI is used as a deflator. Special financial entities (second tier banks) are not included.
b/ The high growth of the housing loan portfolio in 2015 was due to the fact that with the implementation of the IFRS starting in January 2015, residential leasing was reclassified from the commercial loan portfolio to the housing loan portfolio.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Graph 2.12
Quality Indicators of the Gross Loan Portfolio by Default and by Risk



Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

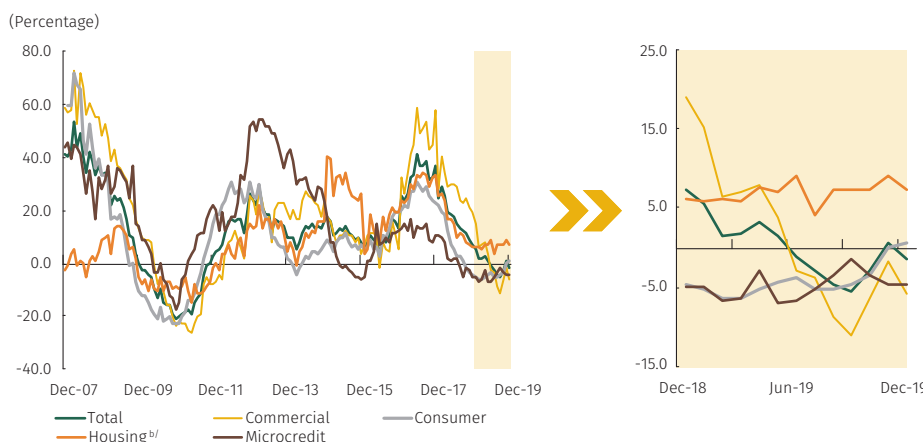
37 There were negative annual changes in the micro-credit portfolio. Housing, in turn, showed a 4.1 pp slowdown in risky loans, and consumer loans a surge of 1.5 pp.

38 The QIR is defined as the ratio between the risky and the total loan portfolio (the risky loan portfolio corresponds to all the loans with ratings other than A on a scale from A to E where A is the best rating).

consumer, and micro-credit loan portfolios improved and deteriorated for the mortgage portfolio.

With regards to the past-due portfolio, the quality indicator by default (QID)³⁹ improved (declined) and stood at 4.8% when penalties are not considered and at 9.8% if portfolio penalties are included (Graph 2.12). The real, annual growth rate of the nonperforming loan portfolio declined 8.7 pp between December 2018 and the same month in 2019 and, thus, stood at -1.3%. The type of loan that registered the largest fall was commercial (24.8 pp) while consumer loans went from declining 4.6% to registering a positive change of 0.7%⁴⁰ (Graph 2.13). With respect to that, the historical pattern indicates that periods when

Graph 2.13
Annual Real Growth of Non-Performing Loans ^{a/}



a/ The total CPI is used as a deflator. Special financial entities (second tier banks) are not included.
b/ The high growth of the housing loan portfolio in 2015 was due to the fact that with the implementation of the IFRS starting in January 2015, residential leasing was reclassified from the commercial loan portfolio to the housing loan portfolio.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

there is a surge in the expansion of consumer loans generally precede an upswing in the past-due portfolio.⁴¹

The second most important category of assets, investments in legal currency, also contributed to the expansion in the CEs' balance sheet and had an average annual change of 11.5%. The CEs were net buyers of TES and benefited from the sharp appreciation of those securities.

39 The QID is defined as the ratio between the loan portfolio with a greater than 30-day default and the total loan portfolio. The QID including penalties is defined as the ratio of the past-due loan portfolio to the total portfolio plus the penalties (these are assets which, since they are considered non-collectable or lost receivables, have been removed from the balance sheet in accordance with the legal provisions in effect).

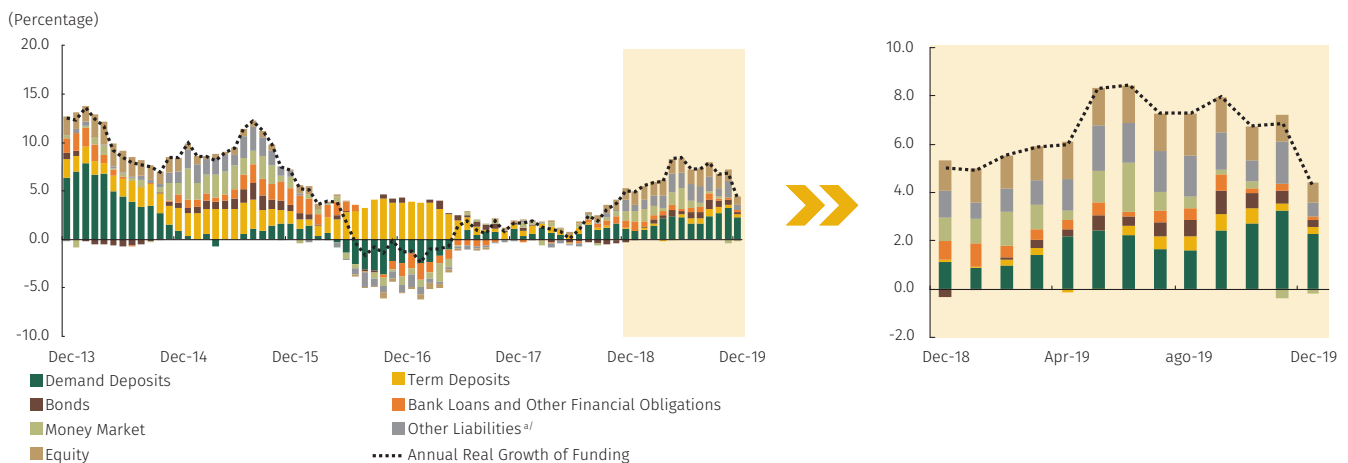
40 For micro-credit, the real, annual change in the past-due portfolio was negative and 0.3 pp lower than it was in December 2018. In contrast, there was a 1.2 pp surge for housing.

41 The upswing in the past-due portfolio at the end of 2015 and beginning of 2016 which was not preceded by a sharp upsurge in the loan portfolio was an exception to this pattern. The above was due to the effect of the shock to the terms of trade that was associated with the drop in oil prices.

2.4.1.2 Main Sources of Funding

In line with the developments on the assets, CE funding (understood as the sum of liabilities and equity) showed a recovery in 2019, and it registered growth rates that have not been seen since the end of 2015 (Graph 2.14). Funding expansion was shared between equity and all the components of liabilities. Money market funding, particularly through repos with *Banco de la República*, was significant during the first part of the year. Nonetheless, the interest rates in this market—Reference Banking Indicator (IBR) and the Interbank Rate (TIB)—remained close to the policy rate (Graph 2.7).

Graph 2.14
Real, Annual Growth of Funding and Contribution of their Components



Note: The total CPI is used as a deflator. Special financial entities (second tier banks) are not included.
a/ Other liabilities include other financial instruments, accounts payable, BOCAS, BOCEAS, etc.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

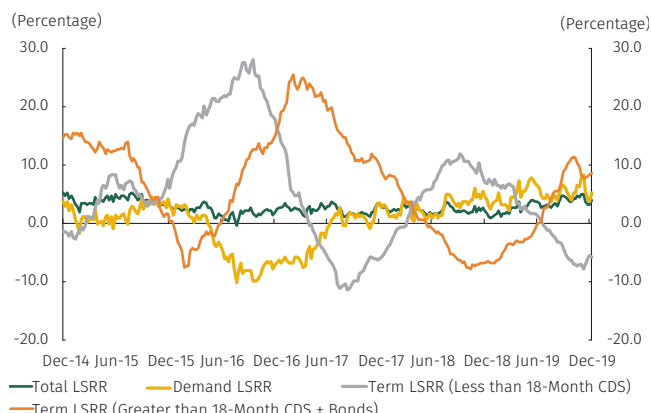
Deposits (liabilities subject to reserve requirements: LSRR) grew a real annual 3.0% on average (6.6% in nominal terms) or 0.8 pp more than a year ago. The growth of this category was mainly due to demand deposits for which the real annual variation was 4.9% on average (Graph 2.15).

Term deposits, in turn, registered a lower expansion (a real 0.7% on average) that was characterized by a surge in those agreed upon for a period exceeding 18 months (Graph 2.15). The interest rates for term deposits, specifically the rates for CDs, did not show a definite trend but rather fluctuated over the course of the year⁴² (Graph 2.16).

These trends constitute a restructuring of financing towards sources that are more stable (longer maturity). This reflects the healthy growth

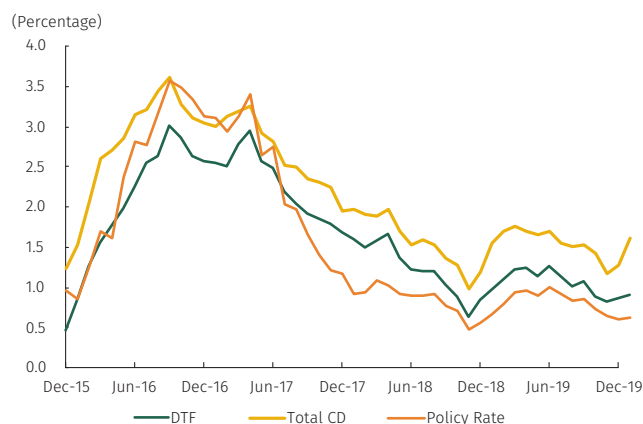
42 When December 2018 and December 2019 are compared, the DTF rate (both nominal and actual *ex ante*) remained stable while the total nominal rate for CDs rose 6 bp and the real *ex ante* rose 8 bp. The increase during the year is explained by increases during the periods.

Graph 2.15
Real Annual Growth^{a/} of Liabilities Subject to Reserve Requirements (total, demand deposits, and term deposits)



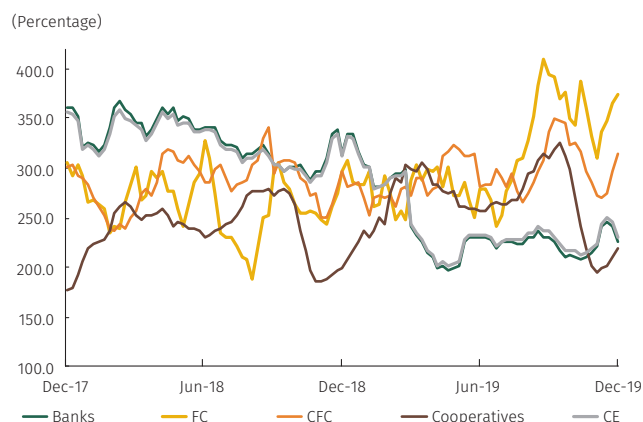
a/ The total CPI is used as a deflator.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Graph 2.16
Real Ex Ante Interest Rate Liabilities^{a/}: Total CDs and DTF



a/ The average of several measures of inflation used as a deflator (for 1 year from now obtained from the monthly survey of financial analysts, for 1 year from now obtained from the quarterly survey on economic expectations, the BEI for 2 and 3 years from now, and the forward BEI for 2 and 3 years from now).
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Graph 2.17
LRI_R at 30 days



Note: the 30-day indicator corresponds to a 4-week weighted moving average.
Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

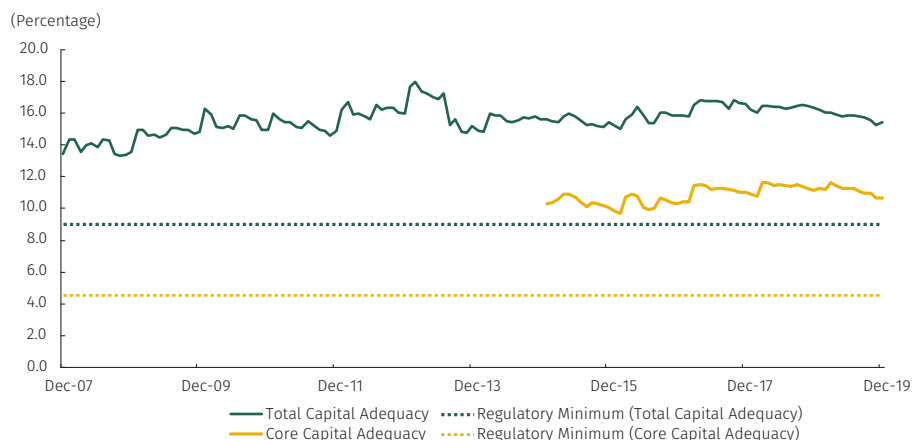
of the CEs' balance sheet and the preparation for the new structural liquidity requirements that go into force in 2020⁴³ (that is, the balance between the maturity of assets and financing sources).

Furthermore, the short-term liquidity of the CEs showed a favorable performance during 2019. Thus, as of December 2019, the CEs' thirty-day LRI_R⁴⁴ stood at 229.9% which indicates that the entities have enough liquid assets to meet their short-term obligations. The indicator is above the regulatory minimum for all the CEs (Graph 2.17).⁴⁵

Finally, the growth of their equity made it possible for the CEs to remain sound in a context of expanding assets. As of December 2019, the overall capital adequacy of the CEs stood at 15.4% and the core capital adequacy at 10.6%⁴⁶ both of which values are above their regulatory limits⁴⁷ and similar to their averages for the past four years (Graph 2.18). Thus, in this state of equity soundness and ample aggregate liquidity, the financial system is facing the changes in the macroeconomic conditions caused by the fall in crude oil prices and rapid expansion of the coronavirus.

- 43 Specifically, implementation of the requirement for a net stable funding ratio (CFEN in Spanish) on the part of the SFC in March 2020.
- 44 The thirty-day LRI_R is defined as the ratio between the balance of liquid assets (available and liquid investments) and an estimate of the net requirements of short-term liquidity (over a horizon of 30 days). If the LRI_R is greater than 100% (regulatory minimum), the entity has sufficient liquidity to cover their thirty-day obligations. If not, the entity could have difficulty facing them in the short term.
- 45 The decline in the indicator for the CEs seen in May 2019 corresponds to the modifications of the Office of the Financial Superintendent of Colombia for calculating the LRI_R going into force. See External Circular 009/2018, available at <https://www.superfinanciera.gov.co>.
- 46 The total capital adequacy (basic) is defined as the ratio of the technical equity (basic ordinary) to the assets weighted by the level of credit and market risks.
- 47 Nine percent for the total capital adequacy and 4.5% for basic capital adequacy.

Graph 2.18
CEs' capital adequacy ratio



Source: Office of the Financial Superintendent of Colombia, calculations by Banco de la República.

Monetary Base and M3

During 2019, the monetary base surged significantly and registered its highest growth in the last three years. The real annual change was, on average, 8.5% and at the close of the year, it was 10.5%. These figures are significantly higher than the ones from the previous year (average, real, annual growth 3.7% and 7.0% at the close). At the end of December, the monetary base was at COP 112,454 b with an increase of COP 14,373 b compared to its value a year earlier.

From the supply point of view and compared to December 2018, the provision of liquidity by the Bank came from sources that have a long-term impact on the monetary base.¹ Specifically, the COP 14,373 b increase in the monetary base was due mainly to the Bank's purchase of foreign currency (by exercising *put* options to accumulate foreign reserves between January and April and the

direct purchase of USD 1 b from the National Government² in February) and the net purchases of TES (net of maturities and coupons). Between the close of 2018 and the close of 2019, these transactions generated an expansion in the monetary base of COP 7,749 b and COP 7,665 b respectively.

The net effect of the Bank's other transactions was a contraction of COP 1,041 b. Thus, the expansion generated by the Bank's payments to the Government of the 2018's profits (COP 2,015 b) and by the returns on its deposits at the Bank (COP 1,230 b), as well as the expansion caused by other items on the Bank's P&L and balance sheet (COP 919 b), was offset by the higher balance of the government's deposits as compared to the end of 2018 (COP 4,162 b) and by the contraction generated by smaller transitory liquidity transactions (repos minus remunerated deposits) and their yields (COP 515 b and COP 529 b respectively) (Graph A). It must be noted that due to the high levels of deposits made by the General Office of Public Credit and the National Treasury (DGCPTN by its acronym in Spanish) in *Banco de la República* during most of the year, the supply of liquidity through repos included transactions for periods of up to 90 days.³

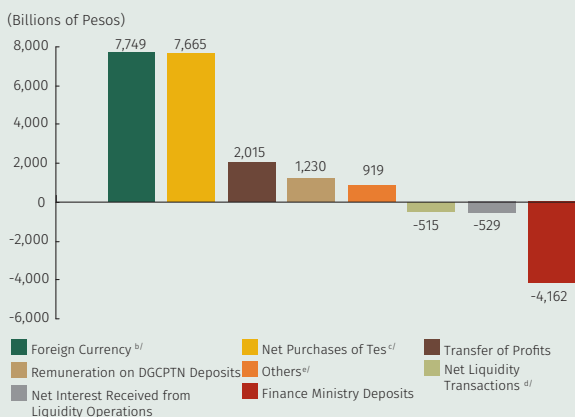
From the demand side, the increase in the monetary base is mostly due to the sharp upswing in cash demand which registered significant growth during the whole year (a real 12.4% at the end) and is the main component of the monetary base

1 The monetary expansion generated by the purchase of securities by the Bank is reversed at maturity. In this respect, the liquidity provided by these transactions is for the term of the security acquired.

2 <https://www.banrep.gov.co/es/comunicado-31-enero-2019-2>

3 The repo balance reached an all-time high in June (COP 22.519 t). See "Banco de la República's Liquidity Supply, 2018-2019," Box 1 in the July 2019 Report of the Board of Directors to the Congress of the Republic.

Graph A
Origin of the monetary base (annual change, 2019)^{a/}

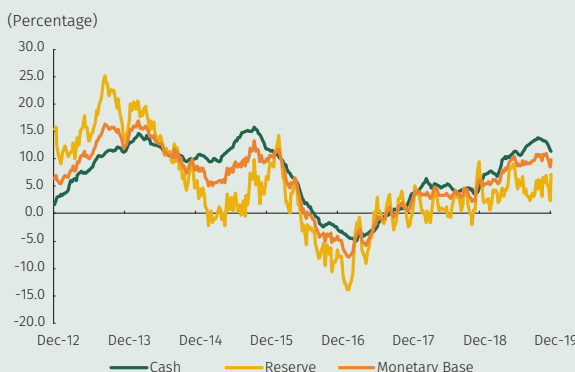


a/ Figures at the close of the calendar month.
 b/ Corresponds to the purchase of foreign currency through the auction of put options in order to accumulate reserves and direct purchase from the government.
 c/ This is the result of purchases minus sales and maturities (principal and coupons) of these securities held by *Banco de la República*.
 d/ Corresponds to the outstanding balance of operations minus interest-bearing deposits not constituting reserve requirements (DRNCE) for all maturities.
 e/ Other items on *Banco de la República* L&P and balance sheet.
 Source: *Banco de la República*.

(average share of 66%). The banking reserve also showed a rising trend, and, at the end of December, it had a real annual variation of 6.8% (Graph B).

The rise in the demand for cash and, in general, for means of payment on demand, could originate from the rebound in economic activity, especially

Graph B
Annual growth of the Monetary Base and its Components (4-week moving average)

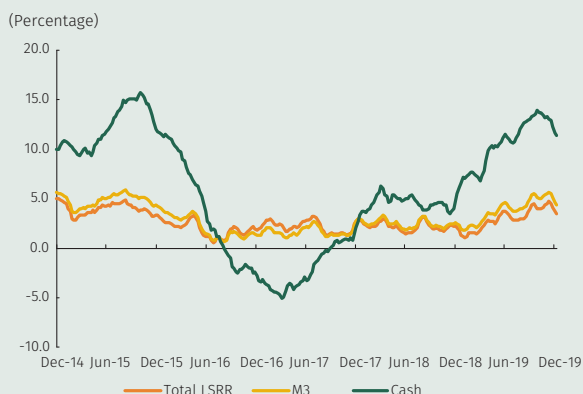


Source: *Banco de la República*.

in those sectors where small payments are made such as retail trade^{4,5}

The performance of cash and deposits was reflected in M3. This surged steadily throughout the year (it grew 3.9% on average in real terms) and registered the largest increases in the last three years (Graph C).

Graph C
Real, Annual Growth of the M3 and of its Components (4-week moving average)



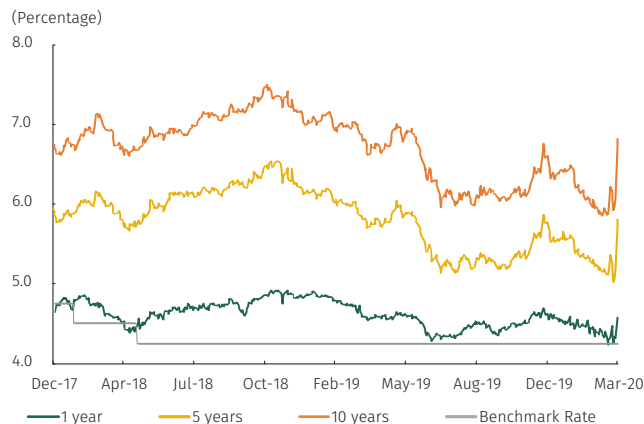
Note: Deflated by the total CPI.
 Source: *Banco de la República*.

- 4 According to DANE's figures, retail sales excluding fuel surged over the course of 2009 (seasonally adjusted series and adjusted for calendar effects). Furthermore, according to *Banco de la República's* survey on the perception of the use of payment instruments (2017), cash is the preferred instrument for making regular payments such as food or transportation in Colombia. With respect to that see Chapter 5: "Payments in the Colombian Economy," *Report of the Board of Directors to the Congress of the Republic for July 2019* (<https://www.banrep.gov.co/es/informe-al-congreso>).
- 5 Furthermore, Colombia experienced a significant increase in 2019 in the number of Venezuelan migrants, a group of people that probably has to make their transactions in cash.

2.4.2 Sovereign Debt Market

In 2019, the yields⁴⁸ of the bonds issued by the Colombian Government (TES) registered sharp drops despite occasional, temporary, and idiosyncratic episodes of volatility. As a result, there were no significant warning signs during the year regarding market risk for the holders of those securities.

Graph 2.19
Zero-Coupon Peso-Denominated TES Yield, and *Banco de la República* Monetary Policy Rate



Note: Figures as of March 10, 2020
Sources: SEN (electronic trading system) and MEC (Colombian electronic market), calculations by *Banco de la República*.

Graph 2.20
Index of 10-Year Local-Currency Zero-Coupon Yields in Latin America

(Base 100 = Sunday, December 31, 2017)



Note: Figures as of March 10, 2020
Sources: Bloomberg, SEN (electronic trading system) and MEC (Colombian electronic market), calculations by *Banco de la República*.

Given the stability of the country's monetary policy stance and expectations for few changes ahead⁴⁹, the appreciation of the Colombian public debt as well as that of the rest of the countries in the region in 2019 was mainly due to the expectations and subsequent implementation of monetary policy rate cuts by the US central bank (Fed). Furthermore, in the case of Colombia, the behavior of the TES was also influenced by the decision made by Moody's and Fitch ratings during the first half of the year to keep the country's credit rating and the statement made by the Government in the *Medium-Term Fiscal Framework*, which indicated that they would seek to reduce their indebtedness through TES. Although it was not enough to offset the appreciation during most of the year, a reversal of the downward trend for yields was seen in Chile and to a lesser extent in the other countries in the region during the last quarter (Graphs 2.19 and 2.20).

The TES appreciation from the previous year occurred in a context of lower trading volumes compared to 2018. The average daily turnover of the Colombian sovereign bonds traded on the SEN and MEC systems was COP 4.3 trillion (t) in 2019, a figure that is lower than in 2018 (COP 8.9 t). The share of the local TES market held by foreigners, in turn, declined as it went from 26.4% at the close of 2018 to 24.4% in 2019.

48 There is an inverse relationship between the price of a bond and its yield. For example, if a bond promises to pay \$110 at maturity and its market price is \$100, its yield is 10%. If the market price of the same security rises to \$105, then its yield falls ($4.8\% = [110/105] - 1$) because, at the end, the holder will still receive the same \$110.

49 According to the *monthly survey of analysts' economic expectations* done by *Banco de la República*, the analysts anticipated stability in the policy rate during the year for at least three months ahead and progressively increased the duration of the period of stability. Thus, at the end of the year, they expected a 25 bp increase in the rate within 13 months.

So far in 2020, depreciations have been observed in sovereign bonds denominated in both local currency and US dollars. This trend has been observed in most of the countries in the region.

So far in 2020 and based on information as of March 10, depreciations have been observed in sovereign bonds denominated both in local currency and US dollars due to the widespread increase in the perception of global risk resulting from the increase in new cases of coronavirus in most of the countries, along with the sharp drop in oil prices (Graph 1.9). This trend has been seen in most of the countries in the region (Graph 2.20).

Since the financial system is one of the main holders of TES and since the majority of its investments is concentrated in these securities, the public debt market has a significant effect on the profitability and stability of the financial system.

Financial institutions can have TES as part of their assets (their proprietary position) or as part of the assets they manage for their clients (third party position). Between December 2018 and the same month in 2019, the financial system's proprietary TES portfolio and the one held on behalf of third parties rose (COP 1.8 t and COP 19.5 t respectively). The above could indicate that the establishments are more exposed to this market. However, in 2019 the volatility of the TES was far from their historical maximums.

With respect to the portfolio in the proprietary position, the rise in its value is mainly explained by the banks' and insurance and capitalization companies' increases (COP 3.6 t) that were partly offset by the decreases (COP 1.7 t) registered by the investment banks and stock-brokerage firms. Regarding the managed funds, the increase in the portfolio was largely driven by pension funds that registered a COP 17.7 t rise and which have a share of 56.5% (Table 2.4).

Like the rest of TES holders, the financial entities may face losses due to valuation resulting from a fall in the price of said securities. This risk is quantified by using the Value at Risk measurement that estimates the maximum loss that an institution may experience in its investment portfolio based on the observed returns over a 1-day horizon and for a given level of confidence.⁵⁰ It should be stated that an appropriate measure of the financial system's market risk is the VaR of their proprietary account since the losses associated with the portfolios managed by the system are faced by the investors.

During the period under analysis (December 2018 to the same month in 2019), the average monthly VaR of the financial institutions' proprietary account increased thus putting an end to the stability it had shown since mid-2018. However, given that the volatility was generally

During 2019, the financial system's TES portfolio in its proprietary account and in the third-party account increased, which would indicate that the institutions are more exposed to this market.

⁵⁰ To illustrate, if the VaR of a financial institution is 5.0% at a 99% confidence level, it indicates that the maximum loss that this entity might face in one day would be 5.0% of the value of their portfolio and there is only a 1.0% chance of surpassing this.

Table 2.4
Change in TES Balance Managed by the Financial System

TES Balance (Trillions of Pesos)		
Entities	Dec 28, 2018	Dec 27, 2019
a. Financial System: Proprietary Accounts		
Credit Institutions		
Commercial Banks	43.0	45.9
Investment Banks	3.3	2.0
Commercial Finance Companies	0.1	0.0
Financial Cooperatives	0.0	0.0
Non-Banking Financial Institutions (NBFI)		
Pension Funds	0.1	0.1
Stock Brokerage Firms	1.5	1.0
Trust Funds	0.2	0.1
Insurance and Capitalization Companies	15.7	16.4
Total	63.9	65.7
b. Financial System: Third-Party Accounts		
Foreigners	75.7	74.2
Stock Brokerage Firms	0.0	0.0
Trust Funds	75.7	74.2
Pensions	107.1	126.0
Pension Funds	84.7	102.4
Trust Funds ^{a/}	22.4	23.6
Cif^{b/}	2.3	2.7
Stock Brokerage Firms	0.4	0.7
Trust Funds	1.9	2.0
Others	18.4	20.0
Stock Brokerage Firms	0.8	0.7
Trust Funds	17.6	19.3
Total	203.5	222.9
c. Others^{c/}	26.0	25.0
Total Supply	293.4	313.7

a/ Pension liabilities managed by trust companies.

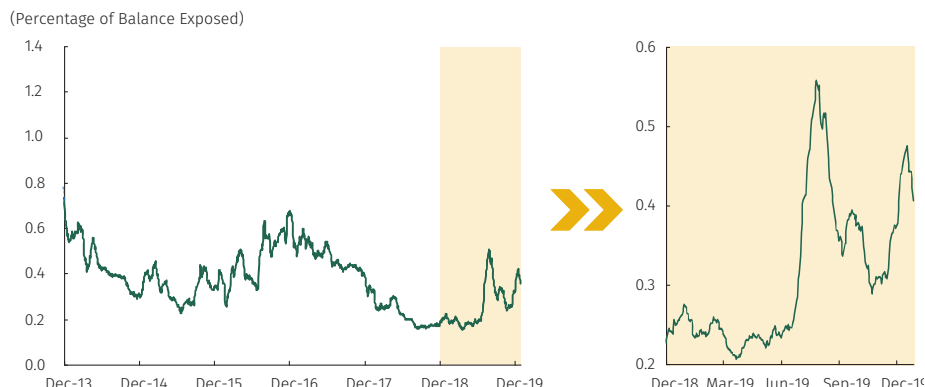
b/ Information from the Office of the Financial Superintendent of Colombia format 351.

c/ Includes Banco de la República, National Treasury Office, Fogafin, etc.

Source: Central Securities Depository (CSD) and Office of the Financial Superintendent of Colombia (FSC), calculations by Banco de la República.

far from its historical peak that occurred in September 2015, 2019 did not register significant warning signs with regard to market risk for the ones holding these instruments (Graph 2.21).

Graph 2.21
 The VaR of the Financial System Proprietary Account as a Percentage of the Exposed Balance
 (monthly moving average)



Sources: Central Securities Depository (DCV), calculations by *Banco de la República*.

Recent Measures by *Banco de la República* to ensure the Liquidity of the Economy in Pesos

In accordance with Act 31/1992, article 16, *Banco de la República* is responsible for studying and adopting monetary measures to regulate monetary circulation and, in general, the liquidity of the financial market and the normal functioning of payments in the economy. Under the inflation targeting framework, the Bank seeks to provide the amount of primary liquidity required by the economy at the benchmark interest rate. The latter refers to the policy interest rate that the Board of Directors of *Banco de la República* considers compatible with reaching a specific inflation target (3%) and achieving a maximum sustainable level of output and employment.

During periods of turmoil like the one the financial markets are currently facing, the need agents have for liquid funds increases. By ensuring an appropriate and sufficient liquidity supply in pesos, *Banco de la República* seeks to promote the proper operation of the payment system, protect funds deposited by individuals and companies in financial institutions, and facilitate a sufficient flow of credit into the economy. With these objectives in mind, and in response to the sudden change in economic conditions in the current context, the Bank has taken the following extraordinary measures:

1. Substantially increase the amount and period of the liquidity that the financial system agents have access to in order to ensure that all payments in the economy continue to be made in a timely manner. From the beginning of the year to March 6, the average limit on the liquidity auction (transitory expansion including overnight and term repos) was about COP 9.6 trillion (t). At the beginning of March, the Bank was offering close to COP 11 t in liquidity with an overnight period. In response to the turmoil in the markets, both the auction limits of and the periods to which *Banco de la República* was willing to provide liquidity were progressively raised. At the time this report was written, the total limit on transitory expansion was COP 23.5 t which was offered for periods of up to ninety days. With this, the financial intermediaries can be more certain of having the necessary liquidity for a longer period than usual.¹ When offering repo operations with a longer maturity, the Bank seeks to enable the financial intermediaries to obtain the funds for the periods they need without constantly having to renew them and thus contribute to the smooth functioning of the money market.

¹ *Banco de la República's* liquidity transactions are usually overnight.

2. Allow the use of rated private debt instruments (such as CDs, ordinary bonds, commercial paper, etc.) as collateral in repo operations. Under normal circumstances *Banco de la República* usually carries out auctions for repo expansion transactions with public debt securities. In the current situation, the volatility of the financial markets may exacerbate the liquidity risk of a wide range of financial system sectors that are highly exposed to rated qualified private debt instruments. When those instruments are allowed as collateral for the liquidity auctions (and access to the auctions is extended as described below), the Bank facilitates the flow of liquid resources into the economy and prevents the liquidation of those positions from generating an excessive collapse in the price of the securities that could alter the liquidity of the financial entities and affect public confidence in the system.

3. Extend access to transitory repo expansion auctions to a wider group of financial institutions, especially those that were experiencing greater pressure in the markets. Initially, stock-brokerage firms, trust funds, and investment management companies (both proprietary and on behalf of third parties or managed funds) were allowed to participate in the private-debt repo auctions.² Subsequently, they and insurance entities were also authorized to participate in the public debt repo auctions and in the discount window. In addition, the pension and severance funds were allowed to participate in the public debt repo auctions of public

debt securities and in the discount window as well.³ This group of agents does not usually have access to the operations for provision of temporary liquidity by *Banco de la República*.⁴ By allowing them access to these operations, the Bank seeks to make liquidity flow efficiently to those sectors of the financial system that may require it more quickly.

4. Authorize the permanent injection of liquidity into the economy through the outright purchase of public debt securities and private debt securities issued by credit institutions⁵ (certificates of deposit and ordinary bonds) from a broad range of financial agents. This is done to reinforce liquidity in the economy and permanently mitigate the threats caused by the recent macroeconomic situation on liquidity and public confidence.

² See the BDBR's March 12, 2020 press release (<https://www.banrep.gov.co/es/comunicado-junta-directiva>)

³ See the BDBR's March 18, 2020 press release (<https://www.banrep.gov.co/es/banco-republica-refuerza-medidas-para-asegurar-liquidez-economia-pesos-y-dolares>)

⁴ This group of entities usually has access to the intraday repo (with the exception of the insurance entities) that is considered to be a transaction for facilitating the functions of the payment system (not an operation for supplying the economy with liquidity). However, they can participate in temporary contraction transactions through interest-bearing deposits not constituting reserve requirements.

⁵ In the case of private debt securities through discriminatory price auctions.

2.5 External Balance and Foreign Exchange Policy

In 2019 the current account widened, continuing the trend started a year ago after a period of external adjustment with respect to the terms of trade shock. In 2019, the greater expansion of domestic demand, the weakness of our trading partners, and the lower export prices raised the current account deficit to 4.3% of the GDP compared to the 3.9% seen in 2018. The deterioration in the trade balance was the primary determining factor in the broadening of the foreign deficit while the reduction in the profits of businesses with foreign capital and the higher income from workers' remittances mitigated that increase. In 2020, the changing worldwide economic and financial conditions fostered by the Covid-19 pandemic and the significant reduction in crude oil prices have generated great uncertainty in the forecast for the current account deficit. This year, how it develops will depend on the magnitude and persistence of these shocks.

The balance of international reserves came to USD 53,167.2 m in 2019.

Regarding the foreign exchange policy, in 2019, *Banco de la República's* strategy of accumulating foreign reserves together with the profitability of the investments made it possible to raise the balance of the foreign reserves by USD 4,774.3 m for a total of USD 53,167.2 m by the end of the year. The accumulation was done by means of *put* option auctions and through the purchase of dollars from the General Office of Public Credit and the National Treasury (DGCPTN). In the days prior to the publication of this Report, in turn, and in view of the volatility of markets due to the sharp drops in crude oil prices and the uncertainty about the impact of the Covid-19 on the global economy, *Banco de la República* has been implementing a set of measures in order to provide the market with instruments to hedge the foreign exchange risk, facilitate trading in foreign currency, and ensure the economy's liquidity in dollars. These measures are explained in detail in the section on exchange rate policy.

2.5.1 Colombia's Foreign Balance in 2019

During 2019, the country's balance of payments current account registered a deficit of USD 13,800 m which is USD 753 m higher than what was registered a year ago (Table 2.5). As a share of the GDP, the deficit was estimated to be 4.3% which is 0.4 pp higher in comparison to what was seen in 2018.

The larger current account deficit is in line with the growth of domestic demand, lower export prices, and the weak economic growth of our trading partners. First of all, the positive performance of household expenditures and of gross fixed capital formation probably drove imports of goods and services. The lower prices and coal production, in turn, as well as the decline in the international price of crude oil explain, for the most part, the drop in exports of goods. These factors, added to the slowdown our main trading partners experienced, would have been reflected in the deterioration of the trade balance which rose USD 3,303 m with respect to a year ago (Table 2.5). In contrast, the decline in net outflows for the factor income category (USD 1,455 m) together with the USD 1,033 m increase in net current transfer revenue contributed to mitigating the country's foreign deficit.

The higher current deficit was reflected in the greater need for foreign financing. As a result of that, in terms of the financial account,⁵¹ net capital inflows of USD 13,102 m (4.1% of the GDP) were registered in 2019.

During 2019, the current account deficit of the country's balance of payments was USD 13,800 m, which is equivalent to a 4.3% share of GDP.

51 According to the IMF's proposed *Balance of Payments Manual*, sixth version, the financial account has the same sign as the current account. The financial account is the result of the difference between asset and liability flows. If the current account has a deficit, then the financial account is negative, which indicates that the Colombian economy has had to resort to foreign financing (liabilities) or liquidate its foreign assets in order to finance its current excess spending. In contrast, if the current account is positive (surplus), the financial account will also be positive which would indicate that the country has the capacity to lend funds to the rest of the world.

Table 2.5
Colombia's Balance of Payments

	2018 (Pr)	2019 (Pr)	Change (Dollars)
Current Account (Millions of Dollars)			
Current Account (A + B + C)	-13,047	-13,800	-753
Percentage of the GDP	-3.9%	-4.3%	
A. Goods and Services	-8,926	-12,167	-3,241
1. Goods	-5,144	-8,447	-3,303
Exports FOB	44,440	42,374	-2,066
Imports FOB	49,584	50,821	1,237
2. Services	-3,782	-3,720	62
Exports	9,654	9,988	334
Imports	13,436	13,708	272
B. Factor Income	-11,764	-10,309	1,455
Income	6,117	6,934	817
Outlays	17,881	17,243	-638
C. Current Transfers	7,643	8,676	1,033
Income	8,584	9,636	1,052
Outlays	941	961	19
Financial Account Annual Flows (Millions of Dollars)			
Financial Account with Change in Foreign Reserves (A + B + C + D)	-12,415	-13,102	-687
Percentage of the GDP	-3.7%	-4.1%	
A. Direct Investment (Ii - I)	-6,409	-11,279	-4,870
I. Foreign in Colombia (FDI)	11,535	14,493	
Percentage of the GDP (FDI)	3.5%	4.5%	
Ii. Colombian Abroad	5,126	3,214	
B. Portfolio Investment (1+2)	1,297	506	-791
1. Public Sector (Ii - I)	-1,410	-787	
i. Foreign Portfolio Investment (A + B)	2,016	850	
a. International Markets (Bonds)	-1,514	1,069	
b. Local Markets (T.E.S)	3,529	-219	
ii. Portfolio Investment Abroad	605	63	
2. Private Sector (Ii - I)	2,707	1,294	
i. Foreign Portfolio Investment (A + B)	-1,667	-817	
a. International Markets (Bonds)	-844	415	
b. Local Markets	-823	-1,232	
ii. Portfolio Investment Abroad	1,041	477	
C. Other Capital Flows Public Sector + Private Sector	-8,490	-5,662	2,828
D. Reserve Assets	1,187	3,332	2,145
Errors and Omissions (E and O)	632	698	66
Memo Item: Financial Account Excluding Change in Foreign Reserves	-13,602	-16,434	-2,833
Change in Foreign Reserves	1,187	3,332	

(pr): preliminary
Source: Banco de la República

This is USD 687 m higher than what was seen the year before when they totaled USD 12,415 m (3.7% of the GDP) (Table 2.5). In 2019, FDI remained the main source of foreign financing (USD 14,493 m), particularly those funds oriented towards companies whose business is focused in the domestic market. In addition, the capital revenue going to the mining-energy sector was maintained in order to sustain or increase production levels. Furthermore, access to other sources of foreign financing (USD 5,156 m) such as indebtedness and portfolio flows remained in an environment of favorable external financial conditions.

The performance of the different components of the balance of payments is described in greater detail below:

The deficit in the balance of trade in goods during 2019 totaled USD 8,447 m with an increase of USD 3,303 m (64.2%) compared to the year before (Table 2.5). This result is due to the USD 42,374 m in exports with an annual decline of 4.6% (USD 2,066 m) and USD 50,821 m in imports at an annual increase of 2.5% (USD 1,237 m) (Table 2.5).

The decline in exports was mainly the result of lower sales abroad of coal (USD 1,780 m), oil and its derivatives (USD 869 m), and industrial products (USD 171 m). In contrast, sales abroad of non-monetary gold (USD 312 m) and bananas (USD 68 m) registered increases. The decrease in sales abroad of coal resulted from the combined effect of a smaller volume exported (14.0%) and a reduction in the export price (11.7%). The lower value of the crude oil exported is due to the reduction in the selling price (7.2%) that is partially offset by the rise in the quantities sold (1.3%). Regarding exports of non-monetary gold and bananas, these rose with respect to both their increase in volume shipped (15.0% and 8.4% respectively) and their higher implicit export prices (9.7% and 0.1% respectively).

The imported value of merchandise in 2019 totaled USD 50,821 m with an annual increase of 2.5% (USD 1,237 m). This increase is primarily due to growth in purchases abroad of fuel and lubricants (USD 868 m; 28.3%), transportation equipment (USD 538 m; 13.4%), and consumer goods (USD 595 m; 5.3%). This result is partly offset by the decline in imports of supplies and capital goods for industry (USD 386 m; 1.5%).

The reduction in the factor income deficit and of the services account coupled with the increased revenue from workers' remittances partially offset the deterioration in the trade balance in goods. Thus, the deficit in the service account declined USD 62 m during 2019 (Table 2.5) due to the higher increase in exports compared to the imported services. With regards to exports, the higher income received from business services, especially the revenue related to call centers as well as the sale of trips and transportation services stands out. Regarding imports, the higher outflows resulting from insurance, finances, trips, and freight stand out.

The greater expansion of domestic demand, the weakness of the country's trading partners, and the lower export prices raised the current account deficit.

The deterioration of the trade balance was the main determining factor in the expansion of the external deficit.

Lower profits for companies with foreign capital and higher income from workers' remittances mitigated the current deficit.

During 2019, the decrease in net outflows due to factor income (USD 1,455 m) (Table 2.5) resulted mainly from the decrease in the profits obtained by companies with direct investment (USD 1,062 m). The profits of the firms working in oil drilling, mining, and quarrying are estimated to be the main ones that have decreased (USD 1,026 m). This trend is partially offset by higher estimated profits for companies with FDI that provide public services except for those in the transportation and communications sector.

With regard to the category of current transfers, a net income of USD 8,676 m was received in 2019. This meant 13.5% more (USD 1,033 m) than in 2018, a result that was mostly explained by the workers' remittances, which amounted to USD 6,744 m in 2019 with an annual increase of 6.7% (USD 422 m). The main increases in remittances income were seen in those sent from the United States, Spain, Canada, and Australia while remittances from Argentina, Mexico, and Costa Rica, in turn, decreased.

As for the result of the financial account, in 2019 there were net capital inflows of USD 13,102 m, USD 687 m higher than what was seen a year earlier. This was due to incoming foreign capital (USD 17,051 m), outflows of Colombian capital abroad (USD 533 m), outflows due to financial derivatives (USD 84 m), and a USD 3,332 m increase in the foreign reserves as a result of balance of payment transactions.⁵² The errors and omissions were estimated at USD 698 m (Table 2.5).

These foreign funds received by the country came from FDI (USD 14,493 m), the net disbursement of loans and other credit from abroad (USD 2,525 m), and the net disbursements from long-term debt securities placed on the international market (USD 1,484 m). This income was partially offset by settlements of variable-income securities in the local market by non-residents (USD 1,232 m) and net sales of TES in the local market by non-residents (USD 219 m).

Thus, in 2019, USD 14,493 m was received through FDI (4.5% of the GDP), an amount that is USD 2,958 m (25.6%) higher than what had been received the year before. The FDI received during this period was distributed by economic activity as follows: mining and oil (31.9%), financial and business services (20.6%), retail trade and hotels (14.7%), manufacturing industry (10.7%), transportation and communications (8.6%), electricity (2.1%), and the remaining sectors (11.4%). The flow of Colombian direct investment abroad, in turn, was estimated at USD 3,214 m, and the majority of this was made by businesses in the mining-energy and industrial sectors.

⁵² Note that this accumulation of reserves is the result of the net purchases of USD 2,478 m in foreign currencies, USD 938 m in income from the net yields on foreign reserves, and USD 84 m in net outflows for other *Banco de la República* transactions.

Foreign direct investment continued to be the main source of external financing in 2019.

During 2019, income from foreign portfolio investment, in turn, totaled USD 33 m, an amount that is USD 315 m lower than what it was a year ago. This was the result of net disbursements of long-term debt securities issued on the international markets (USD 1,484 m), the sales of stocks in the local market by non-residents (USD 1,232 m) and the net sales of TES in the local market on the part of non-residents (USD 219 m). The outflows of Colombian capital for this totaled USD 540 m and corresponded to portfolio investments made by companies in both the private (USD 477 m) and the public sectors (USD 63 m) (Table 2.5).

Finally, due to other capital flows, the country received USD 2,525 m in net disbursements through mainly long-term loans and other credit. The private sector received USD 2,648 m in net disbursements, loans contracted especially by companies working in the non-banking private sector that used these resources for the purchase of assets abroad and as working capital. The public sector, in turn, made USD 123 m in net loan repayments, mainly on long-term loans.

2.5.2 Changes in the Exchange Rate

During 2019, the dollar strengthened with respect to its peers and emerging countries. This was mainly due to the uncertainty and greater risk aversion in view of the trade tensions between the United States and China as well as other events related to domestic political uncertainty in several regions around the world (e.g.: United Kingdom, Italy, Argentina, and Hong Kong) and fears of a greater global economic slowdown. At the close of the year, the US currency had risen 0.4% annually with respect to the main advanced economies⁵³ and 1.3% with respect to the currencies of the emerging economies.⁵⁴

During 2019, the U.S. dollar strengthened in comparison to its peers and the currencies of emerging countries. This was mainly driven by the uncertainty and greater risk aversion due to the trade tensions between the United States and China as well as other events related to domestic political uncertainty in several regions around the world (e.g.: United Kingdom, Italy, Argentina, and Hong Kong) and fears of a greater global economic slowdown. At the end of the year, the U.S. dollar strengthened by 0.4% annually in comparison with the main currencies of developed countries⁵⁴ and 1.3% in comparison with the currencies of the emerging economies.⁵⁵

During 2019, the US dollar strengthened vis-à-vis its peers and emerging countries.

53 In line with the DXY index, which includes the euro, the yen, the Canadian dollar, pound sterling, the Swedish krona, and the Swiss franc. This group of currencies corresponds to those of the United States' main trading partners.

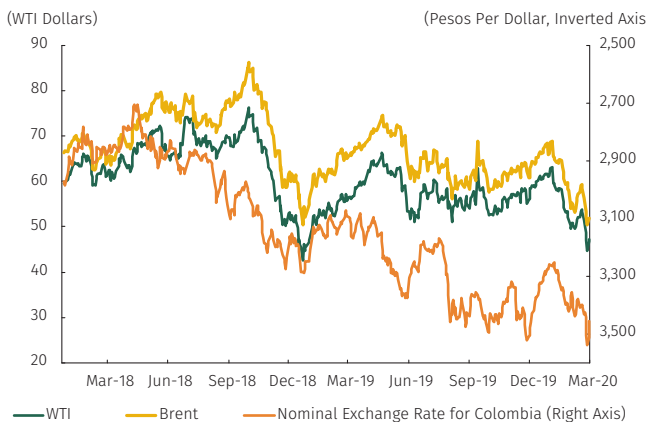
54 According to the FXJPEMCI index, which includes the currencies of Brazil, Russia, China, Mexico, South Africa, South Korea, Chile, Israel, Taiwan, Peru, Turkey, India, Argentina, Malaysia, Colombia, Hungary, Indonesia, Egypt, Thailand, the Czech Republic, the Philippines, Morocco, Pakistan, Jordan, and Poland.

Graph 2.22
Nominal Exchange Rate Indices for some Latin American Countries



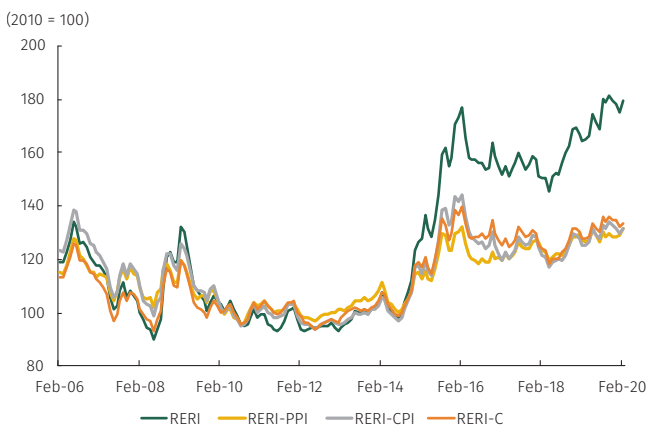
Source: Bloomberg and Banco de la República.

Graph 2.23
Nominal Exchange Rate and International Price of Oil



Source: Bloomberg.

Graph 2.24
Multilateral Exchange Rate Indices (nominal and real)



Source: Banco de la República.

In line with the overall strengthening of the U.S. dollar, the majority of Latin American currencies depreciated. This was also influenced by idiosyncratic factors such as the emergence of different social protests in the region during the last quarter of the year. Thus, comparing the average exchange rates of these currencies during 2019 with those for 2018, the Argentine peso depreciated 72.1%, the Colombian peso 11.0%, the Chilean peso 9.6%, the Brazilian real 7.9%, the Mexican peso 1.9%, and the Peruvian sol 1.5% (Graph 2.22).

The Colombian peso appreciated during the first quarter of 2019 in line with the performance of the rest of the currencies in the region and influenced by the increase in oil prices and expectations of monetization from real sector companies for the payment of dividends and taxes. This trend was reversed during the second and third quarters of the year given the unfavorable international context as a result of the increased trade tensions between the United States and China. Finally, the Colombian peso appreciated by 5.8% in the fourth quarter⁵⁵ vis-à-vis the U.S. dollar due to the perception of a lower intensity of the national protests, the scope of the first round of negotiations between the United States and China in December, and the increase in oil prices⁵⁶ (Graph 2.23).

In comparison to the currencies of our major trading partners (based on the nominal exchange rate index: NERI), the Colombian peso became weaker during 2019 in comparison to the close of 2018 (Graph 2.24) when the country's exchange rate stood at COP 3,280 per dollar on average. With this, the Colombian peso registered a depreciation of 0.84% when December 2018 is compared to the same month in 2019. In terms of the annual averages, the depreciation in 2019 was 11%.

⁵⁵ However, it should be noted that, in November, the peso depreciated due to local factors such as uncertainty regarding the duration and costs associated with national social protests.

⁵⁶ Between 30 September and 30 December 30, 2019, the Brent crude oil price increased in 12.6% and the WTI price in 14.1%.

If the changes in prices in Colombia and the rest of the countries are ruled out (real exchange rate index: RERI), the peso was also weakened with respect to the country's main trading partners as a group during 2019 (RERI-CPI, RERI-PPI; Graph 2.24). Something similar can be seen if the purchasing power of the Colombian peso is compared to its competitors in the United States in the coffee, banana, flower, and textile markets (RERI-CPI and RERI-C). As was mentioned, the uncertainty and greater risk aversion caused by the trade tensions between the United States and China, Brexit, and fears of a greater worldwide economic slowdown generated depreciation pressure that was partially mitigated in the RER indices by an upward trend in local inflation. When the annual averages were taken, the dynamics described implied that the trend of the RER indices would show a depreciation of around 5.5%.

So far in 2020 and based on information as of March 2020, the Colombian peso has nominally weakened 17.1%. This has occurred in a context of greater perception of global risk given the spread of the coronavirus. The devaluation of the peso has also been influenced by the sharp drop in oil prices.⁵⁷ These registered their sharpest declines after the 6 March, 2020 meeting between members of OPEC and their associated countries which ended without an agreement to intensify and prolong oil production cuts. As a result, Saudi Arabia stated that they would raise production in order to increase their market share and lowered their official prices on 9 March.⁵⁸

2.5.3 Foreign Exchange Policy

In view of the volatility of the markets due to the sharp drops in oil prices and the uncertainty associated to the impact of the coronavirus on the worldwide economy, *Banco de la República* announced the sale of U.S. dollars through Non-Delivery Forwards, (NDFs)⁵⁹ for USD 1,000 million (m) in order to provide the market with a mechanism for exchange-rate hedging and facilitate trading in foreign currency. Subsequently, on 18 March, the BDBR decided to sell USD 400 m on the spot market through FX *Swap* contracts⁶⁰ in order to reinforce the measures taken to ensure the liquidity in the economy in U.S. dollars.

The real exchange rate indices showed an average 5.5% depreciation in 2019.

***Banco de la República* has been putting a set of measures into place in order to provide the market with exchange risk hedging instruments, facilitate trade in foreign currency, and ensure the liquidity of the economy in US dollars.**

57 Between 30 December 2019 and 11 March 2020 the Brent crude oil price fell 47.7% and the WTI price, 46.5%.

58 Between 9 and 6 March 2020, the Brent crude oil price and the WTI price went through daily variations of -24.1% and -24.6% respectively.

59 Through this instrument, *Banco de la República* sells dollars on a one-month futures contract.

60 *Banco de la República* sells dollars in cash and buys them back with a futures contract (in sixty days).

Banco de la República recognizes the importance of having an appropriate level of international liquidity to strengthen its external position.

The use of the latter mechanism was extended to pension and severance fund managers as well as to their original counterparts.⁶¹

Banco de la República recognizes the importance of having an appropriate level of international liquidity to reinforce its external position. Given the above, the Bank's strategy of accumulating foreign reserves together with the profitability of the investments made it possible to raise the balance of the foreign reserves USD 4,774.3 m during 2019 and reach a total of USD 53,167.2 m by the end of the year. The accumulation was achieved through *put* option auctions (USD 1,478.1 m) and through the purchase of dollars from the DGTPTN in February of the previous year (USD 1,000 m).

In addition, Colombia has had a line of contingent financing with the IMF (flexible credit line: FCL) since May 2009. This is given to member countries with good economic performance, prudent policies, and a sound economic policy framework. On May 20, 2019, the IMF reaffirmed the agreement with Colombia for access to the 7.848 million in special drawing rights (SDR) in contingent resources which, at the end of 2019, amounted to approximately USD 10.800 m.⁶² Although the economic authorities do not envisage making use of these funds, they consider having them prudent in the event of a sudden cut off in external financing.

The methodology adopted by the Bank to determine the proper level for the foreign reserves follows the same logic as the proposed liquidity coverage ratio (LCR) within the framework of Basel III bank supervision.⁶³ This framework stipulates that the liquid assets should be sufficient to cover liquidity needs for a predetermined period and take a stressed scenario into account. Thus, the foreign reserves should cover at least the projected current account deficit plus the amortizations of the foreign debt over the coming twelve months. Based on information as of December 2019, the foreign reserves exceeded these indicators by approximately USD 7.000 m. Furthermore, the foreign reserves together with the IMF's FCL should cover those needs for foreign financing and the residents' and non-residents' possible capital outflows. This criterion was also fully met at the end of 2019.

There are also other indicators for assessing the foreign reserves that could give warning signals regarding the external vulnerability of economies. Included among these are the ratios of foreign reserves to M3,

The international reserves, together with the IMF's FCL, should cover the needs for foreign financing and possible outflows of capital.

61 Mainly banks.

62 For more information, see Box 1: "Colombia's Flexible Credit Line with the IMF" in the July 2018 Report of the Board of Directors to the Congress of the Republic.

63 See the shaded area: New methodology for determining the appropriate level of foreign reserves in the March 2019 Board of Directors' Report to the Congress of the Republic.

to amortizations of foreign debt, and to the current account deficit. In the case of Colombia, these indicators registered average values above 1⁶⁴ during the most recent decade and probably presented improvements in 2019 with respect to the levels seen in 2018 largely due to the increase in the balance of the foreign reserves (Table 2.6). Moreover, Colombia occupies an intermediate position with respect to its peers in the region and, in general, shows indicators that are higher than those for Chile, similar in some cases to those for Mexico, and, the majority of the time, lower than those for Brazil and Peru⁶⁵ (Table 2.7).

Table 2.6
Other Indicators of Colombia's International Reserves

	2012	2013	2014	2015	2016	2017	2018 (Pr)	2019 (Proj)
Balance								
Net Foreign Reserves (NIR) (Millions of Dollars) ^{a/}	37,467	43,633	47,323	46,731	46,675	47,629	48,393	53,167
Indicators								
A. Foreign Debt Repayment Indicator								
Foreign Debt Repayments (Millions of Dollars) ^{b/}	22,539	16,773	21,756	24,531	23,759	30,212	32,168	32,863
NIR/Current Year Foreign Debt Repayments	1.66	2.60	2.18	1.90	1.96	1.58	1.50	1.62
NIR/Coming Year Foreign Debt Repayments	2.23	2.01	1.93	1.97	1.54	1.48	1.47	1.55
B. Appropriate External Liquidity Position								
NIR/(Current Year Debt Service)	1.44	2.14	1.84	1.61	1.64	1.34	1.28	1.36
NIR/(Coming Year Debt Service) ^{c/}	1.84	1.69	1.63	1.64	1.32	1.26	1.24	1.35
NIR/(Current Year Debt Repayments + Current Year Current Account Deficit)	1.11	1.49	1.14	1.08	1.30	1.18	1.07	1.14
NIR/(Coming Year Debt Repayments + Coming Year Current Account Deficit) ^{d/}	1.28	1.05	1.10	1.31	1.15	1.05	1.04	1.09
C. Other Foreign Reserves Indicators								
NIR as Months of Product Imports	7.9	9.2	9.2	10.8	13.0	12.9	11.7	12.6
NIR as Months of Total Imports	6.5	7.4	7.6	8.7	10.3	10.1	9.2	9.9
NIR/M3 (Percentage)	22.1	24.7	30.2	35.5	31.7	29.6	31.4	32.2
NIR/GDP (Percentage)	10.1	11.4	12.4	15.9	16.5	15.3	14.5	16.4
NIR/GDP Adjusted PPP (Percentage) ^{e/}	6.7	7.3	7.4	7.0	6.8	6.7	6.5	6.8

(pr): preliminary

(proj): projected

a/ The net international reserve balance includes the contributions to the Latin American Reserve Fund (FLAR in Spanish).

b/ The amortizations of foreign debt corresponds to payments on long-term debt and includes the balance of short-term debt.

c/ The interest and debt amortizations for 2020 correspond to the estimated payments in the preliminary projection for the balance of payments.

d/ The current account deficit for 2020 is a forecast.

e/ The GDP PPP corresponds to the GDP converted into dollars based on the World Bank's purchasing power parity (PPP) rate.

Source: Banco de la República, calculations based on the data seen as of December 2019 and in the preliminary estimate of the balance of payments.

64 According to the IMF, "Debt and Reserve Related Indicators of External Vulnerability" (2000), there is empirical evidence for a sample of emerging economies which makes it possible to establish the value of 1 as a benchmark for these types of reserve indicators. Specifically, the Guidotti-Greenspan rule states that a country's reserves should be equal to the balance of the short-term external debt, which implies a ratio of 1 for this indicator. The explanation is that countries should have enough reserves to be able to withstand a massive withdrawal of short-term foreign capital.

65 In the case of Peru, the banking reserve requirements are excluded from the balance of the foreign reserves. Note that the calculation of the dollar-denominated M3 is affected by the behavior of the exchange rate.

Table 2.7
Regional Comparison: Other International Reserve Indicators in 2019

	Brazil	Chile	Mexico	Peru	Colombia
NIR/M3	22.6	11.2	29.4	31.4	32.2
NIR/Repayment of Foreign Debt	2.5	0.6	1.8	3.2	1.6
NIR/Debt Service	2.2	0.6	1.4	2.8	1.4
NIR/Repayment of Foreign Debt + Current Account Deficit	2.1	0.5	1.6	2.5	1.1
NIR as Months of Product Imports	24.3	6.2	4.4	15.0	12.6
NIR/GDP (Adjusted PPP)	11.0	7.4	6.6	10.7	6.8

Note: the GDP of the countries under consideration corresponds to the GDP converted into dollars based on the purchasing power parity (PPP) rates of the World Bank.
Sources: Central banks, The Economist Intelligence Unit (updated as of January 2020), and *Banco de la República*.

03

Foreign Reserves

Banco de la República manages the foreign reserves subject to safety, liquidity, and profitability criteria and within a strict framework of risk management. Within this, emphasis is placed on the measures geared towards the management of market risk, credit risk and liquidity risk. The breakdown of the investment portfolio, which is the main component of the foreign reserves, shows the high credit quality and liquidity of the securities in which the foreign reserves are invested.

As of December 31, 2019, the net foreign reserves totaled USD 53,167.2 m which is USD 4,774.3 m higher than the balance registered in December 2018. The factors that explain the increase in the foreign reserves are the purchase of foreign currency and the return of the foreign reserves.

In compliance with Law 31/1992, *Banco de la República* manages the foreign reserves as provided to the public interest, to the benefit of the national economy, and to facilitate the country's payments abroad. Based on this, the law requires the investment of the reserve assets to be done under the criteria of security, liquidity, and profitability.

The security criterion applied to managing foreign reserves in Colombia implies adequately controlling the risk to which investments are exposed. In order to manage risks within acceptable parameters and levels, the Foreign Reserves Committee of *Banco de la República* defines strict limits for the exposure to each of the different risks facing the foreign reserves. Within this framework, emphasis is placed on: 1) the management of market risk so that the value of the investments is not significantly affected by changes in the international interest rates 2) the management of credit risk in order to have a very low probability of facing defaults on payments, and 3) the management of liquidity risk in order to be able to convert the reserve assets into cash quickly and at a low cost.

To meet the liquidity criterion, the Bank aims to invest in financial assets that are easy to liquidate in the secondary market or in assets with a short-term

maturity. In addition to investing in highly liquid assets, *Banco de la República* defines investment tranches according to the objectives of liquidity and profitability. Shorter-term, most liquid investments are used to intervene in the foreign exchange market. Normally, the portion of the reserves that would be used only in exceptional cases is invested over a longer term in order to seek a higher return rate. *Banco de la República* divides the reserves investment portfolio into three tranches: short term, medium term, and the gold tranche.

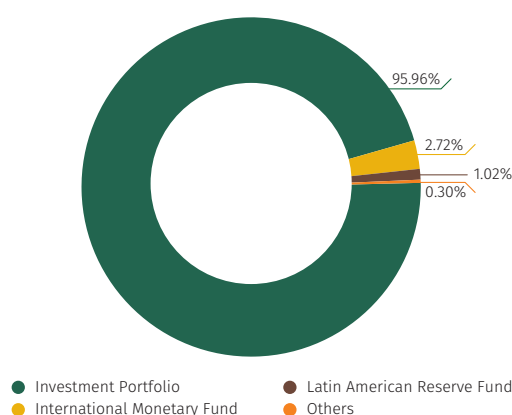
Reserve management policies are based on modern portfolio theory, which recommends applying the principle of diversification. Thus, portfolio security, liquidity, and profitability are assessed as a whole and not according to the performance of individual investments. Once the criteria are defined to ensure that the foreign reserves portfolio is invested at a low risk, the management policy also seeks to achieve a suitable return since this criterion is part of the mandate given to *Banco de la República* by law. An explanation of the policies that guide the investment of the reserves and some relevant definitions are provided in the Appendix.

As of December 2019, the net foreign reserves totaled USD 53,167.2 m which is USD 4,774.3 m higher than the balance registered in December

2018.⁶⁶ The increase in the dollar balance of foreign reserves over the course of the year was due to the purchase of foreign currency (USD 2,478.1 m), and the return of the foreign reserves, which, at the close of December 2019, was 4.57%.⁶⁷ The most important factors explaining that return are the appreciation of bonds that resulted from the fall in interest rates and the accrual of interest earned from the instruments that were invested in.

The main component of the foreign reserves is the investment portfolio which corresponds to investments in financial instruments on the international market and to the certified physical gold (94.68% and 1.28% respectively of the reserves). The breakdown of the foreign reserves is presented in Graph 3.1.

Graph 3.1
Breakdown of the International Reserves
(information as of 31 December 2019)



Note: gold is included in the investment portfolio. The item *others* includes international agreements, cash on hand, and demand deposits.
Source: *Banco de la República*.

⁶⁶ The net foreign reserves are equal to the total foreign reserves, or gross reserves, minus *Banco de la República's* short-term foreign liabilities. The latter consist of demand obligations to non-resident agents in foreign currency. The gross foreign reserves came to USD 53,174.2 m and the short-term foreign liabilities totaled USD 7.04 m.

⁶⁷ This rate of return excludes the effect of the foreign exchange component.

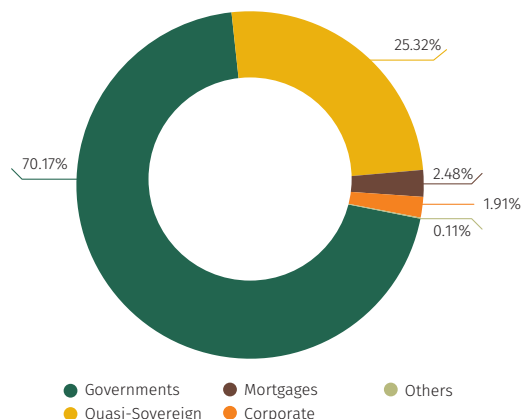
3.1 Breakdown of the Investment Portfolio⁶⁸

The breakdown of the investment portfolio as of December 2019 can be seen in Graph 3.2 when about 95.5% of it was invested in securities issued by governments, entities related to governments (quasi-sovereign), and repurchase agreements with the Federal Reserve.

Graph 3.3 shows the credit rating of the investment portfolio. The Bank uses the lowest rating granted by at least two of the three main rating agencies (S&P, Moody's, and Fitch Ratings) as a benchmark. Evidence of the high credit rating of the assets in portfolio can be seen in the fact that 77.76% of it is invested in instruments with AAA ratings and 18.96% is in instruments with AA ratings.

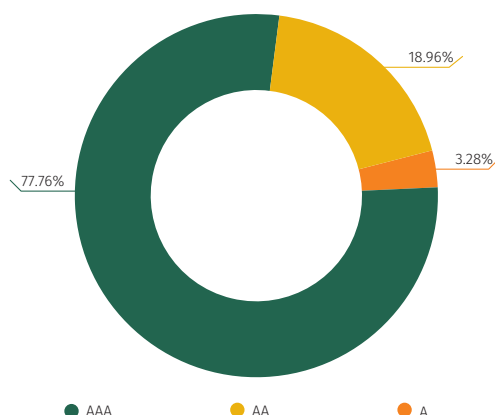
Finally, Graph 3.4 shows the currency breakdown of the investment portfolio as of December 2019. The largest share of Colombia's foreign reserves is in US dollars due to the fact that the majority of the country's commercial and financial transactions with the rest of the world are carried out in this currency. Investment in the following currencies is also allowed: Canadian, Australian, New Zealand dollars; Swedish krona; the British pound; Swiss franc; euros; yen; Norwegian krone; the renminbi; Hong Kong and Singapore dollars, and the Korean won.⁶⁹ All of these currencies are characterized by high daily trading volumes and belonging to countries that are characterized by having government bonds with high credit ratings.

Graph 3.2
Breakdown of the Investment Portfolio by Sector
(information as of 31 December 2019)



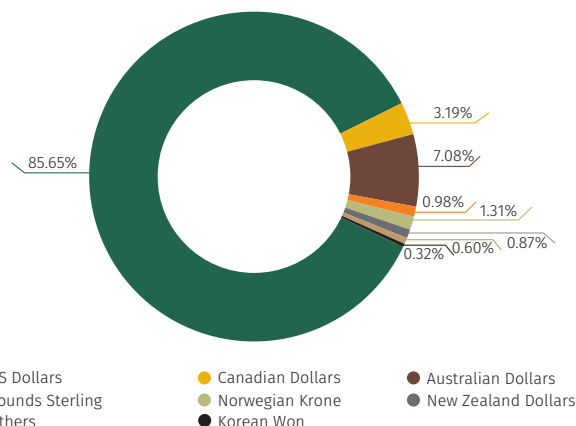
Source: Banco de la República.

Graph 3.3
Breakdown of the Investment Portfolio by Credit Rating
(information as of 31 December 2019)



Source: Banco de la República.

Graph 3.4
Breakdown of the Investment Portfolio by Currency
(information as of 31 December 2019)



Source: Banco de la República.

68 The graphs in this section were calculated based on the amount in the investment portfolio excluding the gold.

69 The euro has a very small share in the foreign reserves investment portfolio due to the fact that it is not part of the group of currencies that the benchmark index is made up of. The reason why it is not in this group is because both the benchmark interest rate of the European Central Bank and the rates for the main short-term sovereign bonds issued in euros are negative.

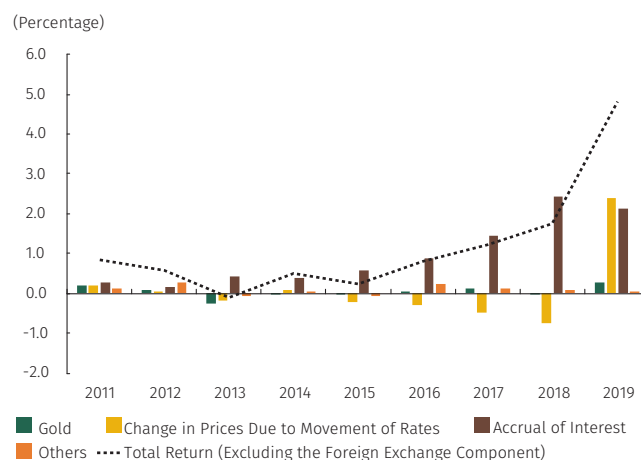
3.2 Profitability of the Reserves

The decision to have a portfolio with a conservative risk profile implies receiving a lower return. The basic financial theory for portfolio management indicates that, if an investor wants to face a lower risk, his expected profitability will be lower.

The return of the reserves depends primarily on two factors: first, the interest received from the instruments invested in (accrual factor), and second, the change in the prices of the securities because of movements in the interest rate (valuation factor). The second factor occurs because there is an inverse relationship between bond prices and interest rates; that is to say, the price of the bonds declines as the interest rates increase and vice versa.

As can be seen in Graph 3.5, the rate of return on the foreign reserves has been rising gradually since 2013. Between 2009 and 2015, return remained low due to the expansionary monetary policy implemented by the central banks of the developed countries in response to the global financial crisis which triggered very low interest rates. However, the US Federal Reserve gradually raised its monetary policy rate during the 2015-2018 period which made it possible for investments to get higher interest (accrual factor). In 2019, the return on reserves surged as a result of the appreciation of securities in view of the declining interest rates (valuation factor).

Graph 3.5
Historical Profitability of the International Reserves
(total and contribution by components)



Source: Banco de la República.

The decline in interest rates that caused the rise in the return of the reserves occurred primarily because the US Federal Reserve changed its monetary policy within a very short period of time and went from a gradual cycle of interest rate hikes to introducing three decreases in the benchmark rate within a quarter. This change was implemented by that central bank in an environment that had no inflationary pressure in order to mitigate the global economic downturn and the uncertainty arising from the international trade tensions.

During 2019, the profitability of the reserves was 4.57%⁷⁰ (USD 2,322.76 m) which is higher than what has been seen in the last few years. This increase in profitability is due to the increase in the prices of

⁷⁰ This rate is obtained by dividing the return in dollars by the average value of the net reserves on 31 December 2018 and 31 December 2019. Since 2015, the impact of the exchange rate effect on the profitability of the reserves has been excluded.

securities in the portfolio as a result of the drop in interest rates (valuation factor) at the same time as interest accrual remained at relatively high levels compared to the average for the decade (accrual factor).

04

Financial Situation of *Banco de la República*

In 2019, the increase in Banco de la República's assets mainly arose from the increase in the balance of the foreign reserves that resulted from their yield, the purchase of foreign currency by the central bank, and the depreciation of the peso. This last factor, in turn, was reflected in the equity in the exchange rate adjustment account. The profit from the 2019 accounting period, in turn, was higher than the one in 2018 mainly due to the greater profitability of the foreign reserves.

During 2019, there was an exceptional conjunction of circumstances that was favorable for the Bank's profits and that is not likely to be repeated in the future. The Bank's profits came to COP 7,149 b mainly as a result of the yields from foreign reserves. This result was due to the decrease in the interest rates for US government bonds throughout the year and the rise in the international price for gold.

4.1 *Banco de la República's* Financial Position Statement (balance sheet)

At the close of 2019, *Banco de la República's* assets registered a balance of COP 212,416 b⁷¹ which was COP 25,210 b (13.5%) higher than what was seen in December 2018 (Table 4.1). This was primarily the outcome of the annual

71 In this section, items are shown by economic criteria, not by accounting criteria. With respect to the financial statements presented to the Office of the Financial Superintendent of Colombia and the National General Accounting Office, the differences are: first, the value of the liabilities associated with purchase transactions for the foreign reserves portfolio for which payment has not yet been made is discounted from the assets (this is registered as a higher value of the asset in the Bank's financial statements and as a requirement of the foreign reserves under liabilities); second, the coins in circulation, which are not part of the accounting information on the Bank's balance sheet, are included in the assets and liabilities in this section; and third, other reclassifications of lower value accounts. Hence, the asset value presented in this Report (COP 212,416 b) differs from what was registered in the December 31, 2019 financial statements (COP 215,007 b), and the value of the liabilities (COP 135,888 b) differs from what was registered in the December 31, 2019 financial statements (COP 138,479 b).

Table 4.1
Financial Position of *Banco de la República* Classified by Economic Criteria
(billions of pesos)

Accounts	December 2018		December 2019		Change	
	Balance	Percentage Share	Balance	Percentage Share	Absolute	Percentage
Assets	187,206	100.0	212,416	100.0	25,210	13.5
Gross Foreign Reserves ^{a/}	157,293	84.0	174,257	82.0	16,964	10.8
Contributions to International Entities and Organizations	9,232	4.9	9,349	4.4	117	1.3
Investments	6,827	3.6	15,221	7.2	8,394	122.9
Resale Agreements: Transitory Liquidity Support	9,128	4.9	8,600	4.0	-528	-5.8
Other Net Assets	4,725	2.5	4,988	2.3	263	5.6
Liabilities and Equity	187,206	100.0	212,416	100.0	25,210	13.5
Liabilities	117,561	62.8	135,888	64.0	18,327	15.6
Foreign-Currency Liabilities That Affect Foreign Reserves	22	0.0	19	0.0	-3	-15.2
Monetary Base	98,081	52.4	112,454	52.9	14,373	14.7
Cash	64,378	34.4	75,101	35.4	10,724	16.7
Reserve	33,703	18.0	37,352	17.6	3,649	10.8
Interest-Bearing Deposits Not Constituting Reserve Requirements	68	0.0	55	0.0	-13	-19.4
Other Deposits	59	0.0	120	0.1	61	102.2
National Government: National Treasury Office L/C	8,037	4.3	12,200	5.7	4,162	51.8
National Government: National Treasury Office F/C ^{a/}	312	0.2	0	-	-312	-100.0
Obligations with International Organizations	10,980	5.9	11,041	5.2	60	0.6
Total Equity	69,645	37.2	76,528	36.0	6,883	9.9
Capital	13	0.0	13	0.0	0	0.0
Surplus	68,249	36.5	70,149	33.0	1,900	2.8
Special Foreign-Exchange Account Settlement	453	0.2	453	0.2	0	0.0
Foreign Exchange Adjustment	67,446	36.0	69,315	32.6	1,869	2.8
Investment in Assets for Cultural Activities and Donations	283	0.2	313	0.1	31	11.0
Others	67	0.0	67	0.0	0	0.0
Other Overall Results	-224	-0.1	-343	-0.2	-119	53.3
Results	2,241	1.2	7,149	3.4	4,907	218.9
Previous Profits and/or Losses	0	-	0	-	0	0.0
Fiscal Year Profits and/or Losses	2,241	1.2	7,149	3.4	4,907	218.9
Cumulative Results: Effect of Change in Accounting Policies	-512	-	-347	-0.2	164	-32.1
Accumulated Results of Process of Convergence with IFRS	-123	-0.1	-92	-0.0	31	-25.0

a/ Starting June 4, 2019, the government's funds in dollars at *Banco de la República* are registered in accounts other than those of the international reserves, and as of 17 December 2019, all the Government's foreign currency resources in *Banco de la República* are accounted for outside the Bank's balance sheet.

Note: In this table, the line items are shown by economic and not by accounting criteria. With respect to the financial statements presented to the Office of the Financial Superintendent of Colombia and the National General Accounting Office, the differences are: first, the value of the liabilities associated with purchase transactions for the international reserves portfolio for which payment has not yet been made is discounted from the assets (this is registered as a higher value of the asset in the Bank's financial statements and as a requirement of the international reserves under liabilities); second, the coins in circulation, which are not part of the accounting information on the Bank's balance sheet, are included in the assets and liabilities in this section; and third, other reclassifications of lower value accounts. In this respect, the asset value presented in this Report (COP 212,416 b) differs from what was registered in the December 31, 2019 financial statements (COP215,007 b) and the value of the liabilities (COP135,888 b) differs from what was registered in the December 31, 2019 financial statements (COP 138,479 b).

Source: *Banco de la República*.

increase in the balance of the gross foreign reserves (COP 16,964 b)⁷² once expressed in Colombian pesos, and the TES held by *Banco de la República* (COP 8,394 b).⁷³

The liability balance, in turn, was COP 135,888 b⁷⁴ which is COP 18,327 b (15.6%) higher than what was registered at the end of 2018. The main sources of this variation were the increase in the monetary base (COP 14,373 b) and the National Government's peso-denominated deposits in *Banco de la República*⁷⁵ made through the General Office of Public Credit and the National Treasury (COP 4,162 b).

Last of all, at the close of 2019, equity had a balance of COP 76,528 b, which was COP 6,883 b (9.9%) higher than the figure seen in December 2018. This is mainly due to the Bank's COP 7,149 b profit in 2019 and to the annual increase in the foreign exchange adjustment account (COP 1,869 b), which was the counterpart of the increase in the balance of the gross foreign reserves, once expressed in Colombian pesos. The above was partially offset by the transfer of profits to the National Government charged against the 2018 earnings (COP 2,015 b) and by the lower value in the Other Comprehensive Income account (OCI) (COP 119 b).

4.2 Income Statement (L&P)

4.2.1 Close of 2019

In 2019, *Banco de la República's* profit for the accounting period was COP 7,149 b, the result of COP 9,447 b in income and COP 2,299 b in expenditures (Table 4.2). With respect to what had been seen the year before, there were COP 5,381 b (132.3%) in annual increases in income and COP 474 m (26.0%) in expenditures.

The revenue seen in 2019 is mainly the result of the return on the foreign reserves, the portfolio of Treasury bond investments (TES) held by the Bank, and the liquidity transactions through expansion repos. Most of the income from the foreign reserves was mainly due to the reduction in interest rates of the US government bonds during the

72 This increase was mainly the result of the Bank's purchases of foreign currency (COP 7,749 b), the return on the foreign reserves (COP 7,638 b), and the positive change due to the exchange rate adjustment arising from the higher exchange rate (COP 1,869 b).

73 The higher TES balance held by the Bank was mainly the result of purchases of securities (COP 8,500 b) and the valuation of this portfolio at market prices (COP 972 b). The above was partially offset by maturities (COP 834 b) and by the transfer of securities to the pension liability portfolio in order to fund it (COP 243 b).

74 See Note 72.

75 Interest-bearing as well as other deposits at *Banco de la República* are included.

Table 4.2
Income Statement for 2019, Banco de la República
(billions of pesos)

	Implemented:		Annual Changes	
	2018	2019	Percentage	Absolute
I. Total Income (A+B+C)	4,066	9,447	132.3	5,381
A. Monetary Income	3,659	8,975	145.3	5,316
1. Interest and Returns	3,505	8,926	154.7	5,422
Foreign Reserves	2,488	7,638	207.0	5,150
Regulated Investment Monetary Portfolio (TES)	788	756	-4.1	-32
Active Monetary Regulation Transactions (Repos)	228	533	133.4	304
Other Operations	0	0	-28.6	-0
2. Foreign Exchange Differences	147	35	-76.4	-112
3. Other Monetary Income	8	14	70.5	6
B. Face Value of the Coins Issued	172	221	28.8	49
C. Corporate Income	236	251	6.7	16
1. Commissions	184	190	3.1	6
Banking Services	72	68	-6.2	-4
Fiduciary Operations	112	122	9.0	10
2. Other Corporate Income	51	62	19.7	10
II. Total Expenditures	1,825	2,299	26.0	474
A. Monetary Expenditures	1,017	1,421	39.7	404
1. Interest and Returns	856	1,235	44.2	379
Remunerated Deposits - DGCPTN	850	1,229	44.5	379
Liability Transaction Deposits for Monetary Regulation	6	6	-3.9	-0
2. Management Costs and Cost of Managing Funds Abroad	33	39	17.0	6
3. IMF Commission On Flexible Credit Commitment	83	88	6.4	5
4. Foreign Exchange Differences	44	13	-71.2	-31
5. Other Monetary Expenditures	1	47	4,193.5	46
B. Banknotes and Coins	213	233	9.1	19
C. Corporate Expenditures	594	644	8.4	50
1. Personnel Costs	390	416	6.9	27
2. Overhead	111	122	9.7	11
3. Other Corporative	93	105	13.0	12
D. Pension Payments	0	1	n. a.	1
III. Operating Results (I - II)	2,241	7,149	218.9	4,907

Source: Banco de la República.

Graph 4.1
International Price of Gold



year and to the rise in the international price for gold. (Table 4.3 and Graph 4.1).

The larger outlays, in turn, are due, especially, to the higher remuneration paid to the national government on its deposits at *Banco de la República* as a result of the higher volume of these deposits.

Regarding the corporate outlays, these amounted to COP 644 b with an annual increase of COP 50 b (8.4% which is equivalent to 4.7% in real terms) of which: 1) personnel costs, COP 416 b, rose 6.9% per annum (3.3% in real terms); 2) the overhead, COP 122 b, registered an annual change of 9.7% (5.9% in real terms); and 3) other corporate expenses, COP 105 b, presented an annual increase of 13.0% (9.2% in real terms). The real growth of these corporate expenses is mainly due to the provisions of the Bank's Collective Agreement and the higher outlays for depreciation, debt repayment, deterioration, and loan-loss provisions.

Table 4.3
Return on International Reserve Investments
(billions of pesos)

	2018	2019
Foreign Reserves	2,488	7,638
Portfolio	2,474	7,132
Interest	2,066	3,056
Valuations	408	4,076
Gold	-10	445
International Entities, Aladi Agreement, Etc.	24	60

Source: Banco de la República.

4.2.2 Reserve Accumulation and Profit Distribution

According to the Bank's legal framework contained in the Constitution, Act 31/1992, and the Bank's by-laws, once the net investment in goods for cultural activity is discounted and the statutory reserves are appropriated, the remainder of the profits will belong to the nation.

As is explained in the shaded area entitled "*Banco de la República's Profits*" (p. 80), the accumulation of reserves by the Bank follows precise rules. According to them, once the results from 2019 were analyzed, the conditions for setting up these reserves were not presented. Considering the above and the losses from the implementation of IFRS pending settlement, the Board of Directors of the Bank approved a transfer of COP 6,998 b in profits to the government in February 2020 and this was carried out in late March (Table 4.4).

Table 4.4
Distribution of Profits
(billions of pesos)

	2019
A. Fiscal Year Result	7,149
B. Plus, Use of Reserves	0,0
C. Minus Accumulation of the Reserves and Other Deductions	151
Losses Due to the Implementation of IFRS in 2015	31
Net Investment in Cultural Activity Goods	15
Loss Due to Adoption of IFRS 9: Change in Accounting Policy On TES Held by Banco De La República	105
Net Result in Favor of the National Government: A + B- C	6,998

Source: *Banco de la República*.

4.3 Outlook for 2020

The budget has two main components: monetary and corporate. The former includes the results of responsibilities such as monetary, foreign exchange, and credit authority; manager of the foreign reserves; banker and lender of last resort for credit institutions; and issuing bank. The corporate results include the administrative management of the Bank such as income from commissions, personnel costs, operating expenses and pensioner expenses.

The budget for 2020 was approved by the Board of Directors of *Banco de la República* (BDBR) in December 2019 with the prior approval of the Fiscal Policy Board (*Consejo Superior de Política Fiscal*, CONFIS) with regard to the implications of the budget for the public finances. An accounting period profit of COP 1,300 b is estimated for 2020 as a result of COP 3,895 b in income (annual change of -60.6%) and COP 2,595 b in expenditures (annual change of 3.9%) (Table 4.5).

With respect to the monetary results, the budget approved for 2020 anticipates a 64.1% yearly decrease in income compared to what was budgeted for 2019. This was mainly a result of the lower return projected for the foreign reserves (COP 5,931 b, -74.7% with respect to the 2019 budget). The main monetary expenditures correspond to the remuneration paid to the national government on their deposits at the Bank which are estimated at COP 1,334 b with an increase of 2.7% with respect to what was budgeted in 2019).⁷⁶

In relation to the income from the placement of coins into circulation (face value of the coins issued) it is COP 276 b with a 15.8% annual increase compared to what had been budgeted in 2019. This forecast

⁷⁶ The 2020 budget envisions average daily volumes of COP 31,393 b and an interest rate of a real annual 4.25% (r.a.). In the budget for 2019, an average of COP 28,797 b in deposits and a 4.36% r.a. interest rate had been projected.

Table 4.5
Budget of Banco de la República, 2020
(billions of pesos)

	Approved Budget		Changes	
	2019 ^{a/} (A)	2020 (B)	(B) / (A)	(B) - (A)
I. Total Income (A+B+C)	9,894	3,895	-60.6	-5,999
A. Monetary Income	9,452	3,395	-64.1	-6,057
1. Interest and Returns	9,273	3,328	-64.1	-5,945
Foreign Reserves	7,937	2,006	-74.7	-5,931
Monetary Regulation Investment Portfolio (TES)	729	854	17.2	126
Active Monetary Regulation Transactions (Repos)	608	468	-23.0	-140
Other Operations	0	0	-100.0	-0
2. Foreign Exchange Differences	176	63	-64.0	-113
3. Other Monetary Income	3	3	14.4	0
B. Coins Issued	239	276	15.8	38
C. Corporate Income	203	223	10.2	21
1. Commissions	187	198	5.7	11
Banking Services	72	71	-1.3	-1
Fiduciary Operations	115	126	10.2	12
2. Other Corporate Income	16	26	62.9	10
II. Total Expenditures (A+B+C+D)	2,497	2,595	3.9	97
A. Monetary Expenditures	1,527	1,568	2.7	42
1. Interest and Returns	1,305	1,341	2.7	36
Remunerated Deposits: General Office of Public Credit and the National Treasury	1,299	1,334	2.7	35
Monetary-Contraction Operating Expenses	6	6	11.0	1
2. Costs of Management and Handling of Funds Abroad	49	48	-1.7	-1
3. Commitment Fee for IMF Flexible Credit	88	95	7.3	6
4. Foreign Exchange Differences	39	63	63.5	25
5. Other Monetary Expenditures	46	22	-53.0	-24
B. Banknotes and Coins	272	274	0.7	2
C. Corporate Expenditures	678	742	9.5	64
1. Personnel Costs	431	455	5.7	25
2. Overhead	137	152	10.9	15
3. Other Corporative	110	131	19.2	21
4. Budget Availability	0	4	0.0	4
D. Pensioners' Expenses	20	10	-50.7	-10
III. Fiscal Year Result (I - II)	7,397	1,300	-82.4	-6,096

a/ Includes the budgetary adjustments and transfers made during the time it is in force.
Source: Banco de la República.

includes the introduction of three coins into circulation that commemorate the Bicentenary of Colombia's Independence, the 100th year of the Colombian Air Force (FAC), and the Bicentenary of the martyrdom of the national heroine Policarpa Salavarrieta. The costs of production and putting the monetary specie into circulation are calculated at COP 274 b, which is 0.7% higher than what was budgeted in 2019.

Regarding the corporate budget, COP 223 b in income and COP 742 b in spending is estimated (annual changes of 10.2% and 9.5% respectively compared to what was budgeted for 2019). The real growth in corporate expenses is mainly due to what was considered in the Bank's Collective Agreement and the higher expenses resulting from depreciation, debt repayment, deterioration, and loan-loss provisions.

Last of all, expenditures for pensioners were budgeted to amount to COP 10 b, an amount that includes the effect of the pensions shared with Colpensiones.

Profits of *Banco de la República*

Given its nature as a state institution, *Banco de la República* follows special rules laid down in Act 31/1992 and in its Bylaws for their financial activity and for the preparation of financial statements. Thus, unlike private sector companies, which seek to maximize profits, the policy decisions adopted by the Board of Directors of *Banco de la República* are intended to meet the objectives assigned to it by the Constitution and the law. Included in these objectives is: keep inflation low and stable, contribute to macroeconomic and financial stability, and maintain a level of reserves that will reduce the country's vulnerability to external shocks. This gives the Bank a unique financial structure.

In accordance with these functions, which *Banco de la República* must comply with by law, is the fact that among the decisions they have to make is the need to determine what financial structure they require to achieve these objectives. Table A presents *Banco de la República's* main assets, liabilities, and equity.

Once this balance sheet position is determined, the Bank will incorporate the income derived from

Table A
Outline of *Banco de la República* Balance Sheet

Assets	Liabilities
· Foreign Reserves	· Monetary Base (Cash Plus Bank Reserves)
· Investment in Debt Securities	· Government Deposits
· Asset Operations with the Financial System (Asset Repos)	· Financial System Deposits Not Constituting Reserve Requirements
· Net Others ^{a/}	
	Equity
	· Capital
	· Reserve
	· Surplus and ORI
	· Profit

a/ Includes the net result of all other line items on *Banco de la República's* financial statement that are not explicitly considered in this Box.
Source: *Banco de la República*.

the assets they hold, the expenses associated with their liabilities, and the results of the business operations into its Income Statement (P&L). Thus, as part of the decision regarding the breakdown of its balance sheet, the P&L is affected by the valuation of the different line items included in its balance sheet.

Based on the above, two main components are defined within the Bank's P&L: monetary and corporate. The monetary ones include the results of responsibilities such as monetary, foreign exchange, and credit authority; manager of the foreign reserves; banker and lender of last resort for credit institutions; and issuing bank. These results are affected by variables such as external interest rates and fluctuations of the market prices for the foreign reserves portfolio and the TES portfolio held by the Bank.¹ Therefore, the Bank's monetary results are influenced by both the breakdown of their balance sheet and the valuation of it.

The corporate results, in turn, include the administrative management of the Bank such as, for example, income from commissions, personnel costs, operating expenses and pensioner expenses.

To the extent that the foreign reserves have constituted the Bank's most important asset in recent years, the returns from them represent the major source of income. As shown in Graph A, the Bank's profits have correlated strongly with the returns on the foreign reserves during the 1998-2019 period.

With regard to the policy on distributing profits, Act 31/1992 and the Bank's By-laws establish the Bank's reserve system precisely and exhaustively. Thus, at the end of each financial period, a proposal is presented to the Board of Directors of *Banco de la República* for the allocation of said reserves. As a result, and in compliance with the Bank's legal framework, the remaining profits, once the net investment in goods for cultural activity is discounted and the statutory reserves are appropriated, will belong to the nation.

Articles 60 and 61 of the By-laws of *Banco de la República* constitute the reserves² that must be established from the annual profits:

- Monetary and currency foreign exchange stabilization reserve (Act 31/1992, article 27 and article 60 of the By-laws).
- Foreign-exchange result reserve (article 61, number 2 of the By-laws).
- Asset-protection reserve (article 61, number 4 of the By-laws).

Graph A
Returns of *Banco de la República's* Foreign Reserves and Profits



Source: *Banco de la República*.

1 Up until the end of 2017, the valuation of the TES held by the Bank was registered on the income statement. Starting in 2018, these valuations are part of the *Other Comprehensive Income* account (OCI) in the Bank's equity and only the interest at the purchase interest rate (purchase PIR) continued to be registered as income on the income statement.

2 By means of Decree 2386/2015, the paragraph in article 61 of the By-laws was amended to the following wording: "The current balance of the Foreign Currency Fluctuation Reserve will be used to increase the 'exchange adjustment' account of the equity surplus."

The purpose for these reserves is described below.

- a. **Monetary and currency exchange stabilization reserve:** this is intended to absorb Bank losses before resorting to the General Budget of the Nation. It consists of the necessary amounts based on the anticipated losses the Bank's budgets present for the next two financial years.
- b. **Foreign-exchange result reserve:** this should be made up of or increased from the positive result that is obtained at the end of the accounting period. The income is compared to the expenses resulting from *Banco de la República's* daily transactions to purchase and sell foreign currency on the exchange market and the differences in value with respect to the market price of each day. This reserve could be used to cover

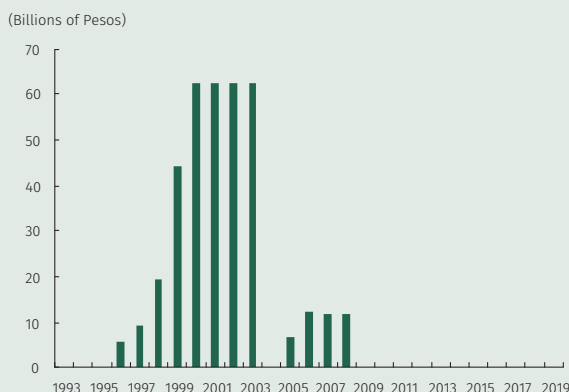
losses incurred by the Bank in its daily purchase and sale of foreign currency transactions.

- c. **Asset-protection reserve:** this consists of or is increased by part of the profits from each period as determined by the Board of Directors of *Banco de la República* in order to prevent possible and contingent risks of asset losses. These may be specifically determined and, according to the accounting rules, should not be provisioned.

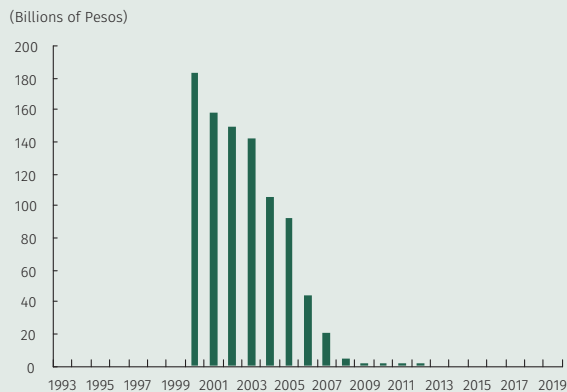
Graph B shows the historical information on these reserves. The *foreign currency fluctuation reserve*, which was defined by article 61, number 3 of the By-laws and was amended by Decree 2386/2015, is also included. At the time, this reserve consisted of

Graph B
Legal and Statutory Reserves of Banco de la República

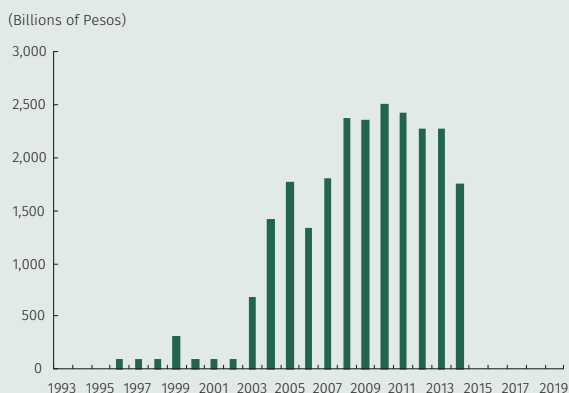
A. Foreign-exchange result reserve



B. Asset-protection reserve



C. Foreign currency fluctuation reserve



D. Monetary and Foreign-exchange stabilization reserve



Source: Banco de la República.

the portion of the profits from each year that corresponded to the greater net value of the Bank's foreign currency assets and liabilities arising from the foreign exchange variations between the US dollar and the other currencies in which they are denominated provided that the profits occurred in the respective year. When the currency fluctuations generated a negative net result, this value could be wiped out against this reserve. Decree 2386/2015 eliminated the registration of the effect on the foreign reserves of US dollar fluctuations with respect to other currencies in which those reserves are invested from the P&L. At present, this registration is made in the *foreign exchange adjustment* equity account, and therefore, there is no reason to appropriate this reserve.

As can be seen, the total balance of these reserves has been zero since 2015. As was mentioned, to the

extent that Act 31/1992 and *Banco de la República's* By-laws precisely and stringently establish the Bank's reserve system, the conditions required for the creation of any reserve have not been established in recent years. In particular, no losses have been estimated for the Bank for the two years following the evaluation of its budget, and this has resulted in a zero balance for the monetary and exchange rate stabilization reserve. Likewise, to the extent that the Bank's intervention mechanisms have led to net purchases of foreign currency at the representative market rate, the conditions for establishing a reserve for foreign exchange earnings have not been enabled either. Finally, no conditions have been put forward for setting apart a reserve for asset protection, and Article 61 of the By-laws, which established, etc., the conditions for the currency fluctuation reserve, was amended in 2015.

05

Environmental Management by *Banco de la República*

Banco de la República contributes to the care of the environment by implementing measures focused on the prevention, control, and mitigation of the environmental impacts generated by its operations including overall management of waste, sewer discharges, atmospheric emissions, and efficient use of resources. It also fosters a culture of environmental sustainability.

In 2009, the Environmental Management Unit was created to ensure compliance with environmental regulations; identify, prevent, and control the generation of negative effects on the environment; foster reasonable use of resources; and reinforce an environmental culture. In 2012, to ratify its commitment to the planet, the Bank defined an environmental policy which includes sustainable and comprehensive management of resources, management of discharges and atmospheric emissions, infrastructure, and continuous improvement.

5.1 Sustainable Industrial Processes

In accordance with the provisions of the Constitution and Act 31/1992, *Banco de la República* has the exclusive state function of issuing the legal currency and, consequently, it prints, mints, exchanges, and destroys unfit monetary species. This work includes producing, distributing, and withdrawing cash from circulation once the useful life of banknotes is over. This work is carried out through industrial processes that have been certified by recognized quality standards (ISO 9000, first received in 2009 and renewed since then).

The technological updating of the equipment used in the Banknote Printing Plant, the application of good manufacturing practices, and the better use of resources have made it possible to increase productivity and efficiency in the banknote manufacturing process under conditions that are more favorable to the environment.

The Central Bank has established procedures for reducing, reusing, and recycling industrial waste.

An example of this is the incorporation of a varnishing process⁷⁷ for some denominations of banknotes that increased their useful life by more than 70%. The printing system was also updated, and this generated a reduction in the consumption of supplies such as paper and ink, lower production costs, and a decrease in the generation of waste. Similarly, the Mint has been modernizing its equipment, thereby increasing the efficiency of the process and reducing energy and water consumption.

Regarding the management of discharges into the sewer system and the use of rainwater, the Mint has implemented a system that allows water from the coin washing process to be recirculated and reused thus returning it to the system without generating discharges of non-domestic wastewater⁷⁸ and reducing water consumption. The Banknote Printing Office, in turn, has a recirculation system for the cleaning solution that removes excess ink from the printing machines. This system has reduced the consumption of water as well as the quantity of waste being discharged.⁷⁹

Moreover, the Bank, through the implementation of a comprehensive waste management plan and the quality assurance of the processes, has established procedures to reduce, reuse and recycle industrial waste by working with companies that give them an environmentally friendly use. The most outstanding is the processing of the waste from destroyed banknotes at the Cash Center⁸⁰ when their useful life is over through a composting technique⁸¹ to convert it into fertilizer.

5.2 Architectural and Technical Updating of Buildings using Sustainability Criteria

The architectural and technical updating of some of the Bank's branches has incorporated environmentally friendly materials and technologies.

The architectural and technical updates at several Bank branches have focused on sustainable construction in a context of cutting costs using environmentally friendly materials and technologies. Some of these buildings employ water-saving equipment and rainwater re-circulation systems as well as alternative energy sources that reduce greenhouse gas emissions. Thus, in some of the Bank's buildings, green roofs on the terraces, natural ventilation systems,

⁷⁷ Application of a transparent protective layer on both sides of the banknotes to help protect them from wear and tear.

⁷⁸ Non-domestic wastewater is generated in the industrial processes of manufacturing banknotes and minting coins at the Cash Center and the Mint.

⁷⁹ In this process, two cubic meters of water are used daily and one cubic meter of water, which has been previously treated, is discharged.

⁸⁰ Main facility of *Banco de la República* for cash processing located in Bogotá that includes Banknote Printing Plant and Cash Processing Department.

⁸¹ Controlled microbiological process through which organic matter is decomposed to obtain fertilizer (or compost).

low-consumption lighting (LED), water treatment and reuse systems, and solar panel-based electricity generation have been installed.

In this context, a project has been set up to change the museum lighting system for all the art exhibition halls in Bogotá.⁸² This, in addition to reducing energy consumption, will contribute to implementing high standards in preventive conservation processes for the exhibition of works of art.

5.3 The Carbon Footprint and Offsetting It

In 2011, the Bank began an inventory and monitoring of greenhouse gases generated by its activities under an operational control approach for goals 1 and 2 established by the Greenhouse Gas (GHG) Protocol, which identifies the so-called carbon footprint (CF), measured in units of carbon dioxide equivalent (CO₂ equivalent).⁸³

Between 2013 and 2019, in a joint strategy with the supplier of security ink for the production of banknotes (within its corporate social responsibility program), 60,400 trees were planted on public lands that were set aside to protect water sources for the pipelines in Cundinamarca, Tolima, Antioquia, and Quindío. Bank employees and their families have volunteered to participate in this initiative in order to strengthen an experiential environmental culture. As part of this program, 3,000 Quindío wax palms, the national tree of Colombia which is also illustrated on the 100,000 banknote, were planted at the *Valle de Cocora* (Quindío). It should be noted that the plantations of native species use the fertilizer generated by composting the waste from the banknotes destroyed at the Cash Center, and this makes it possible to close the reuse cycle.

82 *Casa Republicana*, Permanent Collection, the *Casa Gomez Campuzano* museum, *Miguel Urrutia* Art Museum (MAMU), some areas of the *Luis Angel Arango* Library and the Gold Museum.

83 There are three goals in the carbon footprint calculation methodology: **Emissions Goal 1**, also called *direct emissions*: these are the greenhouse gases emitted directly by the organization, for example, through the use of fossil fuels in machinery or vehicles owned by the organization, by losses of refrigerant gases, or by chemical reactions during the organization's production processes.

Emissions Goal 2 or *indirect energy emissions*: these are the greenhouse gases emitted by the producer of the energy required by the organization. They depend on both the amount of energy required by the organization and the energy *mix* of the network that supplies the organization. In Colombia, electricity is generated by means of hydroelectric and thermal plants.

Emissions Goal 3, also called *other indirect emissions*. These are the ones that are attributed to the products and services acquired by the organization for which emissions, in turn, would have been generated previously in their production. These are the most difficult to quantify due to the large number of products and services used by the organizations, and the difficulty in establishing the emissions caused by these products or services if they are not provided by the producer himself.

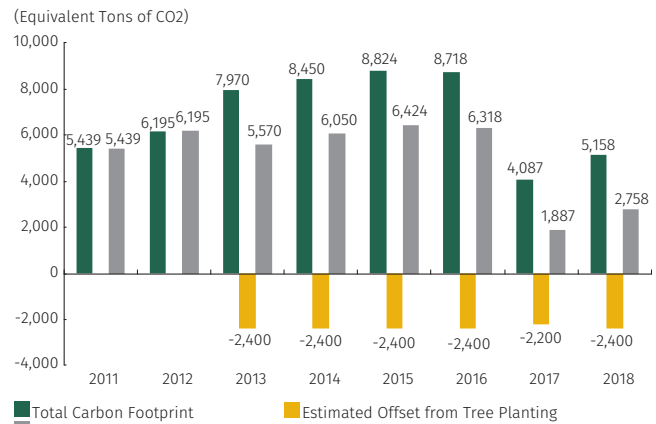
In a joint strategy with the ink supplier, 60,400 trees have been planted on public lands to offset the carbon footprint and protect water sources for pipelines to cities.

The design of the new family of coins (2012) and banknotes (2016) revolved around the concept of biodiversity and reaffirmed the Bank's commitment to sustainability as well as to fostering and conserving the environment.

Planting native trees is a sensible way to offset the carbon footprint since, in addition to removing CO₂ from the atmosphere, it provides additional benefits such as reducing deforested areas, protecting areas around headwaters, protecting the soil, recovering biological corridors, and preserving biodiversity as well as serving as a refuge and food source for wild animals.

Graph 5.1 shows the carbon footprint of the Bank between 2011 and 2019 (green bars) which has been partially offset by planting native trees (yellow bars).

Graph 5.1
Total, Offset, and Net Carbon Footprint for the Bank



Source: Banco de la República.

5.4 Reinforcement of an Environmental Culture

In addition to the above-mentioned activities, *Banco de la República* has held cultural programs throughout the country due to its libraries and museums. In 2010, *Water: a heritage that circulates from hand to hand*, a program for creating physical and digital content, exhibitions, educational tools, and national cultural programming was inaugurated. With this, the intention was to encourage citizens to take ownership of the concept of water as a collective heritage that must be preserved.

In this context, *Banco de la República* put into circulation a new family of coins in 2012. Their design was based on the concept of biodiversity and they illustrate animals that are representative of the Colombian fauna and the *frailejón*, a typical plant on the Andean *páramos* (i.e., moors). The reverse side (back) of each coin has a wavy line motif which evokes moving water. Likewise, the Bank put a new family of banknotes into circulation in 2016. These banknotes give continuity to the concept of biodiversity by incorporating landscapes of our geography and representative species of Colombian fauna and flora into its emblematic design. Thus, the Bank reaffirmed its commitment to sustainability and its interest in advocating for and conserving the environment.

In 2014, with the support of the Alexander von Humboldt Research Institute, the traveling exhibition entitled, *Biodiversity: a vital connection*, was designed and set up. The exhibition presents the importance of the ecosystem services that Colombian biodiversity constantly offers us in a fashion that is educational and interactive. This exhibition has been moving around the country from one of the Bank's cultural venues to another for six years.

The Central Bank will receive the ISO 14001 version 2015 certification, which corresponds to the international standard granted to organizations for their responsibility and commitment to environmental protection, adequate management of environmental risks and impacts, and sustainable use of resources.

Giving continuity to these initiatives, the exhibition entitled, *The River: Possible Territories*, which was intended to make citizens aware of the importance of caring for rivers as a resource for the country's sustainable development, began in 2020. Through this project, educational activities with local communities will be included with the planting of trees to encourage plant regeneration practices in areas that protect water and care for the environment as well as to make headway on achieving the neutral carbon footprint that the Bank has set itself.

These projects for the appropriation of a culture of environmental preservation will potentially reach eight million physically present users and about ten million in digital environments.⁸⁴

5.5 New Initiatives

- a. At the international level, in December 2019 *Banco de la República* joined the Network for Greening the Financial System (NGFS⁸⁵). This initiative brings together more than fifty central banks, financial regulators and supervisors, and international organizations to exchange experiences, share best practices, contribute to the development of environmental and climate risk management in the financial system, and mobilize finance to support the transition to a sustainable economy. Within the framework of this objective, the NGFS promotes the development of technical documents that contribute to the understanding of the impact that climate change could have on the macroeconomic environment and on the financial system, issues that *Banco de la República* hopes to study by involving other think tanks included in the country's Economic Research Network.⁸⁶
- b. At the national level, *Banco de la República* will receive the ISO 14001 certification, version 2015, which corresponds to the international standard granted to organizations for their responsibility and commitment to environmental protection, adequate management of environmental risks and impacts, and sustainable use of resources.

84 <https://www.banrepcultural.org/agua/> and <http://babel.banrepcultural.org/cdm/ref/collection/p17054coll29/id/39>

85 *Network for Greening the Financial System*

86 The Economics Researchers Network creates alliances between *Banco de la República* and various universities around the country in order to foster economic research and increase the dissemination of research work at national level. Thirteen Colombian universities are part of this network: *Universidad de los Andes*, *Universidad de Antioquia*, *Universidad EAFIT*, *Universidad ICESI*, *Universidad Externado de Colombia*, *Universidad Javeriana* (in Bogotá and Cali), *Universidad Nacional de Colombia* (in Bogotá and Medellín), *Universidad del Norte*, *Universidad de la Sabana*, *Universidad del Rosario*, and *Universidad del Valle*.

Share of the Bank for International Settlements Held by *Banco de la República*

Act 1484/December 12, 2011 authorized *Banco de la República* to participate as a shareholder of the Bank for International Settlements (BIS). Based on the authorization conferred on it, the Bank acquired 3,000 shares of the BIS for a price of 65,712,000 in special drawing rights (SDR), which is equivalent to USD 100,978,710 that are registered on the books at their acquisition cost in SDR under “contributions to international organizations and entities.” On July 5, 2019, the Bank received SDR 735,000 (USD 1,018,537)¹ in dividends which corresponded to the BIS accounting year that ended in March 2019 (April 2018 to March 2019), and which are equivalent to an annual return of 1.11%.²

The membership of *Banco de la República* in the BIS has allowed the directors of the Bank to participate in periodic meetings in which recent events and the outlook for the global economy and the financial markets are examined. These meetings are a discussion forum where points of view and experiences with issues of particular relevance to central banks are exchanged, which contributes to a better understanding of the challenges that affect countries and to implementing appropriate policy measures.

Among the meetings that are held, the Bank's recent inclusion in the Central Bank Governance Group (CBGG) should be noted. The purpose of this group, which is presided over by Veerathai Santiprabhob, governor of the Bank of Thailand, is to share experiences in the design, operations, and management of central banks in order to foster the best practices in these institutions.

During 2019, discussions at meetings of governors of BIS member countries have been focused on a variety of topics such as the possible effects of commercial tensions, central bank policy, codes of conduct, policies on staff management, the independence of central banks, and the role of these institutions in financial inclusion, research, and strategic planning. In addition, the most relevant topics that were discussed in the meetings of emerging economies were *bigtech*, monetary policy frameworks, developments in the foreign exchange markets, and the downturn in trade in the region after the 2008 financial crisis.

In June 2019, the BIS established the BIS Innovation Hub in order to encourage international cooperation on topics of financial technology within the central banks. The role of the Hub will be to identify and develop an in-depth view of technology trends that affect the central bank, develop public goods in the field of technology that focus on improving the functioning of the global financial system, and serve as a focal point for a network of innovation experts from central banks.

Furthermore, the Bank participates in various consulting groups coordinated by the BIS such as the Consultative Council for the Americas (CCA), which consists of the governors of the central banks on the American continent that are members of the BIS.³ These forums foster international cooperation and research on issues related to central bank policies and other topics that impinge on macroeconomic and financial stability. Likewise, the Bank is a member of the Consultative Group of Directors of Operations (CGDO),

1 This value corresponds to the exchange rate of the SDR as of July 2, 2019, in accordance with the policy used by the BIS.

2 The BIS General Assembly approved the payment of one dividend of 245 SDR per share. The profitability corresponds to the ratio between the dividend received and the purchase price per share (21,904 SDR).

3 Argentina, Brazil, Canada, Chile, Colombia, the United States, Mexico, and Peru.

a network of representatives of the central banks who are responsible for central bank operations.

Within the framework of the work coordinated by the CCA, the Bank actively participates in research projects and conferences on various areas relevant to central banks. Among them, the Scientific Committee (which includes the chief economists of the respective central banks) launched a network to study the communication of monetary policy issues. During the Annual Research Conference of the CCA on “Macro models and Micro data”⁴ that focused on labor markets, local finances, and trade, a researcher from the Bank presented a paper on the possible effects of misallocation of business resources on a country’s comparative advantage.⁵

The Consultative Group on Innovation and the Digital Economy (CGIDE) was recently created within the framework of the BIS Innovation Hub. It is composed of representatives of the members of the CCA, and its job will be to supervise the region’s joint projects on innovation and the digital economy. The first projects will focus mainly on improving the system for low-value payments and cross-border payments as well as the expansion of financial inclusion through smart phone technology. The Bank will participate in this advisory group with a special interest in developing projects related to low-value payments.

In 2019, the Bank was mainly involved in the following activities: 1) the annual meeting of the deputy governors of central banks of emerging countries that are members of the BIS. This meeting was focused on foreign reserves and foreign exchange intervention in emerging economies. For this meeting, the Bank prepared a paper on the effectiveness of sterilized intervention in Colombia and

the foreign reserves⁶; 2) a seminar on cyber security in central banking; 3) a conference on the management of reserves within the framework of the expansion of BIS Representative Office activities in the Americas. The Bank hosted the joint BIS Round Table and the Center for Latin American Monetary Studies (Cemla in Spanish) where appropriate levels of reserves, foreign exchange intervention, and the management of foreign reserves in the central banks of Latin America were discussed.⁷

4 The schedule and documents are available at: <https://www.bis.org/events/ccconf2019/agenda.htm>

5 Jose Pulido presented the document, “Intra- and inter-Industry Misallocation and Comparative Advantage.” Available at: <https://www.bis.org/events/ccconf2019/colombia.pdf>

6 The Bank’s contribution at this conference was H. Vargas, P. Cardozo, and M. Villamizar (2019) “Foreign reserves and Effectiveness of Sterilized FX Intervention in Colombia.” Available at: <https://www.bis.org/publ/bppdf/bispap104.pdf>

7 Information on this meeting is available at: <https://www.cemla.org/actividades/2019-final/2019-06-mesa-redonda-bis-cemla.html>

Box 1 Recent Development and Description of Direct Investment in Colombia

Direct investment has played a foundational role as a source of financing for economies that are trying to improve their productive capacity as well as an opportunity for income and strategic positioning in international markets for multinational companies. From the theoretical point of view, the explanations of the direct investment phenomenon differentiate between the motives of countries that receive the investment and those of the companies that make it. With respect to the countries, the benefits derived from direct investment are associated with greater economic growth, a larger supply of goods and services, and positive externalities on productivity and wages in local companies, etc. under certain conditions (Scitovsky, 1954; Blomström and Kokko, 1998; Helpman *et al*, 2004). In the case of the companies, some explanations emphasize using the advantage of ownership, location, and internalization (Dunning, 1977), taking advantage of the benefits generated by the geographical dispersion of production (Barba *et. al.*, 2004), the development of imperfect markets (Knickerbocker, 1973), the reduction in the costs of trade (Bloningen and Feenstra, 1996), the transfer of knowledge, etc.

The deepening of global economic relationships through greater access to international markets for capital, goods, and services; the emergence of global chains of value; the lower costs of transportation and communications; etc. have made it possible for the financial flows between countries to grow. Colombia has not been disconnected from this but rather has benefited from the larger foreign financial flows, especially the ones linked to direct investments. That is why a description of capital movements over the past decade with regard to direct investment in both Colombia's role as a recipient of these funds, i.e., foreign direct investment (FDI) and as a direct investor in other economies, or direct Colombian investments abroad (IDCE in Spanish) is given below.

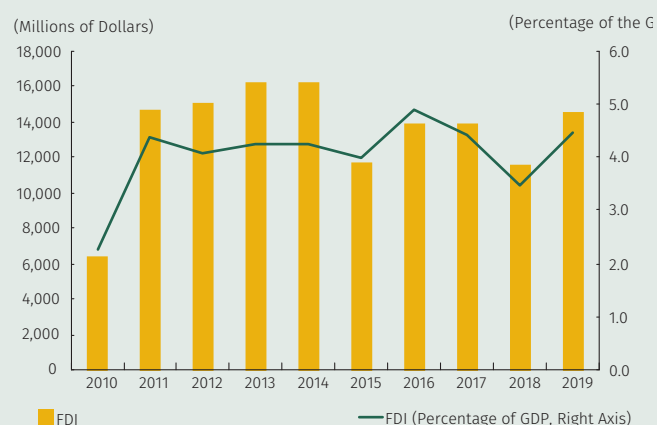
1. Foreign Direct Investment (FDI) in Colombia

One of the characteristics FDI has had during the past decade is that these types of funds emerged as the main component of foreign financing and came to an average of 56% between 2010 and 2019 and 58% in 2019 of the total capital inflows received by Colombia. This is an indicator of confidence in the Colombian economy to the extent that the current account deficit is being financed with mainly long-term capital. This creates a scenario of lower risk and vulnerability in the event of external shocks. However, their performance has not been consistent throughout this period.

Between 2010 and 2014, FDI inflows showed a steady increase and ended up reaching USD 16 billion in 2013 and 2014 (Graph B1.1). This phenomenon occurred in a context of high production and prices for mining-energy goods, stable inflation, high economic growth rates,¹ the adoption of macroprudential policies (among which the fiscal regulations stand out), and an environment of high international liquidity characterized by low interest rates and unemployment.² All of these are conditions that led to these long-term capital inflows into Colombia.

Subsequently, capital inflows were lower between 2015 and 2019 and averaged around USD 13 billion during that period. These results occurred in a more adverse international context due to the fall in the prices for commodities, the greater uncertainty in the markets, and a less favorable domestic outlook.

Graph B1.1
Foreign Direct Investment in Colombia



Source: Banco de la República.

- 1 The average growth rate of the Colombian economy in the 2010-2014 period was 5.0%.
- 2 After the 2008 international financial crisis, the monetary authorities of the major economies of the world lowered the policy interest rates to values close to 0%. This trend has been maintained to date, especially in Japan and the euro zone (BIS 2018). The United States, in turn, began a gradual process of monetary policy normalization 2016 which stopped in 2019 after the downward adjustments decreed by the Federal Reserve.

2. Sector Distribution of FDI

On a cumulative basis over the past decade, FDI flows were mainly directed to the oil and mining sector (40%) followed by the financial services (15%), manufacturing industries (13%), and transportation and communications (11%) sectors (Graph B1.2, panel A). Throughout the period, the relative importance of the mining and energy sector was shown by the fact that until 2014, it was the main recipients of FDI and that, subsequently, it ceased to be so because the funds received were lower than at the beginning of the decade. This was partly due to the end of the crude oil and coal price boom. In contrast, service activities (mainly financial, commercial, and transportation and communications) saw an increase in their receipt of external capital. This made it possible for them to go from 15% in 2010 to close to 50% of the FDI flows in 2019 (Graph B1.2, panel B) based on the search for a domestic market that was dynamic and expanding.

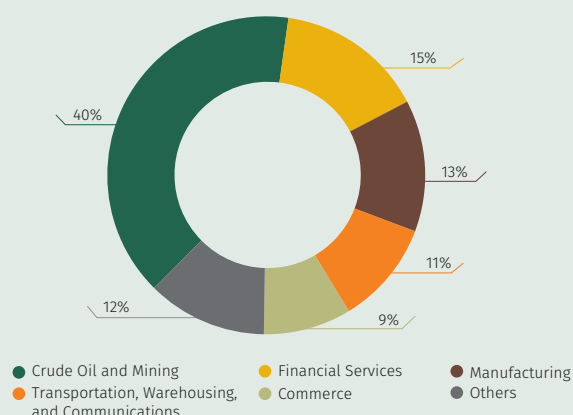
Going by FDI financing components, capital increases (new investment) were found to be the main instrument by which foreign companies make their investments in the country (55%) followed by the reinvestment of profits (30%) and debt between affiliates (15%). In the case of new investment, although this has declined since 2015 from previous years, it remains the main instrument of FDI. This indicates that the country continues to be attractive to foreign investors for capital flows. Reinvestment of profits, in turn, has gained greater relevance since 2017, and this shows that firms with FDI have a preference for financing with their own resources.³ Finally, loan transactions between related companies⁴ have been stable at around 15% of the total FDI (Graph B1.3).

3. Distribution by Investing Country

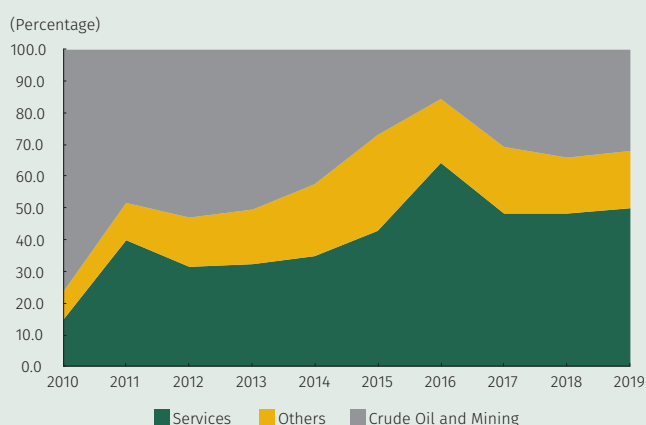
During the past decade, nearly 96% of foreign capital inflows came from nineteen countries, of which the United States, Panama, Spain, England, Switzerland, and Bermuda are the most important ones as they account

Graph B1.2
Distribution by Sector of Foreign Direct Investment in Colombia

A. Cumulative, 2010-2019



B. Annual Change



Source: Banco de la República.

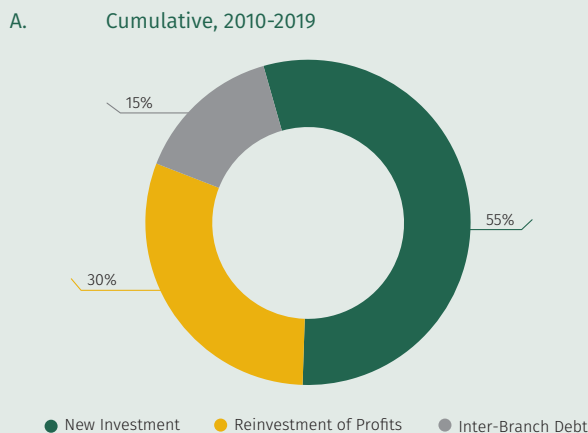
for 64% of total FDI flows in the aforementioned period⁵ (Graph B1.4, panel A). Regarding inflows from the main Latin American countries, the FDI inflows from Chile and Mexico stand out. These have amounted to more than USD 5,000 b each on a cumulative basis for the decade. These are followed by Brazil and Peru although with lower amounts (less than USD 1,500 m each) (Graph B1.4, panel B).

3 According to the *Balance of Payments and International Investment Position Manual* (MBP, 6th version), a company is considered to have FDI when at least 10% of its capital is the property of foreign investors.

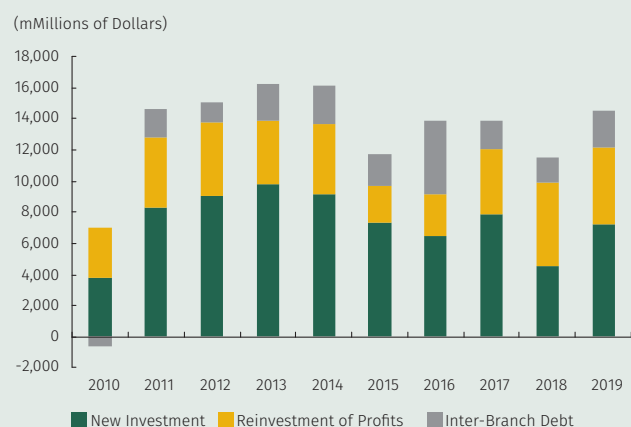
4 According to the MBP, investment between related companies occurs when one firm invests in another with which it shares the same direct investor, but neither of the two owns, directly or indirectly, 10% or more of the voting power in the other.

5 Countries such as Switzerland, Panama, and Bermuda are recognized as financial centers that encourage the entry of capital through tax benefits, a situation that multinational companies take advantage of by establishing their operations there (Garavito et al., 2012). In this regard, the International Monetary Fund (2009) suggests that, in terms of statistical registry, the country from which the FDI originates should be the one from which the funds are sent. Given the above, this may cause some countries to appear to be large investors abroad even when the capital does not necessarily belong to their nationals.

Graph B1.3
Foreign Direct Investment in Colombia by Component



B. Annual Change



Source: Banco de la República.

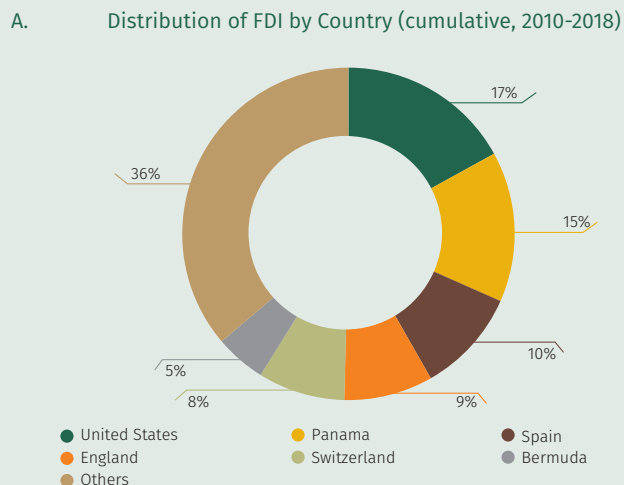
4. Colombia's Direct Investment Abroad (IDCE in Spanish)

As in the case of FDI, the IDCE has become a tool that is increasingly used by Colombian firms to expand their operations abroad. In fact, since 2015 it has surpassed reserve assets as the main component of assets abroad held by Colombian residents and represents 34% of foreign asset holdings in 2019.

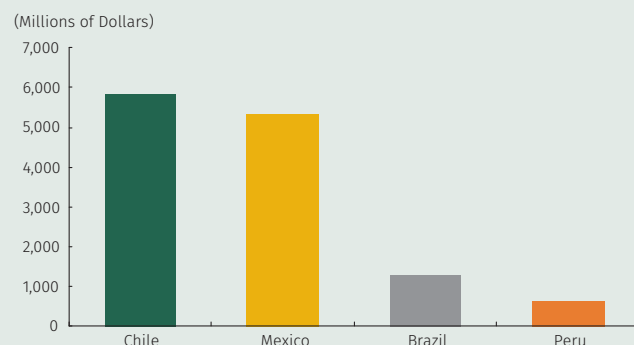
During the first half of the decade, the outflows of Colombian capital were influenced by specific operations that altered the net flows of investment. Indeed, in 2012 these were negative due to settlements made in the area of mining. Meanwhile, the levels seen in 2011 and 2013 were due to investments made by the financial sector in the Central American market and in the insurance market in Latin America. In the second half of the decade, in turn, IDCE flows fluctuated around USD 4,000 m (Graph B1.5).

Going by component, new investment (64%) and reinvestment of profits (34%) have been the main financing

Graph B1.4
Foreign Direct Investment in Colombia by Investing Country

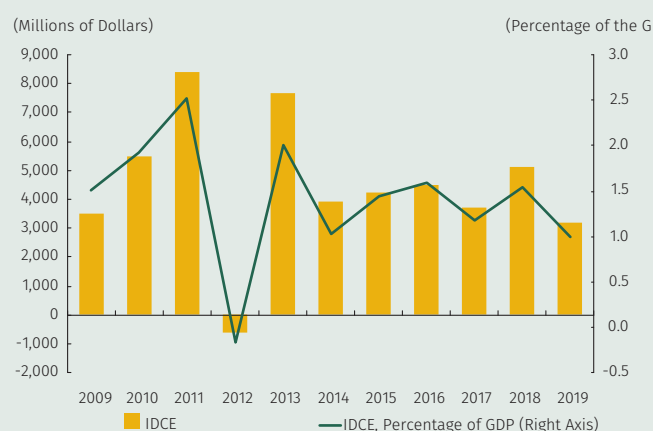


B. FDI in Colombia from the main Latin American countries (cumulative, 2010-2018)



Source: Banco de la República.

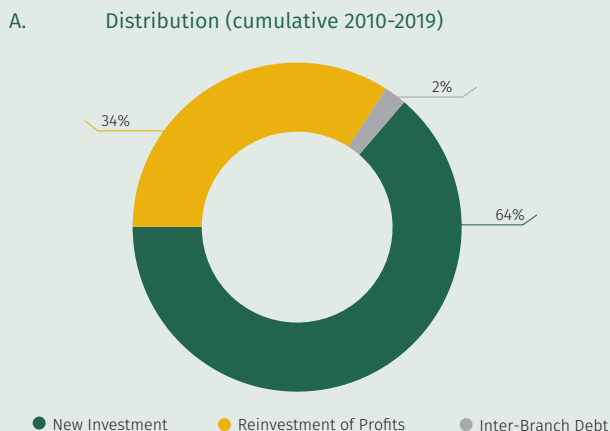
Graph B1.5
Development of Colombia's Direct Investment Abroad



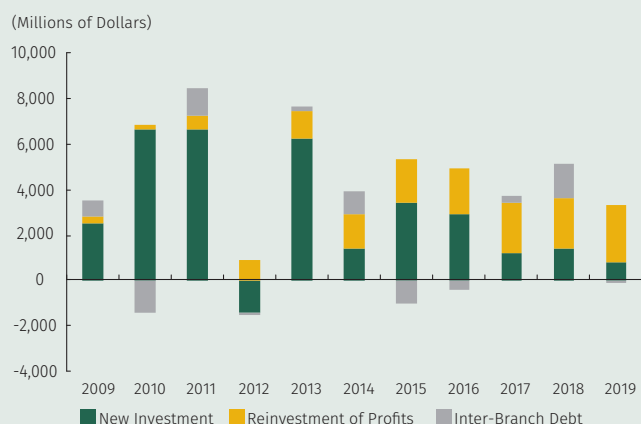
Source: Banco de la República.

instruments that the Colombian firms have used to acquire their investments abroad. While the largest amount of flows is from new investments (Graph B1.6, panel A), reinvestment of profits has taken on a very important role as a source of IDCE in recent years (Graph B1.6, panel B).

Graph B1.6
Colombia's Direct Investment Abroad by Component



B. Annual Change

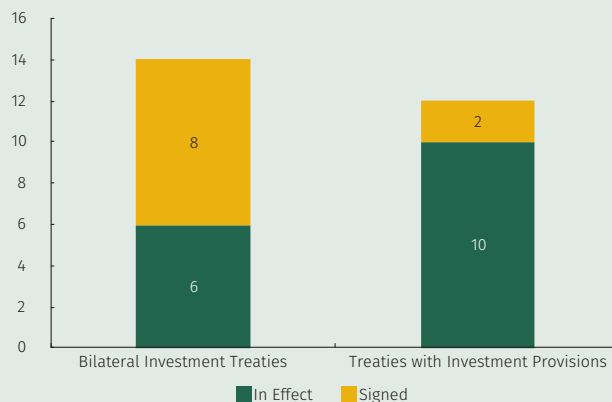


Source: Banco de la República.

The most notable among the possible explanations for this phenomenon were the opportunities for expansion abroad found by some Colombian firms after the international financial crisis of 2008 forced multinational firms to liquidate their investments in subsidiaries in different parts of the world (emerging countries, for example), and the increased global liquidity lowered the cost of financing (Martínez *et al.*, 2019). On the other hand, the increase in the number of trade agreements and investment treaties signed and ratified between Colombia and other economies since the mid-2000s may have contributed to creating an environment of coordination, clear rules, and greater inter-institutional trust that led to a greater incentive for investment flows (Graph B1.7).

However, when these figures are compared to those of some Latin American countries, it shows that Colombia, despite investing lower amounts during the decade (USD 42,394 m) [compared to economies such as Mexico, Chile and Brazil (Graph B1.8, panel A),] invested around 2.0% as a percentage of GDP (only surpassed by Chile). Colombia stood out in 2018 for having the highest ratio of direct

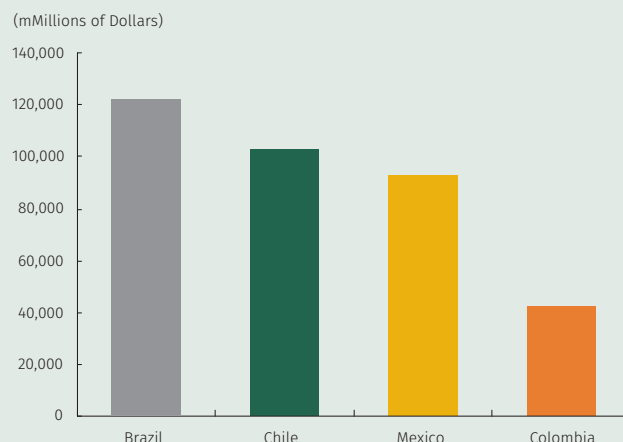
Graph B1.7
International Investment Agreements (since 2004)



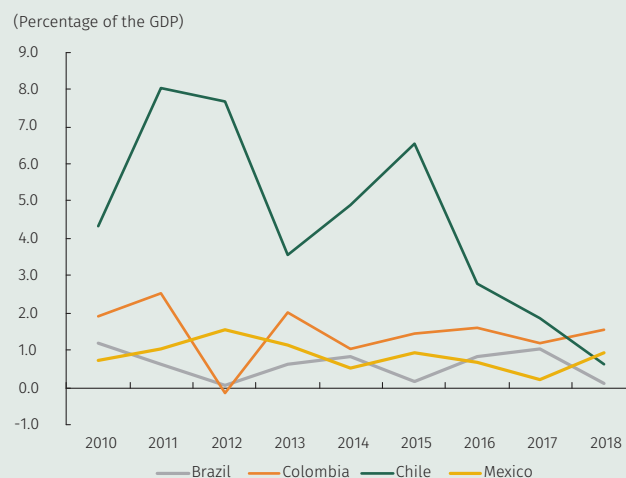
Source: UNCTAD.

Graph B1.8
Foreign Direct Investment Flows in Latin America

A. Cumulative, 2010-2018



B. Share of the GDP



Source: CEPAL.

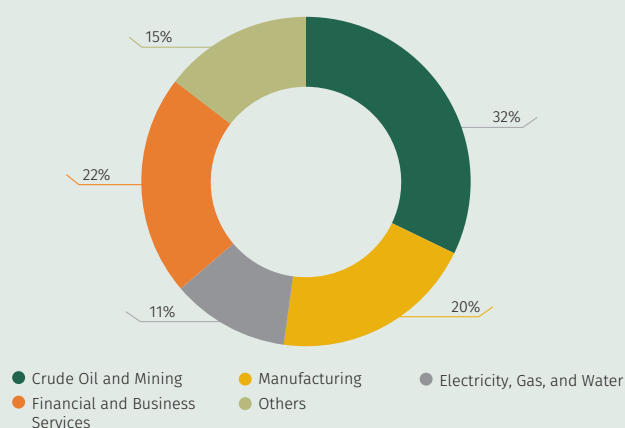
investment flows to GDP among the most important Latin American economies (Graph B1.8, panel A).

Distribution by Sector of ECDI Flows

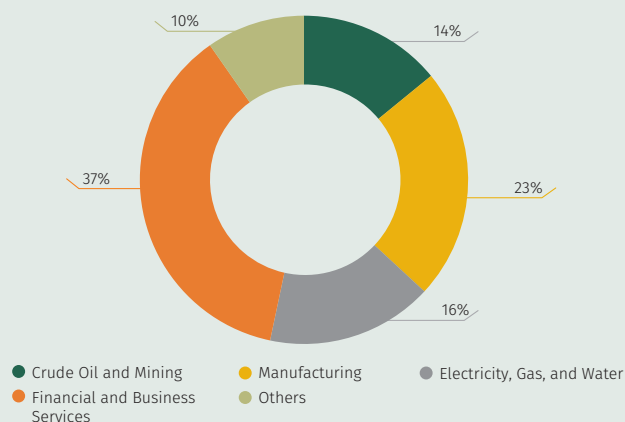
With respect to sector dynamics, between 2004 and 2011 mining-energy was the main direct investor abroad since it represented around 32% of the total capital (Graph 9, panel A). Subsequently, given the reduction in prices for commodities, the IDCE flows begin to take on a structure oriented towards sectors that seek to take advantage of the receiving markets themselves such as financial services (37%); manufacturing industries (23%); and electricity, water, and gas (16%) to the detriment of the oil and mining sector which represents 14% (Graph B1.9, panel B).

Graph B1.9
Distribution by Sector of ECDI Flows

A. Cumulative, 2004-2011



B. Cumulative, 2012-2019



Source: Banco de la República.

This fact is also linked to the concentration of this type of investment in few firms. In fact, the evidence suggests that it is the companies that have more productive and financial capabilities who decide to invest abroad since they are more robust when it comes to competing in the international markets and have greater expertise in managing the uncertainty (Martinez *et al.*, 2019).

5. Final Considerations

In the last few years, direct investment has been the main flow of foreign capital used by Colombia as both a source of funding and a way to expand their international investments. In the case of FDI given its nature as a long-term financial flow as well as the positive externalities that it generates in the Colombian economy, this has made it possible for these funds to continue entering the country regardless of the adverse shocks such as the lower prices for raw materials. The importance that reinvesting profits as a financing instrument has gained is also outstanding. This shows that the firms with direct investment have a significant level of robustness since they are able to generate their own funds to maintain their operations and reduce their vulnerability in the international markets.

A similar conclusion can be drawn in the case of the IDCE, which has become the largest source of foreign assets. This result is supported by the fact that national firms are taking advantage of the dynamics of international markets, and this has manifested itself in the expansion of their businesses abroad, mainly in the economies in the region.

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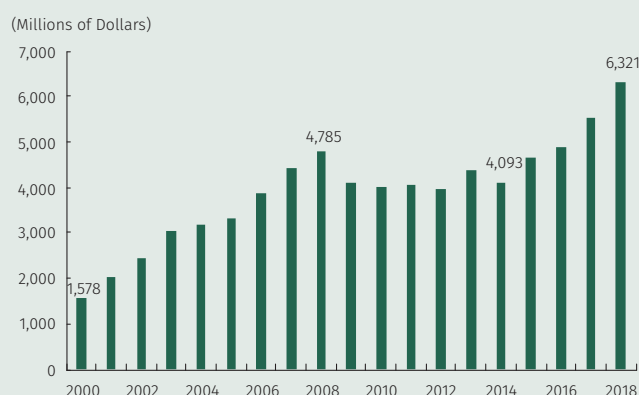
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Box 2

Change in Remittance Income in Colombia and its Effects on the Colombian Labor Market

During the last twenty years, income from remittances has been growing and increased fourfold between 2000 and 2019 (average annual growth of 8.0%). This trend was halted during the 2009-2014 period when remittances remained at levels of USD 4 billion (b) per annum (1.3% of the GDP). This period coincided with the 2009 international financial crisis and the low economic growth in subsequent years (Graph B2.1). Starting in 2015, these sources resumed their positive trend with an average annual rise of 11% and have reached levels greater than USD 5 b per annum since 2017. Last year these transfers amounted to USD 6,744 m, 6.7% more than in 2018.

Graph B2.1
Foreign Income from Workers' Remittances



Source: Banco de la República.

Even though family remittances are not the country's main source of income from abroad, this flow has acquired major importance and become a factor in reducing and mitigating the current deficit. At the same time, it has shown a certain stability when it is compared to other sources of income. In 2019, these funds were equivalent to 9.8% of current revenue and 16% of exports of goods compared to 7.5% and 10% in 2010 respectively.

This is explained by the continued growth of remittances combined with the drop in revenue from sales of mining-energy products after the peak in commodity prices and the low increase in exports of agricultural goods (coffee, bananas, and flowers) and of industrial goods (Table B2.1).

Table B2.1
Importance of Remittances in Economic Accounts (percentage)

Importance of Remittance Income in	2000	2010	2019
GDP	1.6	1.4	2.1
Current Income	8.4	7.5	9.8
Exports of Goods	11	10	16
Foreign Direct Investment	65	62	47

Source: Banco de la República, author's calculations.

In order to receive remittances, it is necessary for there to be Colombians who reside abroad and maintain their links with the country.¹ In recent decades, the migratory flow of Colombians abroad has been constant with the increases in this flow that occurred in the late nineties and early millennium standing out the most. This is in addition to the recent migration of Colombians to new places such as Chile, Argentina, Canada, and Australia as well as to countries they have traditionally gone to such as the United States and Spain. In 1990, migrants represented 3.0% of the Colombian population and in 2017, they came to 5.6% (Garavito et al., 2019).

The United States is the country with the largest Colombian migrant population, which, although it arrived mostly in the 1990s, has not stopped growing and has seen recent significant increases.² In the last six years, this group of people generated, on average, 45% of the total remittance income from abroad that the country has received which makes it the main geographical origin and source of growth of these flows (contributed 60% of the total) (Table B2.2).

Spain has the second largest number of resident Colombians in its economy. This group arrived at the beginning of the new millennium and declined in the 2008-2015 period as a result of the 2008 international crisis and its negative effects on that economy.³ With

- 1 Garavito et al. (2019) find that increases in the Colombian migrant population generate increases in remittance income.
- 2 According to estimates by the United States Census Bureau, there were 1,123,443 Colombians residing in that country in 2017, a figure that has multiplied by 1.4 in eight years.
- 3 While there were 284,581 Colombians residing in Spain in 2008, there were only 140,127 in 2016 (Padrón, Spanish National Institute of Statistics).

Table B2.2
Remittance Income by Country of Origin

Country	(Millions of Dollars)		Share in 2019 (Percentage)	Annual Average Growth, 2014-2019
	2014	2019		
United States	1,685	3,246	48	14
Spain	886	1,057	16	4
Chile	144	417	6	24
Venezuela	80	1	0	-55
Rest of Latin America and the Caribbean	571	1,086	16	14
Rest of Europe	424	526	8	4
Others	303	410	6	6
Total	4,093	6,744	100	11

Source: Banco de la República (Quarterly Report on Remittances).

the recovery of economic indicators and the elimination of the Schengen visa, Colombians have been migrating to Spain again since 2017. During the 2014-2019 period, about 15% of the country's remittances originated in Spain.

Latin American countries are next in importance in receiving Colombian migrants. Up until 2010, Colombians lived mostly in Venezuela and Ecuador. Subsequently, they began to migrate to new countries such as Chile, Argentina, and Panama where the migration policies facilitated their arrival and where the economic performance and cultural similarities favored this even more.⁴ Remittance income from Latin America and the Caribbean has shown high growth rates over the past decade and more than doubled its share of the total income as it went from 8.0% in 2010 to 22% in 2019. Note that in the last six years, the contribution of remittance transfers from this region to the total growth of these flows was 30% (Table B2.3).

Another factor that influenced these recent transfers was the improved economic conditions of migrants in their countries of residence which gave them a greater ability to send funds to their families in Colombia.⁵ In the

4 In 2012 there were 27,411 Colombian residents in Chile while in 2017, there were 105,367. In Argentina, there were 106,000 residency applications by Colombians that had been resolved in the 2011-2017 period (National Department of Immigration).

5 Garavito *et al.* found a positive relationship between the economic performance of the migrants' country of residence and remittances.

Table B2.3
Remittance Income by Receiving Department and Country of Origin

Department	Remittance Share by Country of Origin			
	United States	Spain	Latin America	Others
Valle Del Cauca	38	21	26	16
Cundinamarca	52	11	21	15
Antioquia	64	11	15	10
Eje Cafetero ^{a/}	43	26	20	12
Atlantic Coast ^{b/}	52	10	25	14
Others	46	13	23	17
Total	48	16	22	14

a/ Caldas, Quindío, and Risaralda.

b/ Atlántico, Bolívar, Magdalena, Cesar, Sucre, Córdoba, and La Guajira.

Source: Banco de la República (Quarterly Report on Remittances).

countries where the Colombians settled, economic conditions improved. First of all, the United States registered positive indicators after the crisis of 2008 and 2009, with an average economic growth of 2.4% between 2014 and 2019. Furthermore, the unemployment of the Hispanic population (Hispanic, Latino or Spanish) declined from 7.4% in 2014 to lower levels in 2019 (4.3%) and improved its purchasing power (higher weekly income: from USD 594 in 2014 to USD 706 in 2019).⁶

Starting in 2014, Spain, in turn, once again had positive economic rates of growth after five years of recession, and unemployment went from its peak in 2013 (26%) to 14% in 2019 (INE, Spain). The economies of Latin America have seen positive development in recent years: Panama had the highest growth in the entire region while Chile and Ecuador grew steadily, albeit at lower rates. In addition, unemployment in these countries was below that of Colombia and has remained relatively constant.

In 2019, the information by recipient department indicates that the majority of remittance income was received by Valle del Cauca, Cundinamarca, and Antioquia (60%)⁷ followed by the *Eje Cafetero* region with 13%, and the Atlantic coast with 9.0% (Table B2.4). The remittances going to Valle del Cauca come mainly from the United States, Spain, and Chile (38%, 21%, and 11% respectively) while Cundinamarca, Antioquia, and the Atlantic Coast depended on remittances from the United States to a

6 Bureau of Labor Statistics, United States. Figure in current terms. At 2014 prices, the 2019 value is equivalent to USD 641.

7 According to the 2005 census, the departments with the greatest international migration were Valle del Cauca, Cundinamarca, the Atlantic coast, and the *Eje Cafetero*. These are the same ones that received the most remittances respectively from abroad.

Table B2.4
Remittance Income by Receiving Department

Department	(Millions of Dollars)		Share (Percentage)
	2014	2019	2019
Valle del Cauca	1,204	1,684	25
Cundinamarca	646	1,175	17
Antioquia	713	1,159	17
Eje cafetero ^{a/}	655	880	13
Atlantic Coast ^{b/}	330	587	9
Others	546	1,258	19
Total	4,093	6,744	100

a/ Caldas, Quindío, and Risaralda.

b/ Atlántico, Bolívar, Magdalena, Cesar, Sucre, Córdoba, and La Guajira.

Source: Banco de la República (Quarterly Report on Remittances).

greater degree. This is the place that contributed more than half of the funds that reached those regions.

It should be noted that the remittances, in addition to representing a source of external income for the country, are, to a large degree, received by lower-income households⁸ and are used mainly to cover basic household expenses such as food, rent, utilities and debt payment,⁹ and, in some cases, they make it possible to finance education (Cardona and Medina, 2006; Garay and Rodríguez, 2005). This implies that remittances are a source of income for households, and this influences decisions about entering the labor market, since they represent an inflow of money that can replace income from a salary.

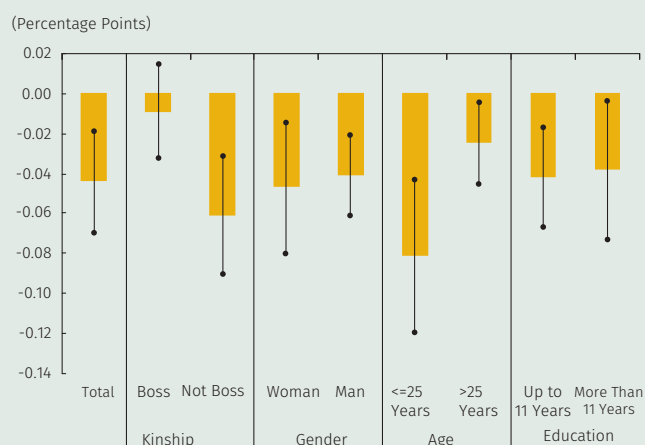
Theoretically, people decide how to distribute their time between working or not, depending on what is known as the reservation wage, which is the lowest amount for which an individual is willing to sacrifice his or her leisure time to work, and this depends on the passive income. If that amount is higher than the market wage, individuals prefer to stay out of the labor market, but as the passive income declines, it becomes more attractive to look for a job to earn income. Remittances, being passive income, directly affect the reservation wages, such that, if they rise, reservation wages rise and, therefore, labor participation is discouraged.

Banco de la República measured the effect of remittances on inclusion in the labor market in Colombia in the 2014-2019 period. Based on a statistical analysis, which

takes into account regional variation in remittances and the performance of indicators such as GDP and the unemployment rate in the United States and Spain, a model was designed that explains the probability that a person in Colombia will participate in the labor market (look for work or be employed) based on the remittances received in his or her city and on his or her own characteristics, such as sex, age, level of schooling, and kinship.¹⁰ Data on individuals' labor participation, from the DANE's *General Integrated Household Survey* (GEIH), and workers' remittance income by destination country and receiving department along with data from *Banco de la República* were used between 2014 and 2019.

The result showed that, in effect, the increases observed in remittances decrease the probability of participating in the labor market: quantitatively, a 10% increase in remittances decreases this probability by 0.4 pp. It should be noted that these results are mixed and depend on the characteristics of the individuals. For example, remittances do not affect heads of household's decision to participate, but they do have an effect on other household members, one that is negative. Furthermore, their effect tends to be more pronounced on women, young people (under 25), and people without a higher education (Graph B2.2).

Graph B2.2
Effects of Remittances on the Probability of Participating in the Labor Market



Note: the height of the bars represents the average effect on each group's labor participation in the event of a 1.0% increase in remittances. The black lines represent the 90% confidence interval of the estimate.

Source: Banco de la República (2020) and authors' calculations.

8 According to DANE's GEIH, remittances are mostly received by quintiles 1, 2, and 3 of the country's income distribution.

9 2016 Opportunity Banking Survey. These results coincide with those of Garay and Rodríguez (2005), who find that the majority of remittances are used to cover recurrent household expenses such as food, utilities, health, and education.

10 For the technical details about the model, see Banco de la República (2020).

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Appendix

Management Policy for the International Reserve Investment Portfolio

According to the best practices' recommendations, the management of reserves should endeavor to: 1) have enough liquidity in foreign currency, 2) have strict policies regarding the management of the different risks that the transactions face, and 3) generate reasonable, risk-adjusted returns subject to liquidity and other risk restrictions.¹ How these criteria are applied in the management of Colombia's foreign reserves is explained below.

1. Risk Management Policy

Banco de la República has a framework for risk management that identifies and assesses the risks to which their transactions are exposed in order to keep them low. Some of the main policies for risk management are as follows:

Liquidity risk: investing in financial assets that are permanently in demand on the secondary market in order to have the ability to turn reserve assets into cash quickly and at low cost. The portfolio is also divided into tranches so that some of them can be liquidated more rapidly.

Market risk: types of eligible assets and strict limits on investment are used to lower the sensitivity of the value of the portfolio to interest rate movements in the market.

Credit risk: investments are only made in assets with high credit ratings by major rating agencies given that these investments have a low probability of defaulting on their payments. The minimum credit rating for governments and entities related to governments is A-. With respect to private issuers, the minimum rating is A+ for exposure to individual issuers and BBB- (investment grade) when the investment is done through funds. Historically, the percentage of issuers with these ratings that have defaulted on their payments the year after is close to 0%. If the rating of an issuer that the portfolio has invested in directly drops below the minimum allowed, the exposure is liquidated within a short period of time. Moreover, the

maximum exposures are limited by sector and issuer in order to limit the impact of credit events on the value of the portfolio.

Foreign exchange risk: market prices of currencies are highly volatile and do not often have defined long-term trends. This makes it very difficult to reliably predict their behavior. *Banco de la República*, like the majority of the central banks around the world, has currencies other than the US dollar as part of their currency composition in order to cover the country's payments abroad since these are made in many currencies. The impact of the foreign exchange risk is mitigated by the "foreign exchange adjustment" equity account that is dealt with under Decree 2520/1993 number 4 of article 62 (Statutes of *Banco de la República*). This account increases during those years in which the reserve currencies become stronger with respect to the Colombian peso and declines in those years when they weaken. Therefore, the variations in the currencies do not have any impact on the consolidated profit or loss statement.

Counterparty risk: to reduce exposure to counterparties, transactions are settled through payment-on-delivery mechanisms which seek to make the exchange of papers for cash or the exchange of payments in a foreign currency exchange transaction simultaneous in order to eliminate the possibility of a default by one of the parties to the trade. In addition, counterparties in fixed income trading are required to be market makers, and the counterparties in currency trading are required to have high credit ratings. The foreign currency exchange counterparties must have a minimum credit rating of A- if they have an ISDA framework contract.² If they do not have said contract, the minimum rating is A+.

2. Tranches of the Investment Portfolio

The investment portfolio is made up of three tranches: the short term, the medium term, and the gold tranche.

1 One example of good practice in this respect can be found in the document "Guidelines for the Management of Foreign reserves," produced by the International Monetary Fund, which can be consulted at this link: <http://www.imf.org/external/np/sec/pr/2013/pr13138.htm>

2 The purpose of the framework contract established by the International Swaps and Derivatives Association (ISDA) is to establish the terms and conditions that govern over-the-counter derivatives traded between entities.

The purpose of the short-term tranche is to cover potential liquidity needs from the reserves in twelve months. Currently, this tranche consists of working capital and a passive portfolio. The working capital is the portfolio into which the funds that come from intervention in the exchange market are placed and their investments are concentrated in very short-term assets denominated in dollars. Given that the objective of this tranche is to provide immediate liquidity for intervention in the foreign exchange market, the working capital is concentrated in deposits and investments that can be liquidated in one day at a very low cost.

The passive portfolio is the main component in the short-term tranche. This portfolio is characterized by its investment in a larger number of instruments and having an investment horizon and profile of expected return that are greater than the working capital portfolio. This, under the restriction that the expected return on the portfolio, excluding the foreign exchange component, must be positive in 12 months with a confidence level of 95% and that the expected value of a possible loss must not exceed 1.0%. The passive portfolio is invested in multiple currencies in order to replicate the behavior of the outflows in the country's balance of payments and seeks a return similar to that of the benchmark index.³ As of December 2019, the value of the short-term tranche was USD 33,096.3 m, of which USD 1,327.6 m corresponded to working capital and USD 31,768.7 m to the passive portfolio.

The medium-term tranche is implemented with an investment horizon and a profile of expected return that is higher than the short-term tranche. The goal of the medium-term tranche is to maximize the risk-adjusted return in US dollars, the currency in which the foreign reserves are valued, for the portion of the portfolio that is less likely to be used within a twelve-month period. When there is a medium-term tranche, an effort is made to raise the expected return of the foreign reserves in the long term while maintaining a conservative portfolio. Thus, the objective is to maximize its return, subject to the restriction that the expected return in US dollars for this tranche must be positive with a 95% probability over a three-year horizon, and that the expected value of a possible loss should not exceed 1.0%. Currently, the majority of the medium-term tranche consists of actively managed portfolios that seek to generate a return that is higher than the benchmark index.⁴ As of December 2019, the value of the medium-term tranche came to USD 17,250.8 m.

3 The concept and breakdown of the benchmark index will be explained in the next subsection.

4 The section, "External Management Program," explains that one of the eight active portfolios is managed directly by *Banco de la República* and the rest by external managers. An explanation on how this program functions can also be found there.

The last tranche corresponds to the international reserve investments in certified physical gold that can be easily traded on international markets. Gold helps to diversify the investment portfolio since its price behaves differently than prices of the securities which the short- and medium-term tranches are invested in. As of December 2019, the market value of the gold in the reserves came to USD 678.8 m.

The securities in the investment portfolio are deposited in financial institutions known as custodians.⁵ The entities that provide custody service for the securities in the foreign reserves are the New York Federal Reserve, Euroclear, JP Morgan Chase, and State Street. The investments in physical gold are in the custody of the Bank of England.

3. Benchmark indices

To manage the reserve investment portfolio, *Banco de la República* has defined theoretical portfolios or benchmark indices.⁶ Different indices are built for the short-term and for the medium-term tranches in order to reflect each of their investment goals. The indices serve as a frame of reference to measure the management of each one of the portfolios. The way the two benchmark indices are built is explained below.

The first step in building the index of the short-term tranche⁷ is to define a target currency composition that seeks to replicate the behavior of the country's balance of payment outflows.⁸ The goal is for the currencies other than the US dollar to appreciate during periods in which the dollar value of the country's payments abroad increases, which would mean that the value of these foreign currencies could decline with respect to the US dollar during periods in which the dollar value of the foreign payments decreases. As of December 31, 2019, the currency composition of the short-term tranche index was 82% US dollars, 9.0% Australian dollars, 5.0% Canadian dollars, 1.5% New Zealand dollars, 2.0% Norwegian krone,

5 Currently, the minimum credit rating for the custodians is A-.

6 In the capital markets, a benchmark index refers to a basket of assets with predetermined weights in accordance with certain rules that define their components. In general, an index tries to comprehensively duplicate the trend of a financial asset market and serves as an indicator of the performance of other investment portfolios in the same market. For example, some of the best-known benchmark indices on the stock markets are the ColCap in Colombia, or the S&P500 and the Dow Jones in the United States (the Bank uses fixed income market indices only).

7 This benchmark index does not apply to working capital since there are no benchmark portfolios that make it possible to properly measure the instruments allowed in this portfolio.

8 See the Box "International-reserve Portfolio's New Foreign Exchange Components" in the March 2012 Report to the Congress of the Republic for a detailed explanation of the methodology for the foreign exchange breakdown of the reserves.

and 0.5% Korean won.⁹ Once the currency composition is defined, two restrictions are included: the restriction to having positive returns over a horizon of twelve months with a 95% level of confidence excluding the exchange rate effect, and the restriction that the expected value of a possible loss over a horizon of twelve months does not exceed 1.0% of the value of the tranche. Based on these, what is sought is a portfolio that maximizes the risk adjusted return.¹⁰

A similar procedure is followed to build the index for the medium-term tranche, with two basic differences. First of all, no currency exchange component restriction is imposed given that the goal of this tranche is to maximize the risk-adjusted return in US dollars. Secondly, the restriction of having positive returns at a 95% confidence level and that the expected value of a possible loss not exceed 1.0% of the value of the tranche is defined for a

longer horizon (three years) in order to reflect the lower probability of using the funds in this tranche in the short term. When building a portfolio that maximizes risk-adjusted profitability in dollars, investments in currencies other than the dollar are allowed.

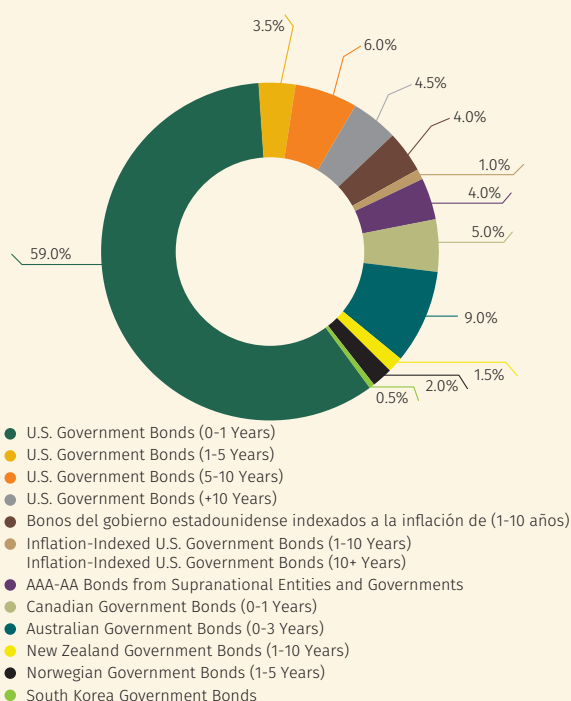
Graph A shows the benchmark indices approved for the short- and medium-term tranches.¹¹ The level of the market risk for the two portfolios is low. The effective duration of the short-term tranche index is 2.33 and the one for the medium-term tranche is 4.29.¹²

4. External Management Program

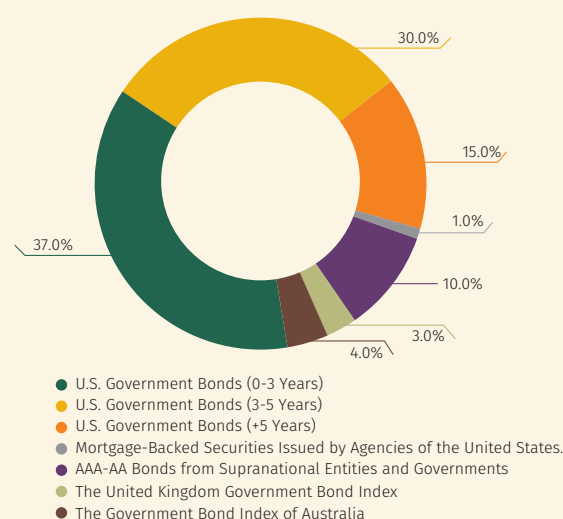
Banco de la República manages the short-term tranche, a portion of the medium-term tranche, and the gold tranche directly (USD 35,779.5 m, or 70.12% of the investment

Graph A
Breakdown of the Benchmark Index
(as of Tuesday, December 31, 2019)

1. Short-term Tranche



2. Medium-term Tranche



Note: Merrill Lynch, along with others, builds indices that make it possible to measure the performance of different sectors of the fixed income market. The government bond indices include all of the instruments that comply with the minimum conditions of size and liquidity. Their rules are a matter of public record.
Source: *Banco de la República*.

9 The euro is not part of the group of currencies that the benchmark index is made up of because both the benchmark interest rate of the European Central Bank and the rates for the main short-term sovereign bonds issued in euros are negative. The Korean won has been included since November 29, 2019 when the benchmark index changed.

10 A detailed description of the methodology for building the benchmark index is located in the Box, "Technical Explanation of the Methodology for Building the Benchmark Index," in the March 2013 Management Report on the Foreign reserves.

11 For the different sectors that the benchmark index is made up of, the indices published by ICE data indices are used.

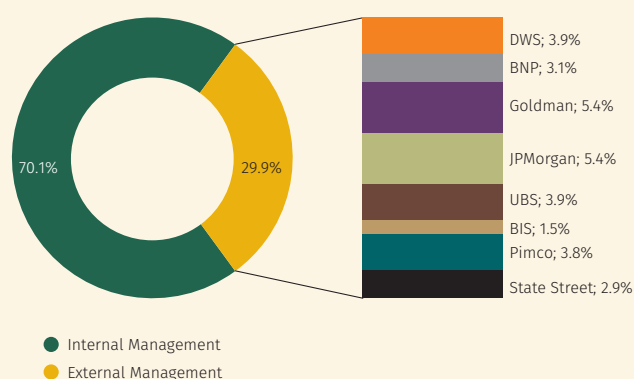
12 The effective duration is a risk measure defined as a percentage decrease (increase) in the value of the portfolio with respect to a 1.0% increase (decrease) in all of the interest rates.

portfolio). The remaining medium-term tranche funds are managed by external portfolio managers.

At the end of December 2019, the external management program came to USD 15,246.5 m (29.88% of the investment portfolio). The reason for using external managers is to generate returns that are better than the benchmark index and train Bank officials in the management of international investments. The firms chosen to participate in the program are highly capable in the analysis of financial markets and have a sophisticated infrastructure that can be taken advantage of in order to define investment strategies.

The private companies that participate in the external management program currently are: DWS International GmbH; BNP Paribas Asset Management USA, Inc.; Goldman Sachs Asset Management, L.P., J.P. Morgan Asset Management (UK) Limited; Pacific Investment Management Company LLC; State Street Global Advisors Trust Company; and UBS Asset Management (Americas) Inc., (Graph B). The private firms that participate in the program are chosen through a competitive bidding process and continuously evaluated. The funds that these entities manage are in *Banco de la República's* custody accounts, and the administrators' contracts can be canceled whenever considered necessary. Based on the results each administrator obtains beginning with the starting date of their contract, the amount managed will be modified or their continuing to participate in the program will be reviewed. The investments in funds managed by the Bank for International Settlements (BIS) are also considered part of the external management program. Only central banks and multilateral entities have access to these funds and the purpose for them is to invest in the assets that are appropriate for global foreign reserves in an effort by different countries to work cooperatively.¹³

Graph B
Breakdown of the Investment Portfolio
(as of Tuesday, December 31, 2019)



Note: approximate values due to rounding.
Source: *Banco de la República*.

¹³ At present, the investments are made in a fund of inflation-indexed securities issued by the Treasury of the United States (USD 116.3 m), a fund of securities issued by the government of China (USD 261.4 m), a fund of securities issued by the government of South Korea (USD 106 m), and a fund of securities issued by non-financial corporations (USD 266.4 m).

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