



THE BOARD OF DIRECTORS' REPORT TO THE  
**CONGRESS OF COLOMBIA**

July 2016

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BOARD OF DIRECTOR'S REPORT TO  
THE CONGRESS OF COLOMBIA

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José Darío Uribe Escobar

Bogota, August 3, 2016

**PRESIDENTS, CHAIRMEN, AND OTHER MEMBERS**

Honorable Third Constitutional Permanent Committee

Senate of the Republic

House of Representatives

Dear Ladies and Gentlemen,

The Board of Directors of *Banco de la República*, pursuant to the provisions of Article 5 of Act 31 of 1992, submits to the consideration of the Honorable Congress of the Republic a Report presenting the macroeconomic results of the first half of 2016 and the remainder of the year.

The last two chapters describe the composition of national reserves and a projection of the financial situation of *Banco de la República* for 2016.

Yours sincerely,



**José Darío Uribe**  
Governor



# MONETARY, EXCHANGE, AND CREDIT POLICIES

## MONETARY POLICY

The 1991 Political Constitution has established that “The State, through *Banco de la República*, shall watch over the purchasing power of the currency.” Subsequently, the Constitutional Court in its sentence C-481 of July 7, 1999 delved into the coordination that should always be present between and among all monetary, exchange and credit policies of which the Board of Directors of *Banco de la República* (“BDBR”) is responsible, as well as the fiscal, salary and employment policy falling under the control of the National Government:

“[...] the Bank’s activity to keep up the currency’s purchasing power must be carried out in coordination with the overall economic policy [...].”

The constitutional mandate of upholding price stability in an economy offers several advantages, of which one of the most important is that once the objective is attained it will protect the least favored citizens from the burden of inflation, which has been described as the worst possible tax. In this social group where income cannot be adjusted to the same rhythm of family basket prices, inflation acceleration ends up by generating sharp losses in the purchasing power of money.

Monetary policy must watch over price stability in coordination with a general policy, understood as a strategy seeking to encourage output and employment growth. In this context, increases in production exceeding the country’s installed capacity must be avoided because, apart from generating pressures, this jeopardizes the sustained growth of the economy. Therefore, monetary policy must as well be directed towards output and employment stabilization at their sustainable long-term levels.

The inflation target strategy implemented since year 2000 by the BDBR is aimed at meeting this constitutional mandate. Helped by it, monetary policy attempts to attain and maintain a low and stable inflation rate, while being able to soften output and employment fluctuations around a sustained growth path.

For the years 2000 and 2001, the BDBR established specific target ranges for the following year, at all times aiming at reducing family basket prices and watching over the purchasing power of the national currency. In November 2001, the BDBR informed that the long-term target for inflation was 3%, and explained that keeping up this objective was tantamount to promoting price stability in the country. It

was in this way that, by mid-2009, inflation stood around 3%; and, from 2010, the range established (between 2% and 4%) has been centered on the long-term target.

The inflation target range is a communication strategy oriented towards advising the public that inflation dynamics involves uncertainty, while its control is an exercise subject to temporary shocks not always easily offset by monetary policy. These transitional fluctuations do not imply a lack of commitment from the central bank to maintaining price stability.

Monetary policy decisions are made based on the analysis of the current situation and prospects of the economy, as well as on forecast assessment and inflation expectations against the target (3.0%). In this manner, the BDBR determines the value its monetary instrument, the reference interest rate (or policy interest or intervention rate) should have, in order to stabilize inflation at 3.0%. The following are the most important criteria taken into account by the BDBR in fixing the rate:

- If the present and future analysis of inflation, as well as of its explanatory variables, suggest that it may deviate from 3.0%, the intervention rate is amended in order to bring inflation to its target within a reasonable period of time. Where deviation exclusively arises from temporary supply factors (like, for example, a rise in the prices of foods) and inflation expectations are “anchored” to the target, the stand of monetary policy does not undergo amendments.
- The intervention interest rate is fixed in order to keep up a proper balance between achievement of the inflation rate and the purpose of softening output and employment fluctuations around its sustained growth path. In this sense, inflation strategy in Colombia is flexible since it is concerned on maintaining inflation at 3% and avoiding excessive spending or productive capacity.
- The interest rate is also determined in order to make monetary policy contribute to mitigate the risk of financial overruns, these being understood as excessive leverage or high asset prices compromising the country’s financial stability, by enabling in this way the economy to move near its sustained growth path over medium and long-term horizons.

The foregoing criteria are incorporated into monetary policy decisions in seeking for a balance between them. Thus, the intervention interest rate is moving gradually except in those conditions suggesting with a high likelihood (or certainty) that, significantly, either inflation is threatening to deviate from its target or the economy from its sustained growth path.

Another function of *Banco de la República* is to ensure liquidity in the economy, this function being fulfilled on a daily basis by means of the one-day repo operations carried out with the financial system, at a cost equal to the intervention rate.

## FOREIGN EXCHANGE POLICY

Since September 1999, Colombia has been maintaining a flexible exchange rate according to which the price of the Colombian peso vis-à-vis other currencies takes



place by means of free supply and demand of currencies in the foreign exchange market. Apart from being consistent with the inflation target strategy, this system offers the following advantages:

- Exchange-rate flexibility is desirable for those countries usually facing real shocks. For example, sharp declines in terms of trade are often accompanied by nominal depreciations contributing to soften them. In this manner, movements in the exchange rate tend to accommodate relative prices in the economy and help reduce the shock impact on both activity and employment.
- In the face of external shocks, the exchange rate provides most part of adjustments; therefore, the internal exchange market interest rate is more stable within a flexible system than in a fixed-exchange rate regime.
- Within a floating exchange rate regime, the authorities in a small and open economy like Colombia's enjoy more autonomy in their monetary policy and this fact enables them to react to their own economic cycles. While, if the opposite is the case, where there is a fixed exchange rate vis-à-vis the currency of a developed country, monetary policy would be subject to the decisions of the external monetary authority. Thus, if the economic cycles are not properly synchronized, the developed country's actions would be likely to generate negative effects on the emerging country's output and employment.
- Foreign exchange mismatches arise if an agent's income is in local currency and a portion of its liabilities is in another one with no particular type of hedging. They pose a risk for a country's financial stability and they are discouraged by a flexible exchange rate system.
- With inflation expectations at the middle point of the target range, exchange rate flexibility is a useful output stabilization tool. In fact, since this system was implemented and unlike what had occurred in the nineties, monetary policy has been extremely countercyclical.

As deduced from the foregoing, fixing targets on foreign exchange rates may be incoherent with the inflation target; it weakens the inflation targeting strategy and erodes monetary policy credibility. In addition, any attempt aimed at fixing the exchange rate involves financial instability as long as the exchange risk is not incorporated by economic agents into their borrowing decisions.

However, as a foreign exchange authority, *Banco de la República* has the power to intervene in the currency exchange market. In this manner, in the inflation targeting strategy under an exchange-rate flexibility system, the coherence of an intervention policy with the achievement of the medium-term inflation target must be assessed.

Since the flexible system was implemented, the Bank has taken part in the exchange market through sterilized interventions without attempting to fix or attain any specific exchange rate level whatsoever. The following have been the main reasons for any such interventions:

- Mitigate exchange rate movements not clearly addressing the behavior and performance of the fundamentals of the economy. With this, what is to be prevented is endangering the inflation target with subsequent currency rate corrections.
- Diminish the volatility of the exchange rate around its trend.

- Increase the international reserves level in order to reduce external volatility and improve the access to external credit conditions.
- Ensure the necessary foreign currency liquidity required.

## MONETARY POLICY AND FINANCIAL STABILITY

Likewise, monetary policy seeks to avoid financial unbalances originating, for example, in high leverage or excessive risk-taking episodes that usually trigger financial crises and sharp output and employment fluctuations. In order to face them, there is a good variety of measures where the use of a specific subset can be justified according to the general conditions of both the economy and the particular financial problem to be confronted.

Economic theory and the countries' experience tell that one of the determinants of financial instability is keeping "abnormally" low or high policy interest rates for prolonged periods of time. In the first case (low rates), agents tend to underestimate risk, and asset prices may grow above what can be sustained, while generally there is a tendency to invest in riskier assets. On their side, credit agencies increase loans as a share of capital and, sometimes, they reduce their demands to grant them. Additionally, the participants in financial markets replace safe assets with riskier ones, looking for a better return. In this way, the economy might be forced to face high indebtedness and risk levels and becomes more vulnerable to unexpected adjustments to income due to job losses, for example.

In the second case, when policy interest rates are exceptionally high, both the economic activity and asset prices may plummet while unemployment rises, thus increasing the risk of default or non-payment. Should this risk materialize, debtors' non-performance and the negative impact of the fall in asset prices threaten credit establishments' solvency and generally hamper the good functioning of both financial markets and monetary policy.

Due to the foregoing, sharp, and prolonged deviations of policy interest rates from their "normal" levels may heighten the likelihood that financial instability situations will occur. For this reason, mitigating this financial unbalance risk is one of the criteria used by the BDBR to fix the reference interest rate level.

Notwithstanding the above, movements in the policy rates are insufficient to prevent the occurrence of financial unbalances. In the face of a context of this type, *Banco de la República* is entitled to use other instruments if it deems it necessary to supplement that tool in order to offset potential excess credits. The use of these instruments must take place as based on a careful cost-benefit analysis. In addition, institutions sharing the financial stability objective such as the Financial Superintendence, the Ministry of Treasury, and the Financial Institutions' Guarantee Fund (Fogafin) are entitled to adopt other measures to discourage this kind of unbalances.

Lastly, in its quality of currency issuer, the Central Bank must ensure the safe and efficient functioning of the payment systems, in addition to serving as a "lender of last resort."

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# INTRODUCTION

In the Reports of the Board of Directors of *Banco de la República* to the Congress submitted in 2015 and March 2016, a detailed analysis was made with regard to the consequences of the intense terms-of-trade-shock on the Colombian economy. Later, the economy had to suffer further shocks like the so-called phenomenon of El Niño and the increase of the interest rate in the United States that made the environment even more complex and rose the degree of difficulty in the monetary policy decision-making process. Economic growth slowdown, an increasing inflation, and the widening of the current account deficit in the balance of payments in an atmosphere of high uncertainty pose a major challenge to macroeconomic policy.

In an adverse and volatile scenario, the Colombian economy has been moving ahead under a gradual and orderly adjustment process as supported by sound economic foundations and a proper policy framework. The economic authorities' timely response to these circumstances has played a crucial role in this experience.

As pointed out from the first diagnostics, the lasting deterioration of the terms of trade and its impact on national income demanded a coherent adjustment in the spending of the economy in harmony with the lessened dynamics of income in order to prevent the unsustainable growth of the current account deficit and external indebtedness.

Gross domestic product (GDP) and balance of payment figures in the first quarter of the year show that this certainly necessary adjustment is taking place. The annual growth rate of domestic demand was 1.3%, at a rhythm below the 4.7% expansion observed in the first quarter of 2015. For the same periods, the current account deficit shifted from 7.0% to 5.6% of GDP. As explained in the Report, both behaviors are mutually related.

As it could be expected, domestic demand slowdown as a result of national income deterioration and a raised interest rate has been reflected on a decline in the impetus of the economic activity. For the first quarter of 2016, an annual growth rate of 2.5% in GDP was recorded, lower than those observed in 2015 (3.1%) and the last quarter of the previous year (3.4%).

Consumption deceleration and investment slowdown have reduced imports (by – 24.5% in the first quarter), where the purchases of inputs and capital goods for industry and transportation equipment have to be highlighted. In this behavior, an important role was played likewise by the Colombian peso depreciation in making the cost of imports more expensive, thus discouraging demand. Regardless of the fact that the value of exports of goods was reduced in the first quarter at an annual rate of -29.7%, mainly as a result from lessened sales of oils and oil derivatives, the trade balance declined. In addition, the loss of firms operating in the oil activity was reflected on the annual drop of net expenditures driven by factor income. All of this has had an effect on the correction of the current account deficit. Given the larger reduction of expenditures in comparison with the contraction of current income, a current account deficit closer to 5.3% of GDP is projected in the most likely scenario for 2016.

GDP performance during the first three months of the year, according to its demand components, was mixed. While private consumption was recording a growth 3.4% higher than that of the fourth quarter of 2015 (2.8%), public consumption exhibited a slowdown (of 1.6% vs. 3.8%), explained in part by the adjustment to the fall of the oil price. On its side, gross capital formation registered an annual contraction of 3.7% mainly originating in the transportation, machinery, and equipment items.

In contrast, investment in construction achieved an 11.4% expansion thanks to the dynamics displayed in the construction of buildings. In the case of civil works, a growth rate of 0.4% was observed, due in part to a high comparison base in the same period of 2015. On the side of supply measuring the performance of the productive sectors composing GDP, the higher growth rates were seen in the industrial sector (5.3%), construction (5.2%), and financial services (3.8%). The only shrinkage was recorded in the working of mines and quarries (-4.6%).

In a context of a weakening demand and economic growth slowdown, it seems rather paradoxical that consumer price inflation has happened to exhibit the most significant upturn since the inflation-targeting scheme with exchange flotation was initiated. However, as it has already been explained in diverse *Banco de la República* reports and releases, the current inflationary pressure is mainly due to supply factors of transient origin, deriving for the accrued depreciation of the Colombian peso and the impacts of the El Niño phenomenon on agricultural and energy supply. These factors have unpinning inflation expectations and activated price and salary indexation mechanisms.

In this way, so far this year, an increase has been observed in consumer price inflation (CPI) from 6.77% on 2015 to annual 8.60% in June.

Annual variances in food pricing topped 14.28% in June. The prices of perishable items like potatoes, vegetables, fruits and dairy products was particularly



affected by a prolonged drought, and those of imported origin foods like cereals, oils and some processed products also came under pressure from the Colombian peso depreciation, even regardless of the fact that their international prices have remained stable since the beginning of year 2015. Given the influence of food prices in the family basket (28.2%), this is the item that has contributed most to inflation acceleration in the first half of the year.

The pass-through of nominal Colombian peso depreciation to domestic prices was another important source of upward pressures. As already explained in former Reports, the channels of the pass-through of the exchange rate on prices are of a diverse nature, among which the one operating through imported consumption stands out, as well as that making it via the producer price increase due to the higher costs of imported input and capital goods. In the group of tradable goods, the items concerning vehicles, household appliances, electronic and communication devices, and medicines, among others, are some of the most affected. Likewise, with the use of a cost channel, the pass-through is extended to non-tradable goods in the production of which imported inputs are used. In this occasion, the magnitude thereof has been high vis-à-vis the 2006 and 2008-2009 depreciation cases. In part, this can be explained because, unlike previous episodes, the exchange rate has not gone back to the levels prior to the terms-of-trade shock. Nevertheless, if a comparison is made with the experience observed in other countries, the pass-through effect is relatively low.

These pressures have affected core inflation measures. Thus, for the average of their four indicators monitored by *Banco de República*, their level in June was 6.52% in comparison with a record of 5.43% in December 2015.

The shocks described above have been more intense and longer than expected and anticipated by the Bank's technical staff and market analysts, to the point that inflation observed exceeds the forecasts carried out early in the year. Notwithstanding this, and as pointed out by the Board of Directors, the nature of any such shocks is of a temporary nature. To the extent that the *El Niño* phenomenon ended in the second half of the year and the rainfall levels have risen, farming and cattle raising supply must tend to go back to normal. In this manner, the increasing pace of food prices is expected to start declining around the third quarter, without ruling out some specific pressures due to the impacts that the recent difficulties may entail for the mobilization of food products from the countryside to the urban zones in the country.

In turn, the effects of Colombian peso depreciation on family basket prices should tend to decline in the course of the second half of 2016, because there is no sign of a marked upward trend in the exchange rate in the elapsed months of this year.

Since observed inflation makes part of the information set upon which people base their inflation expectations, price shocks, even those of a temporary na-

ture, may affect any such expectations. These effects depend upon credibility on the inflation target. If it is high, then the influence of transitory price shocks on medium and long-term prospects will be minimal. Otherwise, if it is low or if it weakens, temporary shocks gain importance because, in the shaping of their inflation expectations, more weight is given by agents to observed information. In other words, they tend to look backwards rather than forwards.

The most recent Colombian experience illustrates this conduct. In the face of the force and persistence of the above-described price shocks, expectations went up in September 2015 at the same time that price indexation mechanisms were activated.

In order to stop this process, an active monetary policy capable of helping preserve credibility in the target is required. For this purpose, the Board of Directors initiated in September 2015 a gradual increase of the policy interest rate from a 4.5% to a 7.75% level in July 2016. This increase in the interest rate at which *Banco de la República* supplies liquidity to the banking system means that a switch has taken place from a comfortable monetary policy to another that diminishes the stimulus to private spending. This reduces inflationary pressure and helps adjust increase in demand to the lower growth path of the national income.

The use of the interest rate as a vital instrument of monetary policy was supplemented with a communication strategy that, through multiple channels, has helped the Board and its technical staff to explain to the public the situation of the economy and the reasons serving to justify the successive interest rate increases. The monetary authority is aware of the fact that transparency is a fundamental ingredient in the construction of credibility.

Increases taking place in the policy interest rate have been reflecting on raises in the financial system's deposit and lending interest rates. The former increases remuneration of savings and the latter makes credit more expensive. As a result, economic agents are finding out that increasing their financial assets becomes more and more attractive while being more prudent in their indebtedness and spending is more advisable, all of this contributing to macroeconomic adjustment which is a necessary condition to achieve growth likely to be sustainable in production and employment.

The Report analyzes other important variables such as employment and financial system risk since both might be affected by the loss of dynamism in the economic activity and the interest rate increase. For those indicators, an accommodation to the new economic condition without great upheavals has been observed.

In the case of the labor market, figures available as of May did not show significant deterioration in the employment situation. Although the major thirteen

cities, and for the national total, certain slowdown has been recorded in the pace of new-job creation, this has coincided with a reduction in labor supply as shown by the lower overall participation rate. As a result, the unemployment rate in urban areas has shown some decline, and a marginal increase in the national total.

As for financial risk, the Report examines the exposure of credit establishments to credit and funding risks and analyzed the market risk in the Colombian Treasury Bonds portfolio. In this respect, the Report notes that the indicators for risk quality and default quality as of April 2016 recorded deteriorations as compared with what had been observed a year before, but their values remain at levels close to the average of the past five years. On the other hand, as of June, the liquidity indicator suggests that the financial system has the necessary liquid resources required to sufficiently meet its short-term contractual and non-contractual obligations. With respect to the risk measure for the system in the Colombian Treasury Bonds portfolio as of June, an increase was registered as a consequence of higher volatility in the public debt market.

Finally, and as pointed out in last year's July Report of the Board to the Colombian Congress, it is worth stressing the importance of progress made in the legislation regarding the regulation of conglomerates and capital consolidation in financial entities as a contribution to the financial system's resilience. Likewise, emphasis is made on a fiscal policy capable of ensuring the sustainability of the country's public finances and helping attain a balanced adjustment of public and private sectors to the permanent drop of income and the spending capacity of the economy, just as noted in the Report to the Congress of March of the current year. For this purpose, it is essential to continue with the austerity policy in spending and income increase ensuring compliance with the fiscal rule and the preservation of consumer and investor confidence. This is the only way to maintain favorable conditions of access to external financing helping the country continue the gradual adjustment in the economy that has been and is being met at the moment.



# I. INTERNATIONAL CONTEXT

*During the second quarter of 2016, the country's terms of trade recovered, primarily thanks to the increase in international oil prices compared to a minimum observed at the beginning of the year. Nevertheless, these remain at levels low and below those of one year ago.*

*Global economic activity remains weak and it is expected that throughout 2016 its dynamism will be lower than what was registered in 2015.*

*In the United States, the Federal Reserve is expected to continue with a gradual normalization of monetary policy. In this context, a highly expansionary monetary policy is anticipated for the developed economies.*

## A. PERFORMANCE DURING THE FIRST SEMESTER OF 2016

During the first semester of 2016, the Colombian economy was framed within a context of slow global growth in addition to terms of trade that, notwithstanding the slight recovery they show thanks to the increasing oil prices since February, still remain at low levels, and a strengthening currency compared to the end of 2015. While interest rates in the United States remained unaltered in the first half of the year, the expectations about an increase thereof were an important source of uncertainty in the financial markets during this period.

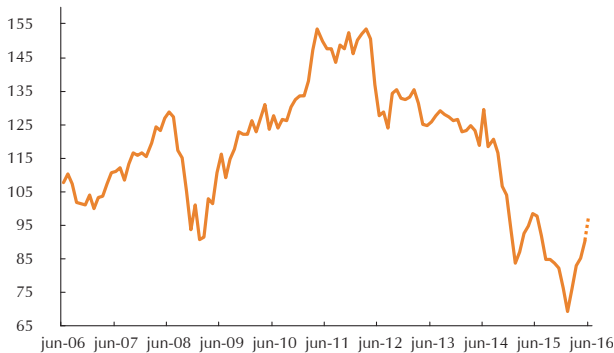
Besides, in the last days of June the U.K. referendum was conducted, in which there was a majority vote in favor of leaving the European Union. The consequences of this fact are many and difficult to measure for now. However, the immediate result has been an increase in economic and political uncertainty, which should last a long time.

Regarding the terms of trade, after sharp declines at the beginning of the year, they experienced a partial recovery starting in February and ended up in April at levels similar to those of September of the previous year (Graph 1). Despite the recent increases, in the first semester of 2016 the terms of trade on average were still standing below their levels observed during the second half of last year.

*During the first half of 2016, the Colombian economy was framed within a context of slow global growth and terms of trade lower than those of 2015.*

Graph 1  
Terms of Trade Index  
(trade methodology)

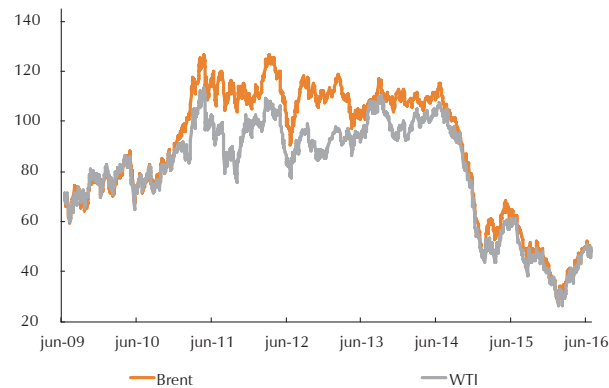
(2005 Index = 100)



Note: Data for June 2016 is a forecast  
Source: Banco de la República

Graph 2  
International Oil Prices (Brent and WTI)

(Dollars per barrel)



Source: Datastream.

The behavior of the terms of trade so far this year continued to be closely tied to what had occurred with respect to oil prices that, by late January, had fallen to minimums never before seen since 2003 (US \$28 per Brent barrel), but later showed a marked recovery, fluctuating around the US \$48 per barrel in the last two months (Graph 2).

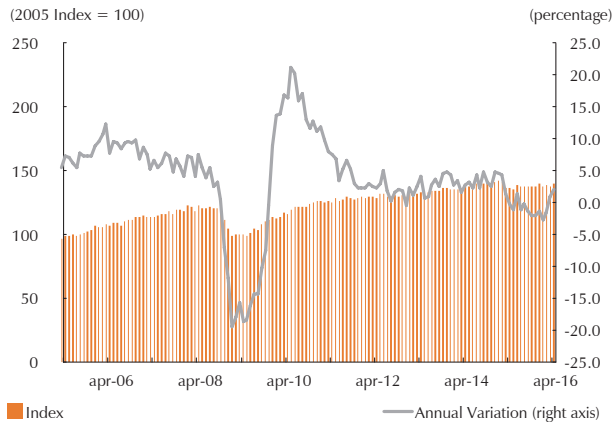
The strong decline in the price of crude oil seen in January was associated with the increases in oil production on the part of member countries of the Organization of the Petroleum Exporting Countries (OPEC), while price surges taking place in the remainder of this half of the year would be explained by supply and demand factors like, on the supply side, the product outages experienced in Nigeria and Iraq due to terrorist attacks, and in Canada on account of forest fires and, in addition, the reduction in the production of non-conventional deposits taking place in the United States. On the demand side, the improvement came from a reduction in risk aversion in the financial markets for the second quarter of the year, a greater appetite for commodities and the expectation of a global growth sustained on the stimulus measures announced by the central banks of developed countries and China's fiscal incentives.

The international prices of other commodities exported and imported by Colombia followed a similar pattern to those of oil. In this manner, average prices during the first semester for coffee, nickel and coal showed reductions of 11%, 37% y 22% respectively, as compared to the same period of 2015. This decline seems to be explained by a lower demand for these goods. However, in the last two months an increase in the prices of coal and coffee has been observed. The former has taken place due to higher imports by China, an interest in stockpiling inventories on the part of India and a reduction in global production. On its part, coffee prices have been affected by the decline of production in Brazil due to climate conditions.

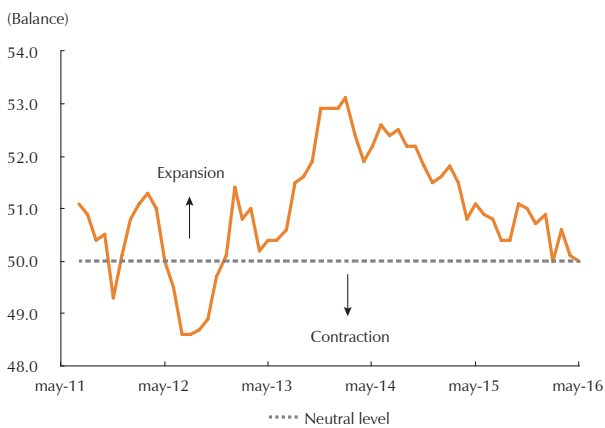
On the other hand, Colombian exports other than commodities have been affected by a lower external demand. This is the result of global economy expanding at a slower pace, as some global indicators show. Although global export indicators display some growth during the first months of the year (Graph 3, panel A), the manufacturing activity, while still remaining in positive grounds exhibits a downward trend (Graph 3, panel B). The low global growth

Graph 3  
Some Global Activity Indicators

A. Global Export Volumes

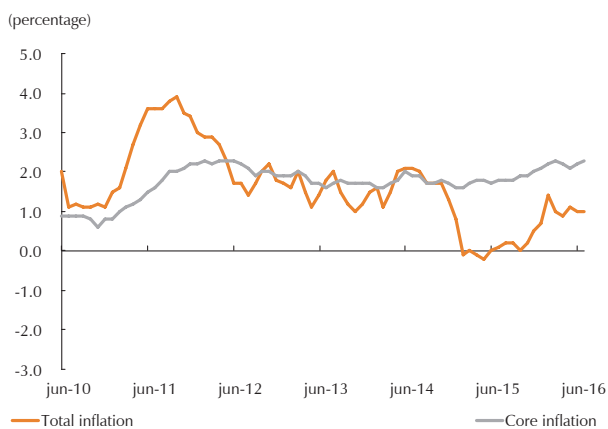


B. Global Business Sentiment Index (PMI: Purchasing Managers Index)



Source: Bloomberg.

Graph 4  
United States' Annual Total and Core Inflation Indicators



Source: Bloomberg.

is specially explained by a slowdown in emerging economies, which are exhibiting historically low expansions of their gross domestic product (GDP). On their part, the dynamics of the developed economies continue to be slow.

In the United States, GDP growth for the first quarter of the year, 1.1% annualized quarter (a. q.), was weak, and stood below the market consensus. Even though at the time of writing this report no GDP data for the second quarter is available, there are indicators suggesting that during this period consumption has picked up. Likewise, it is expected that the labor market has retained its dynamism.

Moreover, annual inflation in the United States is at levels above the observed during the same period of last year but continues to be low. Core inflation measures that exclude volatile elements such as foods and fuels remained relatively stable around 2.2% (Graph 4).

From the Federal Open Market Committee (FOMC) communiqué of their April meeting, the interpretation of the market was that rate increases would take place in the June assembly, after having remained unchanged since the end of the year, due to which a strengthening of the dollar against the main global currencies took place (Graph 5). However, after the disappointing data on job creation disclosed at the beginning of June, analysts discarded this adjustment and it was ratified at the June meeting with the decision of not modifying the interest rate. From June 23 onwards, a strengthening of the United States dollar due to a search for low-risk assets was observed after the news concerning the UK referendum results were known. Additionally, U.S. Treasury bonds rates stand at levels below those seen in the previous year.

As for the Eurozone, between January and March its GDP displayed a quarterly 0.6% expansion, this meaning an improvement in comparison with growth observed in the last quarter of 2015 (0.3%). Household consumption and private investment were the components contributing most to the increase. Net

Graph 5  
Dollar Exchange Rate  
(weighted by trade)



Source: Bloomberg.

exports did not represent a source of growth for the zone, due to the weak external demand. Available figures on real activity and confidence for the second quarter suggest that the economy has been slowly recovering.

Meanwhile, annual inflation in the Euro zone stood in negative terrain the first five months of the year. The decline in fuel prices explains much of the low levels seen in annual price variation. Excluding food and fuels, inflation remained relatively stable at around 0.8%, quite a long way below the target set by the European Central Bank (ECB) (defined by this institution as lower than, but close to 2%).

In this context of low inflation and modest economic growth, the ECB has adopted an even more expansionary monetary policy. In its March meeting it decided to lower policy rates down to 0.0%, decrease deposit rates (from -0.3% to -0.4%) and increase purchases in its quantitative easing program, besides including some corporate bonds. Additionally, it announced a new round of targeted long-term refinancing operations (TLTRO) intended to foster credit supply in the region. Interest rates on ten-year bonds have remained at low levels in Germany and France, with declines in the last month.

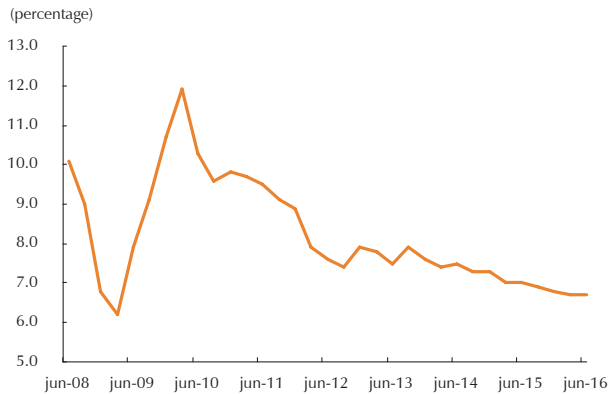
Despite better Eurozone's growth figures, the likely exit of the U.K. lets predict a complex scenario for the European economies. In the following years, reforms concerning new conditions of trade and labor market mobility, among others, shall be carried out in the European Union and the U.K. The news have caused great commotion in the financial markets and generated high volatility and a greater risk aversion in the last week of June; for this reason, refuge in assets considered safer – i.e. the US dollar and gold - was sought. It also has caused a political shock based on fears of additional divisions and separations in both the European Union and the United Kingdom, inuring in worst uncertainty for investors.

On the side of emerging economies, a slight slowdown compared to the previous year's last quarter was seen in China, having gone from 6.8% to 6.7% in the first semester of the year (Graph 6). This moderation is linked to the behavior displayed by its domestic demand, primarily of investment, and by a modest external demand. It is important to underscore that during the first quarter its central bank and government announced a stimulus seeking a softer convergence to the new model of growth, based more on domestic consumption.

Annual inflation in China during the first half of the year showed a slight recovery compared to the same period of the previous year. However, it has re-

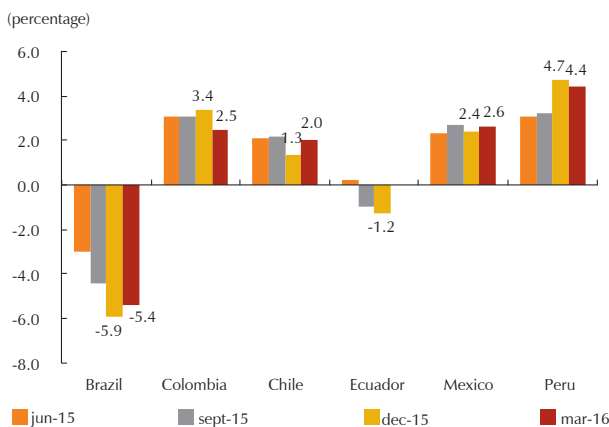


Graph 6  
China's Annual Real GDP Growth



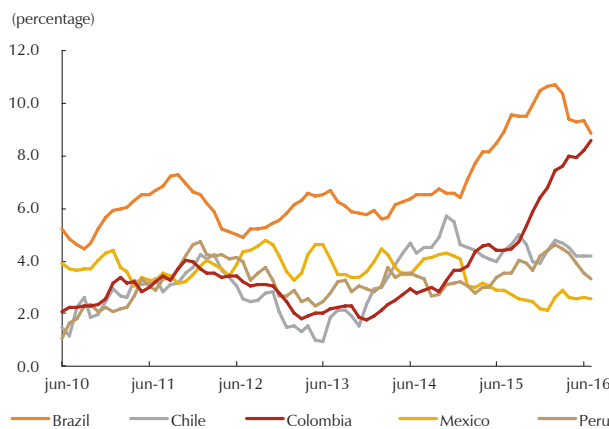
Source: Bloomberg.

Graph 7  
Annual Real GDP Growth for Some Latin American Countries



Source: Bloomberg.

Graph 8  
Annual Inflation in some Latin American Countries



Source: Bloomberg.

mained at low levels as a consequence of lower fuel prices and the weakening of its domestic demand.

Meanwhile, Latin American economies continue to show low growth rates (Graph 7) and to be affected by a sharp decline in the terms of trade. In Mexico and Chile, the low dynamism observed since 2014 persists. Brazil's economy keeps contracting. However, last data on growth (an annual -5.4%) would indicate a lower –than–expected slowdown due to the behavior shown by public spending and, therefore, a strong correction is foreseen in the next quarters of the year.

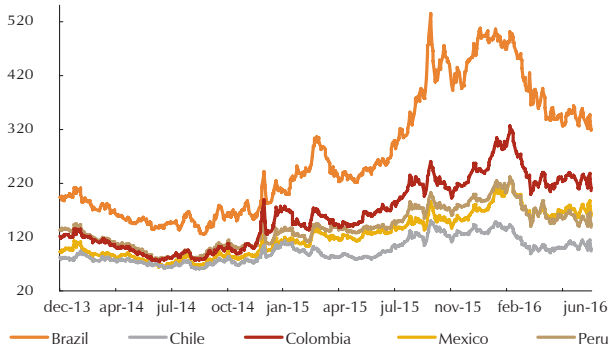
The economies of Ecuador and Venezuela, even though there are no recent data allowing for more precise monitoring thereof, seem to be showing a deepening of their crisis during 2016, given the high cost of external financing and the effect that low oil prices have on their terms of trade and national income. The exception to the low growth levels shown by the region is Peru, which, thanks to the increase in mining activities has reached a quarterly 4.4% growth in the first period of 2016.

Latin America's economic activity index for the second semester would be pointing to a deceleration of the Chilean, Peruvian, and Brazilian economies, compared to what was observed during the first semester. Inflation for the region shows levels lower than at the beginning of the year, even though it remains high. Data on consumer inflation in Brazil, Chile, and Peru at June show that it stands above the target range (Graph 8).

As for monetary policy, Colombia, Peru, and Mexico increased their interest rates in the first semester, while Brazil and Chile kept them unchanged.

During the first two months of the year, a sharp rise of volatility in the financial markets took place, due to a greater risk aversion. This generated an increase in the risk premiums in Latin America and an appreciation of the United States against several of the region's currencies.

Graph 9  
Credit Default Swaps for Some Latin American Countries  
(Basic points)



Source: Bloomberg.

From March onwards and until the end of June said movements in market aversion, risk premiums and the exchange rate reversed, thanks to the stimulus measures adopted by certain central banks and the publication of data indicating the recovery of China and improvements in the terms of trade. After the results of the Brexit referendum in the last week of June, these trends were reversed a little, when depreciations of the region's currencies against the dollar and mild increases in risk premiums were seen again (Graph 9).

## B. PROJECTIONS FOR THE REMAINDER OF 2016

The second semester of the year will be framed within a context of global uncertainty and aversion to risk in the financial markets generated partly by the results of the referendum on the United Kingdom's exit from the European Union (called Brexit).

In the same vein, growth in the world's economies is expected to be slower than predicted in the March issue of this Report, both for the developed and the developing economies. The Eurozone and the United Kingdom will have to make readjustments in the following years so as to incorporate the reforms that Brexit will involve, which could cause a growth decline. However, the uncertainty regarding what changes will occur and the time it will take to carry them out is high. This may impact consumer and business confidence, which would interrupt the slow recovery of the region.

As for the United States, figures show that its economy continues to grow moderately. Nevertheless, the different available indicators have given mixed signals, because of which is hard to determine how sustained is its dynamism.

The increasing risk aversion will be reflected, probably, in a greater demand for safe haven assets, such as the dollar and gold, while at the same time there will be a lower disposition to invest in the real economy. Prices of commodities are expected to decrease as a consequence of lower global growth perspectives.

In this context, it is expected that in the developed economies monetary policy remains highly expansionary. In the U.S., increases in the interest rates would be slower than previously estimated, due to both this economy's performance and the greater uncertainty in the international financial markets.

## Box 1 REDUCTION AND IMPACT OF COMMODITY PRICES ON THE ECONOMIES OF CHILE, PERU, AND COLOMBIA

The drop in the international price of various commodities from historically high levels has given rise to deterioration in the terms of trade along with the slowdown in national income, particularly where these commodities are representative within the framework of each national exporting offer, like in the case of the Latin American countries. In several economies, this contributed to an increase in risk premiums and currency depreciation. The lower dynamics of national income was accompanied from the start by a broadening of the current account deficit followed by a spending adjustment, this fact having reflected in internal demand deceleration and the subsequent closure of the external current account deficit. As for inflation, currency depreciations have been partially passed-through to internal prices and, in some countries, this behavior has become one of the main factors serving to explain why inflation targets have not been met.

This text illustrates the experiences of Chile and Peru after the drop in the price of copper beginning in mid-2011, since they can be compared with the macroeconomic adjustments taking place in Colombia following the sharp fall recorded in the oil price since the second half of year 2014.

As it will be exposed below, the Colombian economy had to face several simultaneous shocks, some of them occurring with much more intensity than those confronting Chile and Peru.

In fact, as compared to these two countries, the drop in the terms of trade was steeper and faster in Colombia, along with a sharper negative impact of the El Niño phenomenon on food prices. At the same time, external demand for Colombian products weakened in part because of the economic slowdown of several of the country's trade partners being affected by the plummeting of the prices of their export products. All this within an environment of increasing global financing cost due to the end of the United States' quantitative easing program (QE) and growing expectations of a further interest-rate hike in this country.

### 1. Characterization of the commodity-price shock.

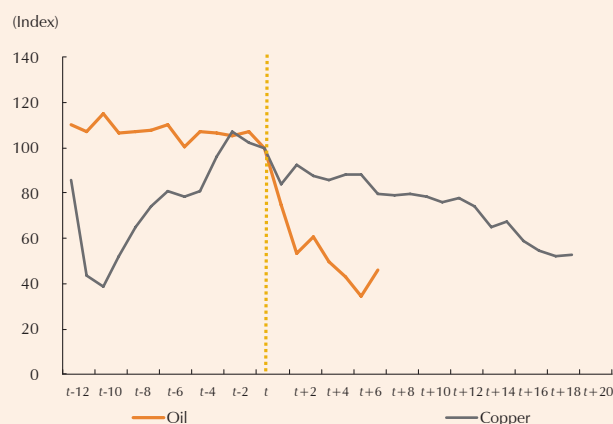
The international prices of commodities have exhibited significant reductions over the past few years and this has affected the economy of countries exporting this type of

products. Particularly, the more relevant export goods have been copper with respect to Chile and Peru, and oil in the case of Colombia.

The decline suffered in the international quotation of the aforementioned raw materials has been different with regard to magnitude, speed, and starting point. As far as copper is concerned, its price decrease began to occur on a gradual basis in the third quarter of 2011 (t period); since this trend was maintained until mid-2016, the total drop over almost five years was 47% (Graph B1.1).

In contrast, the accelerated oil price reduction started being noticed since the third quarter of 2014 (t period). As of the first quarter of 2015 it was already recording a 47% decline and 68% in the first three-month period of 2016 (vis-à-vis benchmark Brent prices) (Graph B1.1).

Graph B1.1  
Oil (Brent) and Copper Price Indices<sup>a/</sup>

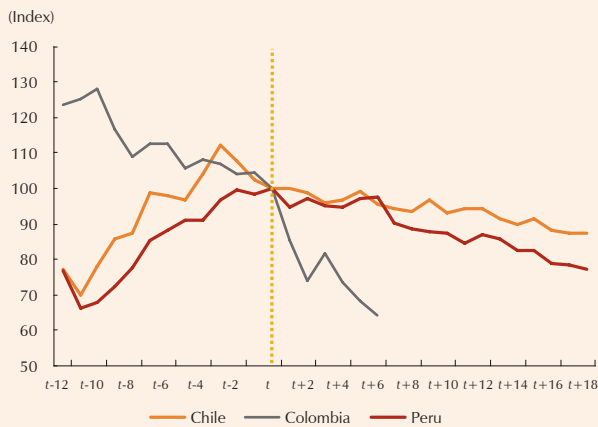


a/ Copper: t = 100 third quarter of 2011; oil: t = 100 third quarter of 2014.  
Source: Datastream

### 2. Effects on the external sector

Taking the above described oil price behavior into account together with the importance of this product in the Colombian export basket, the country's terms of trade (TOT) (Graph B1.2) and hence national income were more affected in comparison with what had been registered in the other analyzed countries. It is worth mentioning that the lower crude oil prices have favored external adjustment in both Chile and Peru insofar as they are importers of this product and its derivatives. In the case of Colombia, the rough shock on the TOT and external revenues

Graph B1.2  
Terms of Trade Index: Chile, Peru and Colombia<sup>a/</sup>



a/ Chile and Peru: t = 100 third quarter of 2011; Colombia: t = 100 third quarter of 2014.  
Source: Central banks

was reflected on a higher and faster peso depreciation vis-à-vis that of the other currencies.

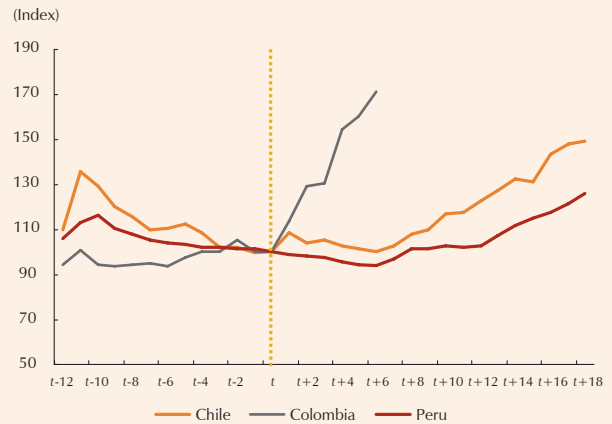
In part, this obeyed to differences taking place in the foreign environment where the price shock took place. While at the beginning copper prices slowed down within a context of broad international liquidity that fostered capital flow towards the emerging countries, the reduction in the international price of oil started after the initiation of the gradual winding-down of the QE in the United States, and in the middle of interest-rate increase expectations in both this country and at an international level. In the case of Peru, an economy with a high dollarization index, the Central Bank carried out heavy investments in the foreign exchange market with an aim at mitigating the depreciation of the Peruvian sol. In addition, also the fiscal space in these countries could have influenced their currencies' response.

As a result of the above, in the Colombian case and six months after the decline in the international quotation of crude oil had started (that is, as of the first quarter of 2015), depreciation was already accruing 29% in nominal terms and 18% in real terms. This trend remain unchanged over the next quarters and, for the first quarter of 2016, nominal and real depreciation amounted to 71% and 42% respectively with respect to the above-mentioned base period but, in comparison, depreciation was more moderate in Chile and Peru. Between the third quarter of 2011 and the first of 2016, nominal and real recorded in Chile were 50% and 6% respectively. On its side and for the same period, in Peru it amounted to 26% for the nominal exchange rate and -1% for the real exchange rate index (Graph B1.3).

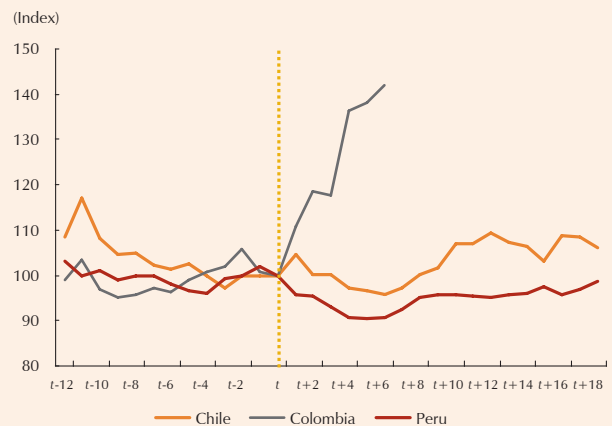
Given the meaningful share of commodities as analyzed in the three countries' exports, the dynamics of the current

Graph B1.3

A. Nominal Exchange Rate Index: Chile, Peru and Colombia<sup>a/</sup>



B. Real Exchange Rate Index: Chile, Peru and Colombia<sup>a/</sup>

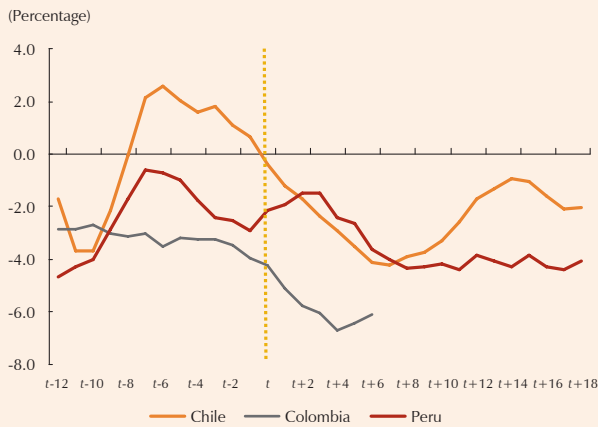


Note: REER-CPI for all three countries  
a/ Chile and Peru: t = 100 third quarter of 2011; Colombia: t = 100 third quarter of 2014.  
Source: Central banks

account was affected as well in a significant manner. Chile and Colombia registered important deteriorations in this indicator once the prices of their primary products began to fall. It is worth noticing that, prior to this shock, Chile's current account had a surplus, while Colombia's exhibited a relatively large deficit. (Graph B1.4).

In the Chilean case, the negative balance adjustment in the current account was registered for the first time two years after the international price of copper began to drop. Until this moment, a similar dynamics can be seen in Colombia. In both countries, the current account adjustment has occurred, in part, due to a reduction in imports. Particularly in Chile, external oil and fuel purchases at lower prices have facilitated the closing of its external unbalance. On the other hand, in both cases the contribution of exports other than commodities has been limited in part by the diminished economic performance of the main commercial partners.

Graph B1.4  
Current Account as Percentage of GDP: Chile, Peru and Colombia<sup>a/</sup>  
(Moving average, four quarters)



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
Source: Central banks

### 3. Effects on national income and growth

The declining terms of trade in the three countries put downward pressure on gross national disposable income - GNDI, this effect having been offset in part by net income from abroad. While in 2015 it continued to exhibit a slowdown in Colombia and Chile, its growth became stabilized in Peru (Graph B1.5).

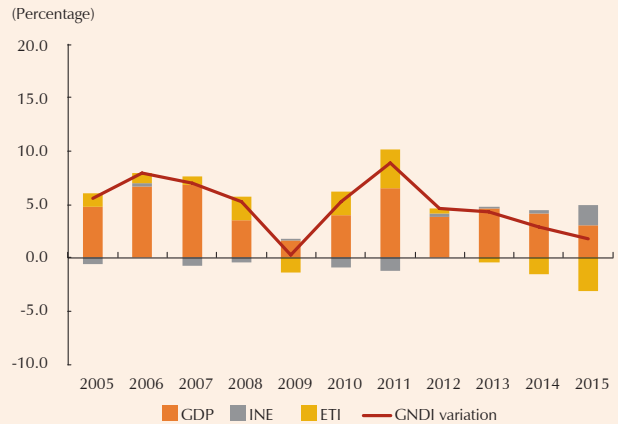
Subsequently to the basic prize shock, lower income dynamics have taken place together with a spending slowdown that has reflected in a lower output growth rate, particularly in what concerns internal demand (Graphs R1.6 y R1.7). Both consumption and investment have been affected by lessened external revenues. In the case of Peru and Chile, consumption slowdown has been significant starting from high rates, while the most recent figures in Colombia show that this behavior has been more moderate.

It is worth pointing out that since 2014, three years after the drop in copper prices had begun, both Chile and Peru recorded significant reductions in the GDP expansion rhythm. In addition, IMF projections evidence that strong stagnation in economic growth is to be expected between 2016 and 2020, likely to stand below what was registered prior to the above-mentioned shock. This prediction responds, in part, to the persistent nature of the reduction affecting raw material prices, which, therefore, has a prolonged effect on national income.

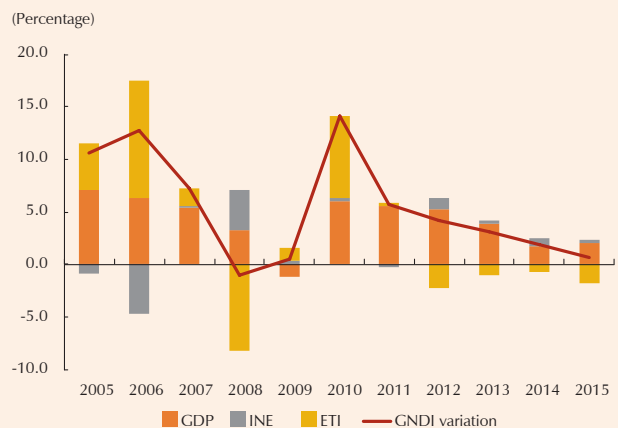
In the Colombian case, two years after international oil prices had started to plummet, the deceleration of the GDP growth rate has been more accentuated in comparison with what has been observed in the same period for Chile and Peru with respect to the initiation of the copper price reduction.

Graph B1.5  
Breakdown of the Gross National Disposable Income (GNDI) in its Components

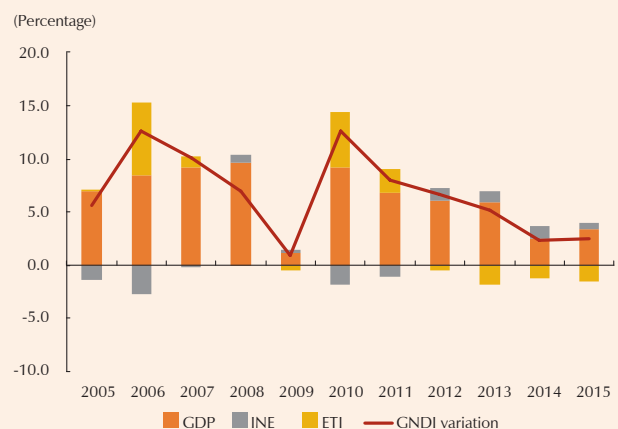
#### A. Colombia



#### B. Chile

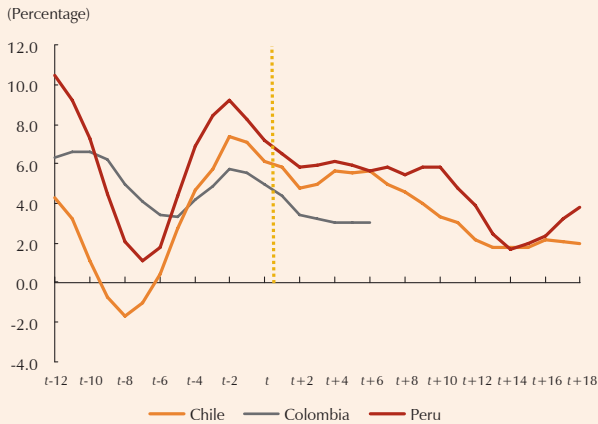


#### C. Peru



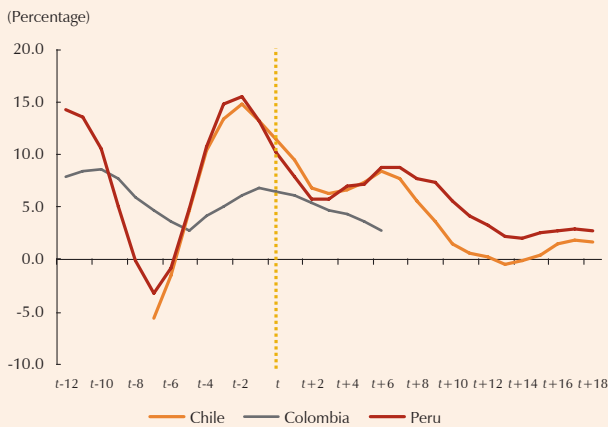
INE: Net income from abroad  
ETI: Effects of the terms of trade  
YNDI: Gross national Disposable income  
Source: DANE and Banco de la República; estimates by Banco de la República

Graph B1.6  
Annualized GDP (% change) <sup>a/, b/</sup>



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
b/ Moving average of the annual growth rate for the last four quarters  
Source: Datastream

Graph B1.7  
Internal Demand (% change) <sup>a/, b/</sup>



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
b/ Moving average of the annual growth rate for the last four quarters  
Source: Datastream.

The lower economic growth in Colombia is associated, as already mentioned, with the range of shocks having taken place in a simultaneous manner, among which the significant and accelerated decrease of the oil price is to be mentioned, along with the end of the QE in the United States and the expectations concerning the increase of interest rates in that country; in addition, the trade partners' economic slowdown and restrictions on food supply.

#### 4. Effects on inflation

In terms of prices, prior to the plummeting of the prices of the major export commodity, inflation in each coun-

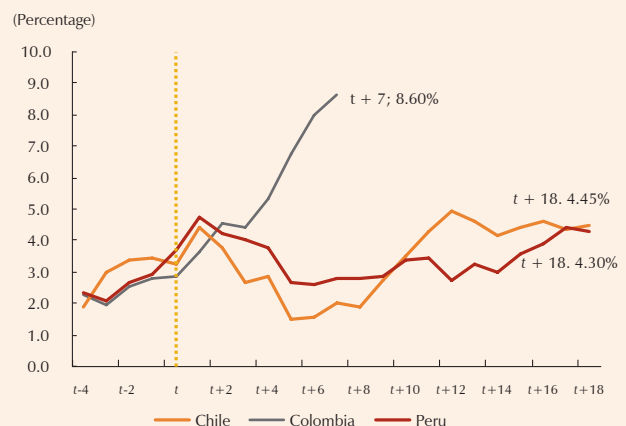
try remained within the target range fixed by the central bank<sup>1</sup>.

Subsequently, the depreciation of their national currencies with respect to the United States dollar increased and a partial pass-through to domestic prices took place; this situation served to accelerate inflation and left it out of the target range (Graph B1.8). In the three economies, the higher price-increase rate took place in an environment of internal demand slowdown, and where the production level reached was below the potential productive capacity (negative output gap).

As already mentioned, nominal depreciation was recorded with different magnitude and speed in the three countries; for this reason, the effect of this shock on inflation has not been the same in them (Graph B1.9). Besides, as shown in a study of the IMF<sup>2</sup>, the pass-through of nominal depreciation to prices in these economies is incomplete and of different sizes. The higher pass-through coefficient is registered by Chile, followed by Peru and Colombia.

In the case of Colombia, despite the fact of it being the country with the lowest pass-through coefficient, depreciation was faster and sharper and this had a strong impact on both production costs and the prices of imported final goods and services. This took place simultaneously with a fall in the food supply due to the El Niño phenomenon that pushed food prices upwards. These two shocks affected in-

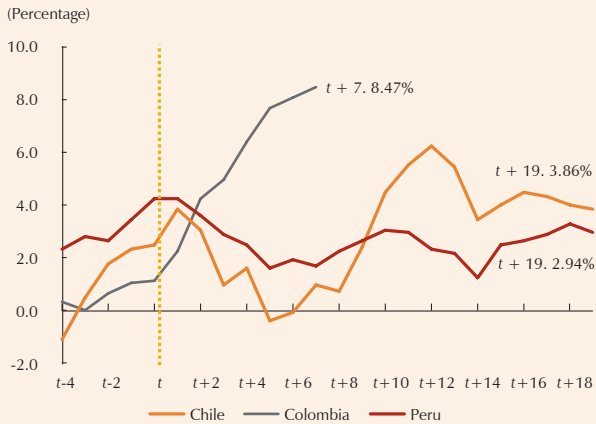
Graph B1.8  
Annual Consumer Inflation<sup>a/</sup>



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
b/ Moving average of the annual growth rate for the last four quarters  
Source: Central banks

- 1 Colombia and Chile's inflation target is 3.0% ± 1 percentage point (pp), while in Peru it is 2.0% ± 1 pp.
- 2 See "Exchange Pass-through in Latin America" in: Regional Economic Outlook, Western Hemisphere, IMF, April 2016.

Graph B1.9  
Tradables Inflation<sup>a/</sup>



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
Source: Central banks.

flation in a direct manner, led it out of the target range, and activated some indexation mechanisms. As earlier said, depreciation in the cases of Chile and Peru was milder than as recorded by the Colombian peso and, for this reason, also the impact of their shock on inflation was less severe.

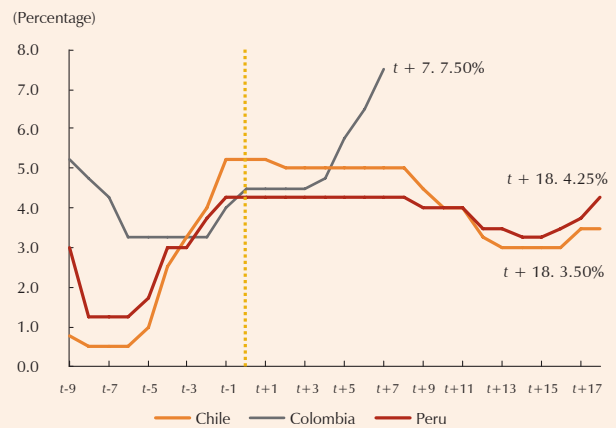
As of June 2016, annual variation in the consumer price index in the same three economies remained above the target range of their respective monetary authorities. Nevertheless, inflation in Chile and Peru began to subside and started a process of convergence toward the target. To a large extent, this can be explained by moderation in nominal depreciation, food price reversion (especially in Peru), in addition to a reduction

in crude oil prices, an output gap in negative terrain, and the monetary policy actions carried out (Graph B1.10).

In the case of Colombia, although also the Colombian peso depreciation has been moderated, it is still being passed-through to domestic prices due, in part, to the recent occurrence of the shock.

Additionally, food supply has not yet been normalized while it continues to put upward pressures on prices in this sector. To the extent that these shocks diminish and monetary policy actions are in full operation, inflation is expected to converge towards the target in year 2017.

Graph B1.10  
Policy Interest Rates<sup>a/</sup>



a/ Chile and Peru: t = third quarter of 2011; Colombia: t = third quarter of 2014.  
Source: Central banks.



## II. THE COLOMBIAN ECONOMY: RESULTS IN 2016 TO DATE AND PROSPECTS FOR THE REST OF THE YEAR

*The country continues to face several negative shocks: one of them is the reduction of the terms of trade, a lasting shock requiring a spending adjustment both in the private and public sectors.*

*The Colombian economy has proceeded with this adjustment process in a gradually and orderly manner, supported by solid economic foundations and an appropriate policy framework. Thus, in the first quarter of 2016, domestic demand slowed down and the current account deficit decreased.*

*Despite a weakened demand, inflation increased and stood at 8.6% in June. The monetary policy's response, i.e., increasing the benchmark interest rate, acknowledges that shocks affecting inflation are transitory, and it is geared to ensure the convergence of inflation to its target in 2017.*

In 2016 to date, the Colombian economy has continued to adjust, largely as a response to the adverse global shocks that have been taking place since mid-2014. Low oil prices and a weakened external demand have caused the national income dynamic to deteriorate, which the country's slower rhythm of spending continues to reflect. In this environment, in the first quarter of 2016 the current account deficit decreased and the internal demand continued to slow down. Despite the weakened demand, inflation increased and in June stood at an annual 8.6%, on account of the depreciation of the peso, the El Niño phenomenon and the activation of some indexing mechanisms. It is expected that monetary policy actions will culminate in inflation converging to target in 2017 and a reduction in the current account deficit.

The country continues to face negative shocks. In the first place, oil prices, that in January of the current year reached the lower value ever registered for the last twelve years, recovered in the second quarter but remained at low levels and continued to generate deteriorating terms of trade and the slowing dynamism of the national income. Global economy remains weak and with a growth rate below what had been observed in 2015, especially for several of the country's trade partners.



*In the first quarter, both the economic activity and domestic demand slowed down.*

With regard to international interest rates, even though they continue to be low, the cost in Colombian peso of external financing remains high as a consequence of the nominal depreciation of the currency and the country's risk premium higher than the average observed in 2015. Another shock has been the El Niño phenomenon, one of the strongest in history having grown worse in the first half of 2016 and reducing agricultural production and the country's generation of energy, in this way putting upward pressures upon prices in these sectors. Likewise, the partial pass-through of accrued nominal depreciation to domestic prices, which increased production costs as well as prices of the family food basket of imported origin.

In the face of these adverse shocks, the Colombian economy has been showing an orderly adjustment of its external and internal accounts. In the first quarter of 2016 the balance-of-payments' current account displayed a USD \$3.381 billion deficit (5.6% GDP), an amount lower than that projected by the Bank and the quarterly figures registered since early 2014.

The serious decline of oil prices having reached in this period unprecedented minimum levels never attained since 2003, as well as the prices of other major export products along with external demand weakness, generated a sizeable fall of exports (annual 29.7%). This slump in external sales was more than offset by: 1) an adjustment in imports (-24.5%) as a response to internal demand slow-down and the Colombian peso depreciation; 2) less factor income expenditures (-42.7%), particularly at companies in the mining and energy sector, and 3) increased revenues from transfers and remittances (13.1%).

In the domestic context, the first quarter of 2016 saw a continuing decrease of the internal demand, as the evidence that the required adjustment was taking place due to the lower dynamism of the national income. The falling gross fixed capital formation (-4.8%), mainly in transportation equipment (-32.9%) and machinery and equipment (-10.1%), can explain the low growth of absorption (1.4%). Household spending (3.4%) displayed an increase similar to that observed in late 2015, while public consumption (1.6%) slowed down. Exports increased (2.1%), while imports decreased (-1.5%), which was reflected in an improving trade deficit according to the national accounts. In this manner, in the first quarter of 2016 the country's economic growth stood at 2.5%, thus similar to the projection made by the Bank's technical staff.

Real credit to households and companies is also slowing down even if it shows increases higher than the economy's estimated growth for the current year. This behavior has taken place in an environment in which a raise in the benchmark interest rate is transmitted to the market interest rates.

*The current account deficit in the first quarter was the lowest since 2014.*

With regard to inflation, rising food prices, increasing production costs of some non-tradable goods and services associated to nominal depreciation and the pass-through of this depreciation to consumer prices continued to exert upward pressures upon inflation. Even though the data on economic activity do not suggest

*Between December 2015 and June 2016, inflation went from 6.77% to 8.60%.*

relevant demand pressures, the core inflation indicators increased, severely affected by the accrued depreciation of the Colombian peso. Even if both (climatic and exchange rate) shocks are temporary, their intensity and magnitude could deviate inflation and its target expectations while some indexation mechanisms were activated.

In this way, between December 2015 and June 2016 annual inflation shifted from 6.77% to 8.60%, while the average of all core inflations increased by 109 bp and stood at 6.52%. In the same period, inflation expectations for different terms stood mostly above the upper limit of the target range, even if they had ceased increasing, likely as a consequence of monetary policy actions. Despite being temporary in nature, the intensity and persistence of the shocks having had an impact on inflation have increased the risk of a slower convergence to the target by both their direct repercussion on prices and their effect on expectations and indexation.

In brief, the Colombian economy continues to adjust in an orderly manner to the strong shocks registered since 2014. The current account deficit continues to be gradually corrected, and the risk of a domestic demand slowdown exceeding the lower dynamism of the national income continues to be moderate. Inflation has increased on account of the accrued depreciation of the Colombian peso, because of El Niño phenomenon, and due to the activation of some indexation mechanisms. In this environment, the monetary policy's response of raising the reference interest rate, acknowledges that the shocks affecting prices are transitory and it is directed to ensure inflation converging to the 3%  $\pm$ 1 pp target in 2017. This adjustment in monetary policy also contributes to the correction of the external deficit.

For the whole year 2016, the technical staff reduced the growth forecast range between 1.5% and 3.0%, with 2.3% as the most likely figure. According to these projections, the internal demand should continue to grow at a slower pace than in the past, just as demanded by the new income conditions confronting the country. The terms of trade shock requires a spending adjustment to both the private and public sectors which, though already under way, must go on and continue and gain more depth in the following years. Exchange rate levels observed are expected to boost the production of exportable goods, while demand for imported goods decreases in this manner contributing to the current account's adjustment. With regard to prices, in the second half of the year, both food prices and Colombian peso depreciation shocks have been projected to start fizzling out, this, in addition to the monetary policy actions, should lead inflation to its target range in 2017.

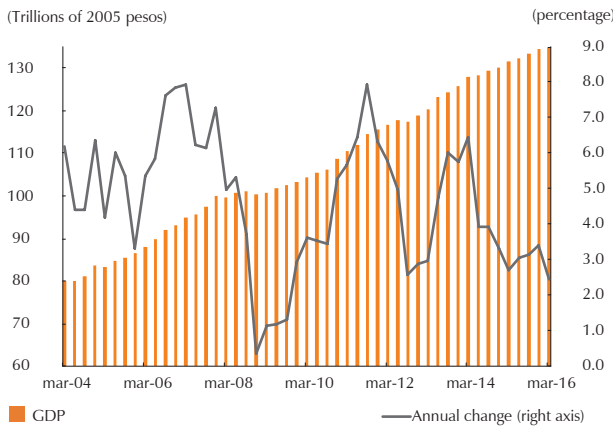
*Inflation has accelerated on account of the accrued depreciation of the Colombian peso, because of El Niño, and due to the activation of some indexation mechanisms.*

## **A. ECONOMIC ACTIVITY**

### **1. Results for the first quarter of 2016**

According to the most recent publication by the National Administrative Department of Statistics DANE on the gross domestic product (GDP), during the

Graph 10  
GDP (seasonally adjusted)



Source: DANE.

first quarter of the year, economic activity registered a 2.5% annual expansion (Graph 10).

This figure representing a deceleration compared to the growth registered in the last quarter of 2015 (3.4%), was affected by the calendar effect of the Easter holiday and public holidays (already included in the technical staff's forecasts). The variation between quarters was 0.2%, corresponding to an annualized quarterly growth of 0.6%.

Besides the calendar effect, the GDP results took place in a context where several factors, both external and internal, contributed to the Colombian economy's slowdown. In the international front, as explained in Chapter 1 of this Report, the economies of our main trade partners and all the other countries in the region had a weak performance, while the terms of trade remained at the minimum levels of the previous years (Graph 1).

Concerning the domestic context increasing consumer inflation levels were observed throughout the first quarter (as shown in this chapter's section C), which deteriorated the purchasing power of households and may have affected economic agents' future plans. Additionally, the accrued depreciation of the Colombian peso continues to generate a change in relative prices, thus propitiating a reconfiguration of spending in tradables in favor of spending on non-tradables.

In any case, the economic dynamics continue to reflect an orderly adjustment as a response to the shock to the terms of trade observed since mid-2014. In principle, the slowdown of real domestic demand (growing 6.0% in 2014, 3.6% in 2015 and 1.3% in the first quarter of 2016) reveals the gradual adjustment of households, companies and government's spending. Also, the surge in export quantities, especially of those denominated as non-traditional and services, together with a fall in real imports, allowed for the foreign trade accounts to have a net positive contribution to the economic activity's growth (Table 1).

A detailed study of the behavior of the different items composing GDP showed mixed results in the dynamics of the lines that make part of aggregate consumption: while growth displayed by the private sector was higher than that of the fourth quarter of 2015, the public sector showed a slowdown. In the first case, the rising growth rates in all the subcomponents of private consumption were responsible for the increase in household consumption; in the second, the slower rhythm of expansion reflected the fiscal adjustment process adopted by the national government as a response to the fall of oil prices and its impact on income.

Table 1  
Real GDP Annual Growth by Type of Expenditure  
(percentage)

	2014	2015				2015	2016
	full year	Q1	Q2	Q3	Q4	full year	Q1
<b>Total consumption</b>	<b>4.3</b>	<b>4.4</b>	<b>3.7</b>	<b>4.3</b>	<b>3.3</b>	<b>3.9</b>	<b>3.2</b>
Household consumption	4.2	4.7	3.7	4.2	2.8	3.8	3.4
Non-durable goods	3.2	4.3	3.9	4.6	3.7	4.1	3.9
Semi-durable goods	3.1	5.9	2.8	6.8	3.2	4.6	3.9
Durable goods	13.5	10.5	2.4	(7.0)	(11.9)	(2.0)	(4.6)
Services	4.7	4.4	4.1	4.5	3.7	4.2	3.8
Government final consumption	4.7	2.2	2.3	3.1	3.8	2.8	1.6
<b>Gross capital formation</b>	<b>11.6</b>	<b>6.5</b>	<b>0.6</b>	<b>3.2</b>	<b>0.4</b>	<b>2.6</b>	<b>(3.7)</b>
Gross fixed capital formation	9.8	7.4	3.3	0.4	0.3	2.8	(4.8)
Agricultural, forestry, hunting and fishing	1.5	(5.9)	(2.8)	0.4	2.9	(1.5)	(0.2)
Machinery and equipment	7.1	0.7	(1.9)	(0.3)	(5.4)	(1.8)	(10.1)
Transport equipment	10.0	41.2	6.0	3.3	(5.2)	9.4	(32.9)
Construction and buildings	7.7	2.2	10.1	(8.2)	8.1	2.7	11.4
Civil works	14.0	3.4	6.4	7.0	4.2	5.2	0.4
Services	11.0	1.4	4.7	(3.8)	1.5	0.9	1.4
<b>Internal demand</b>	<b>6.0</b>	<b>4.7</b>	<b>3.1</b>	<b>4.1</b>	<b>2.5</b>	<b>3.6</b>	<b>1.3</b>
<b>Total exports</b>	<b>(1.3)</b>	<b>4.2</b>	<b>0.4</b>	<b>(4.8)</b>	<b>(2.1)</b>	<b>(0.7)</b>	<b>2.1</b>
<b>Total imports</b>	<b>7.8</b>	<b>11.7</b>	<b>0.3</b>	<b>8.0</b>	<b>(3.6)</b>	<b>3.9</b>	<b>(1.5)</b>
<b>GDP</b>	<b>4.4</b>	<b>2.7</b>	<b>3.1</b>	<b>3.1</b>	<b>3.4</b>	<b>3.1</b>	<b>2.5</b>

Source: DANE; estimates by Banco de la República.

With regard to gross capital formation, the fall observed was consistent with the higher levels for nominal exchange and interest rates. Within this field, decreases were recorded in the transport equipment, machinery, and equipment items, and to a lesser extent in agriculture-and-farming investment. A sizeable part of the decline in investment took place in the mining and energy sector. As usual, the falling investment in tradable goods had its counterpart in imports.

In contrast, investment in construction registered an expansion higher than the rest of the economy. This was the result of the dynamics of building construction, both residential and non-residential. As for civil works, a low growth rate was observed, largely due to a high comparison base in the same period of 2015.

On the supply side, the highest growth rates during the first three months of the year were seen, in their order, in the industrial sector (5.3%), construction (5.2%), and financial services (3.8%) (Table 2). The only branch showing a contraction was mining and quarrying (-4.6%).

Table 2  
Real GDP Annual Growth by Sectors of Economic Activity  
(percentage)

	2014	2015				2015	2016
	full year	Q1	Q2	Q3	Q4	full year	Q1
Agriculture, livestock farming, hunting, forestry and fishing	3.1	2.2	2.4	3.0	5.8	3.3	0.7
Mining and quarrying	(1.1)	0.4	4.2	(0.5)	(1.5)	0.6	(4.6)
Manufacturing industry	0.7	(2.0)	(0.1)	3.2	3.9	1.2	5.3
Utilities (gas, electricity and water)	3.4	2.5	1.6	3.8	3.8	2.9	2.9
Construction	10.5	3.1	8.1	0.2	4.6	3.9	5.2
Buildings	8.1	1.4	9.0	(7.9)	7.1	2.1	10.9
Civil works	13.4	4.7	6.5	7.1	3.2	5.4	0.4
Commerce, repairs, restaurants and hotels	5.1	4.6	3.5	4.7	3.8	4.1	2.7
Transportation, storage and communications	4.7	2.6	0.4	2.2	0.7	1.4	1.8
Financial institutions, insurance, real estate and business services	5.7	4.8	3.8	4.2	4.3	4.3	3.8
Social service, community and personal activities	5.2	2.4	2.5	3.4	3.5	2.9	1.7
<b>Sub-total aggregated value</b>	<b>4.3</b>	<b>2.5</b>	<b>2.9</b>	<b>3.0</b>	<b>3.4</b>	<b>3.0</b>	<b>2.5</b>
Taxes less subsidies	5.6	4.1	4.0	4.6	3.4	4.0	2.3
<b>GDP</b>	<b>4.4</b>	<b>2.7</b>	<b>3.1</b>	<b>3.1</b>	<b>3.4</b>	<b>3.1</b>	<b>2.5</b>

Source: DANE; estimates by Banco de la República.

When classifying sectors between non-tradable and tradable, annual variations were observed of 3.4% and 1.0%, respectively. If mining is excluded, tradable GDP's annual expansion was 2.4%. In all cases, a decline was noticed as compared with the fourth quarter of 2015, when 4.3%, 2.1% and 3.0% growth rates for the non-tradable, tradable, and tradable GDP excluding mining, respectively, were registered.

The good performance of the industrial sector (above the rest of the economy as a whole) was driven, largely, by the reported expansion of the oil-refining branch (20.6%). In spite of the fact that the Cartagena refining plant (Reficar) was not yet working at full capacity, this sub-branch made a positive contribution to the growth of manufacturing industries and GDP. Beverage production did as well record a two-digit growth rate (16.5%) that can be explained by an increasing domestic demand of this type of goods in the context of high temperatures due to the phenomenon of El Niño. Other sub-branches, such as the preparation of coffee products and threshing (8.1%), basic metal products (8.4%), and furniture production (7.6%) recorded significant expansions. It is worth noting that the sectorial heterogeneity remains high: in eight out of twenty-five subsectors, declines were observed, among which the production of machinery and equipment (-8.0%), other manufactured goods (-6.0%) and the processing of textile items (-2.6%) are to be mentioned.

*Industry, construction, and financial services were the branches with the largest growth rates in the first quarter. Mining was the only sector undergoing a contraction.*

Within the construction branch, the most outstanding performance was seen in building construction (10.9%) with significant contributions of both the residential (13.6%) and non-residential sub-branches (10.5%). On the other hand, the construction of civil works recorded an annual growth rate of only 0.4%. In spite of the slowdown in this sub-branch when compared with late-2015 figures, its levels remain high.

Other GDP sectors' dynamics echoed the shocks confronted by the Colombian economy in the course of the first three months of the year. In fact, the slowdown in the agricultural branch on account of a slower expansion pace in coffee products (7.9%), and because of the fall in the production of agricultural commodities (-2.9%) occurs in a context where the El Niño phenomenon has affected both harvest and supply of diverse agricultural-farming products.

Finally, the mining and quarrying sector's contraction was due to the decline reported for the mineral coal (-7.3%) and crude oil and gas (-5.9%) sub-branches. Both cases reflect the restructuring of the productive apparatus as a response to the sharp fall in the international prices of these products and the low global demand for this type of commodities.

## **2. Perspectives of the economic activity for the remainder of 2016**

Since the publication of the most recent version of the Report of the Board of Directors to the Congress of the Republic of Colombia in last March, some of the risks foreseen by *Banco de la República's* technical staff have materialized, especially those relating to the weaker economic performance of our major trade partners and the region. To the above, the terms of trade for 2016 that would be lower than those of 2015 should be added, as well as a nominal exchange rate that will, on average, remain depreciated further, more than it was in the previous year. Besides, the adverse effects of El Niño phenomenon on agricultural supply and the pass-through of the Colombian peso depreciation to internal prices due to the sharp accrued depreciation, among other reasons, have contributed to high consumer inflation levels, as it will be explained later. The foregoing, along with adjustments toward a less expansionary stance in monetary and fiscal policy and the gradual correction of the current account deficit, led the technical staff to foresee a real adjustment of the Colombian economy, with a growth rate between 1.5% and 3.0%, the most likely figure being 2.3%. It is worth noting that the performance of the Colombian economy during the first three months of the year was similar to what *Banco de la República's* technical staff had projected for said period.

*For 2016, GDP is expected to grow between 1.5% and 3.0%, with 2.3% as the most likely figure.*

As far as the external context is concerned, for the remainder of the year, an environment of uncertainty following the results of the Brexit, and lower global growth is foreseen. This in turn may imply, on the one hand, a more expansionary monetary policy in the developed economies and, on the other, an even

*The slowdown predicted for domestic demand would be consistent with the orderly adjustment of the economy after the terms-of-trade-shock.*

worse weakening of the external demand for Colombia than it had been expected at the beginning of the year.

Besides, the perspectives of lower prices for commodities exported by Colombia, compared to last year, remain, which will be reflected by a deteriorating terms of trade, but less than it was foreseen three months before. The latter is due to the fact that all forecasts of a most likely scenario implicitly contemplate an average fall of crude oil prices during the whole 2016, although of a lesser magnitude than projected three months before. For other products such as coal and ferronickel, a fall in their international prices has been envisaged with relation to a lower demand for these commodities.

For the remainder of the current year, the internal demand is expected to keep showing a slowdown consistent with the orderly adjustment the Colombian economy is going through after the important terms-of-trade shock, and its real effect upon the national income. This shock brought about a change in relative prices, because of which real adjustments in the import-intensive component of the internal demand are expected and, to some extent, an import substitution.

In particular, the technical staff projects a poor dynamism of the gross fixed capital formation, focused in capital goods for the industry and transportation equipment, items with a high participation of imported components.

In contrast, investment in both building construction and civil works would show positive expansions. The consolidation of the second version of the Plan to Promote Productivity and Employment (PIPE 2.0), introduced by the national government together with the subsidized interest rate for the purchase of new housing would continue to boost the residential component for the remainder of 2016. On its part, and just as it was expected in the previous quarter, investment in civil works would remain encouraged by the implementation of resources allocated to different strategic projects of road and airport infrastructure being carried out throughout the national territory, although at a slower pace than it was anticipated in the previous Report.

A slowdown in private consumption is also foreseen for the following quarters. In principle, the increase in consumer price levels would continue to affect the purchasing power of households in Colombia, even though inflation is expected to ease in the second half of the year. On the other hand, the labor market would continue to behave in accordance with a less dynamic economic activity. Consequently, the unemployment rate might continue to show new increases, thus putting additional pressures upon the disposable income of households in real terms. Finally, the recent rise of interest rates was oriented, in part, to discourage consumer demands for credit. If household portfolio's growth continues to slow down, this will likely be reflected in private consumption, particularly in durable and semi-durable goods.



*For the remainder of 2016, a consolidation of the expansion of industry greater than the one observed in 2015 and above the rest of the sectors that compose the GDP is forecast.*

Regarding public consumption, the prospects about the weak performance of this GDP item for the remainder of 2016 have been reinforced. Indeed, in the most recent version of the Medium-Term Fiscal Framework published by the Ministry of Finance and Public Credit, the national government's deficit path was reviewed and revised *vis-à-vis* what was previously exposed.

The broadening of the deficit was due to a permanent reduction of the long-term level of oil prices and its effect upon future tax revenues. Additionally, worth remembering are the recent announcements by the national government regarding spending cuts in different investment and operating items.

On the supply side, the accrued depreciation of the Colombian peso is expected to continue encouraging the production of several tradable sectors, mostly manufacturing. As far as this sector is concerned, for the remainder of 2016 a consolidation of industry larger than that observed in 2015 and above the other sectors that compose GDP is foreseen. The gradual reopening process of Reficar should continue to reflect on the growth of the petroleum products' growth. As for the rest of industrial sectors, a good expansion similar to that recorded during the first quarter of the year is foreseen. This performance would be based on the effect of accrued depreciation on the competitiveness of domestic products, and will depend largely on the consolidation of the import substitution process. For all of the above, the estimates by the technical staff of *Banco de la República* point to industry expanding at a faster pace than the remaining sectors.

For the agricultural and farming sector, a mediocre performance is envisaged. In principle, coffee production would be at levels below that observed in 2015, just as the previous version of this Report had anticipated. This is due to the effect of a high comparison base for the year and the adverse consequences that El Niño phenomenon would have brought about on the volume of production of the coffee population, even despite the productivity gains resulting from the renovation of coffee plants and investments made in prior years. In this context, a coffee production largely above that recorded on average for the most recent decade but somewhat below the 14.2 million coffee bags in 2015, is expected. For other agricultural products and for the group of live animals and animal products, the slowdown exhibited by these sub-branches in the first quarter of the year would consolidate. This is also attributable to the delayed impact of the El Niño phenomenon upon the agricultural supply and the livestock surfeit cycle on the slaughter of cattle.

Finally, the remaining quarters of 2016 would witness the drops in the mining sector, in line with what had been observed during the first three months of the year. In spite of the recent recovery of international oil prices, the perspective of a reduction in crude oil production down to levels close to 920,000 barrels per day, on average, is maintained. In fact, accumulated production as of June has dropped by an annual 9.5% that, added to the announcements of a cut in investments on extraction and exploration by some companies in the sector, helps perceive a bad performance of the sub-branch for the remainder of 2016. In the case of coal production, falling



international prices and declining global demand for this product would lead to the continuation of this sub-branch's drops throughout the second half of the year.

Taking all the foregoing into account, the performance forecast for economic activity in 2016 made by the technical staff of *Banco de la República* suggests that GDP growth would stand between 1.5% and 3.0%, with 2.3% as the most likely figure in the core scenario.

Graph 11  
Unemployment Rate  
(Rolling quarter, seasonally adjusted)



Source: DANE (GIHS); estimates by Banco de la República.

## B. THE LABOR MARKET

In general, despite the economic downturn, on the date of writing this Report<sup>1</sup> no important deterioration in the labor market indicators has been observed. Albeit the fact that the unemployment rate (UR) ceased falling and did even show some increases, it still remains near the levels observed in the last two years (Graph 11). Employment continued to grow although at low rates (close to 1.0%), propelled by rises for salaried and formal employees<sup>2</sup>, and this suggests that the advances in terms of quality of employment have been preserved. Nevertheless, the employment rate fell.

Labor market series show seasonality, that is, their values are systematically higher or lower depending on the time of the year. Hence, this phenomenon must be corrected by means of statistical techniques in order to be able to make comparisons between months of a same given year. For this reason, the series presented in this section are seasonally adjusted.

### 1. Unemployment

According to DANE's Great Integrated Household Survey (GEIH), so far in 2016 slight annual increases in the UR have been seen. The moving quarter seasonally adjusted series<sup>3</sup> show a mild upward trend of the national UR during the last year. As for the thirteen-area's UR, although it had increased at the start of 2016, by March it was already showing a significant decline taking it back to the average levels of 2015 (Graph 11)

<sup>1</sup> The more recent information available corresponds to May 2016.

<sup>2</sup> Any worker or laborer of private and public companies is considered a wage earner. A formal worker is understood as one being employed by a business with over five employees (definition by DANE and the International Work Organization). When the text refers to formal wage earners/salaried workers, it is referring to those who meet both conditions.

<sup>3</sup> The rolling quarter series have minor errors in comparison with monthly series; for this reason, they happen to be less uncertain.

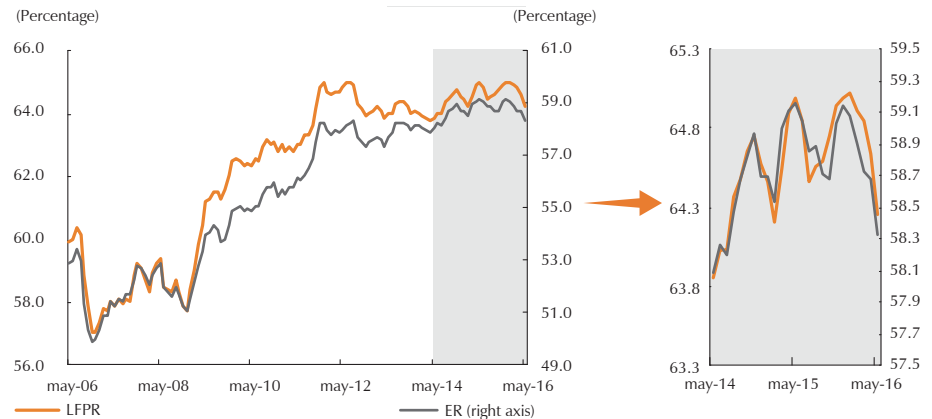
Despite the economic downturn, no significant worsening of the labor market indicators has been observed.

## 2. Labor supply and demand

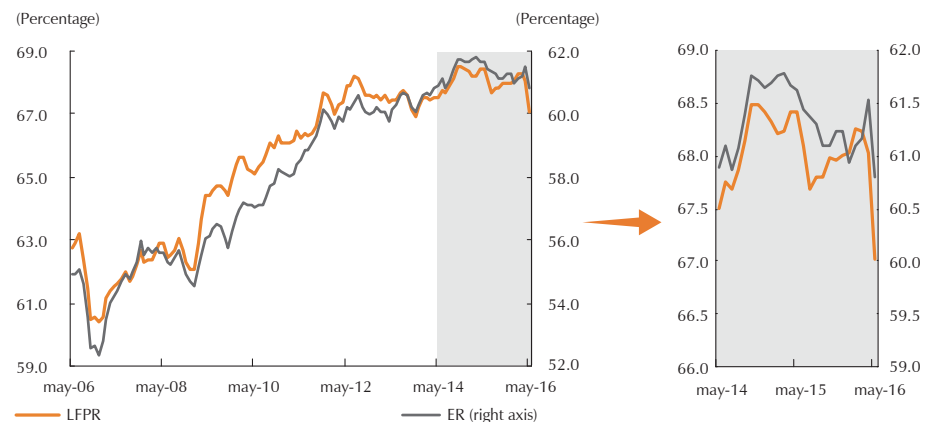
Variations in the UR are explained by the dynamics of labor demand, represented by the employment rate (ER), and the corresponding supply, expressed by the labor force participation rate (or GPR). In 2016 so far for the national total, unemployment has shown an upward trend for the last twelve months, due to an ER declining faster than the overall labor market participation rate/global participation rate (GPR). For this reason, the gap between these two variables was closed during 2015 and in 2016 so far (as illustrated by the orange and grey lines in Graph 12, panel A). A similar phenomenon was being observed in the thirteen areas up until March, after which the GPR fell much more than the ER (Graph 12, panel B). This resulted in a rising UR up to March, which then went back to levels similar to those in early 2015. Thus, the factor explaining the diverging trends of the national and thirteen areas UR was the GPR.

Graph 12  
Labor Force Participation Rate (LFPR) and Employment Rate (ER)  
(Seasonally-adjusted series)

### A. National Total



### B. Thirteen Areas



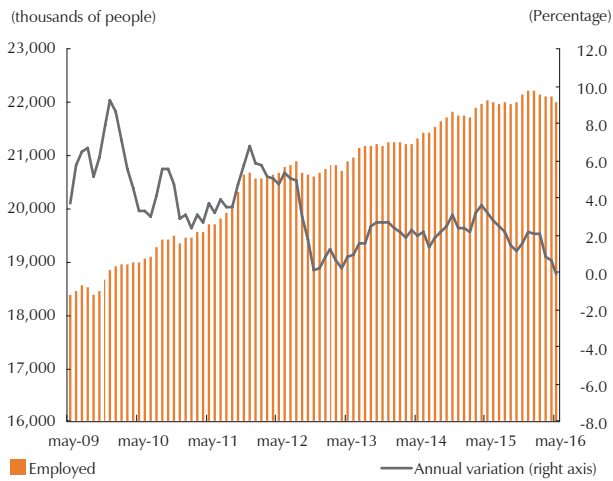
Source: DANE (GIHS); estimates by Banco de la República.

For both the national total and the thirteen areas, employment continued to slow down and the ER kept declining. The January-May period saw an average 1.1% growth in the number of employed for the national total (Graph 13, panel A), 1% for urban centers (Graph 13, panel B), +1.4% for rural areas (Graph 13, panel C) and 0.5% for the thirteen areas (Graph 13, panel D).

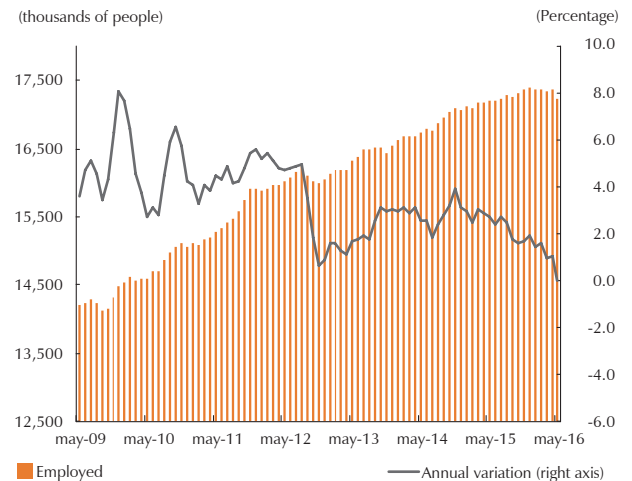
According to the GEIH, the branches of activity contributing the most to the average growth of national employment during the first months of 2016 were commerce, hotels and restaurants, real estate, business, and rental activities, and communal, social, and personal services.

Graph 13  
Number of Employed  
(Seasonally-adjusted series)

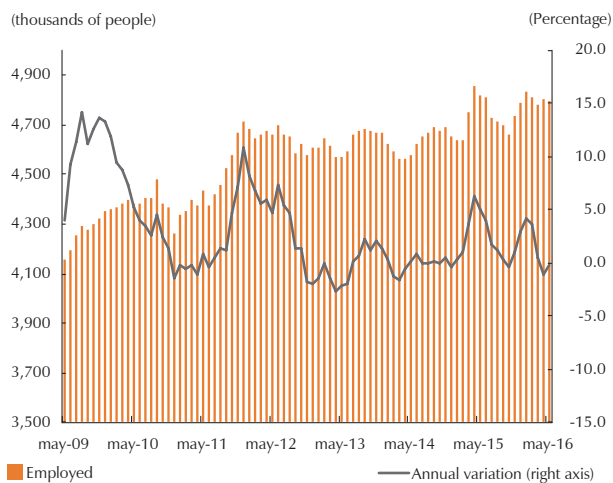
A. National Total



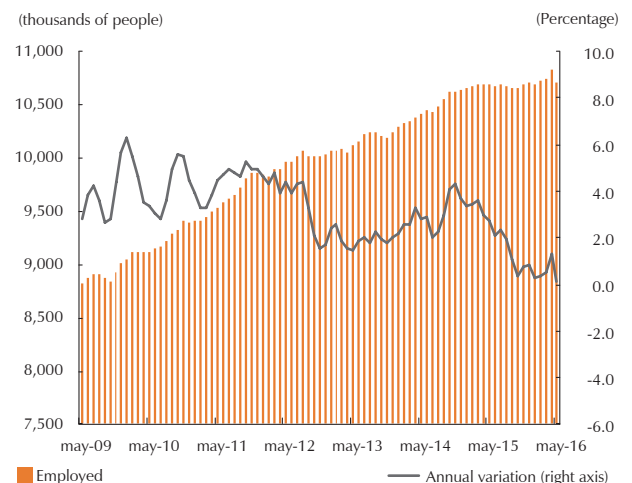
B. Urban Centers



C. Rural Areas

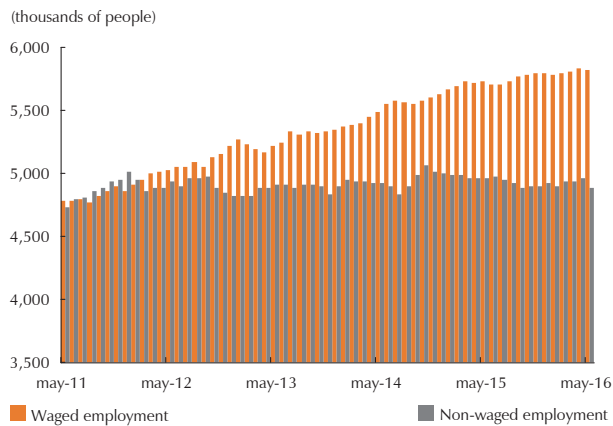


D. Thirteen Main Metropolitan Areas



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

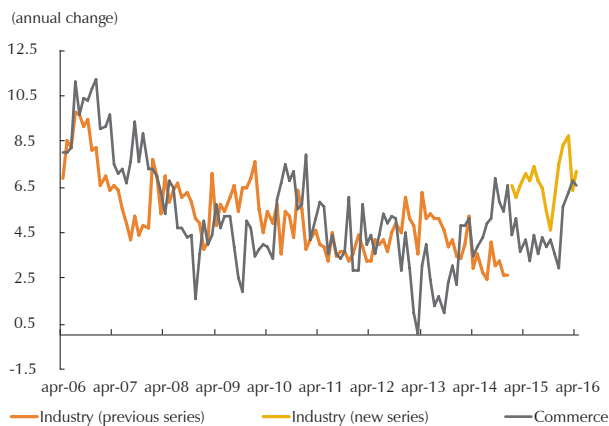
Graph 14  
Employment by Occupation Type  
(Thirteen areas, rolling quarter, seasonally adjusted)



Source: DANE (GEIH); estimates by Banco de la República

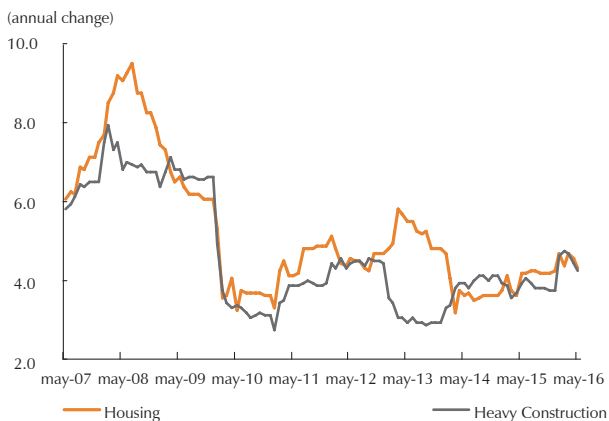
Graph 15  
Nominal Salary Index:

A. Industry and commerce



Source: DANE (MMCM y MMM); estimates by Banco de la República

B. Heavy construction and housing



Source: DANE (Housing Construction Cost Index -ICCV- and Heavy Construction Cost Index -ICCP-); estimates by Banco de la República

### 3. Quality of employment and labor market conditions

The information of the GEIH suggests that, despite the slowdown in employment, its growth continues to be driven by better quality jobs. Advances made in formality and wage employment indicate that the improvements in quality of employment have continued, but at a slower rhythm than in the previous two years. This is because these indicators are associated with greater job stability, higher remuneration, and better access to credit, Factors than in turn increase household confidence and consumption levels.

So far this year most of the employment created has been waged (Graph 14) while non-wage employment has been contributing with fewer jobs. In this period for the thirteen areas, the number of wage earners rose an annual 1.8% in average while that of non-wage earners fell an annual 0.9%. As for the formal percentage of the labor force stood at 52.5% in the moving quarter ending in April, a 0.8 pp increase over the same month of the previous year.

### 4. Labor and salary costs

Information available suggests that salary adjustments observed so far this year have been larger with respect to what was observed in 2015, likely as a response to higher inflation and due to the increase of the minimum wage for 2016. Between January and April, nominal salaries in commerce exhibited an average annual 6.3% rise, while for industry it was an average 7.6% (Graph 15, panel A). As for heavy construction and housing, between January and May nominal salaries in both sectors registered an average annual expansion of 4.5% (Graph 15, panel B).

As forecast in the previous Report to Congress, so far in 2016 conditions of the Colombian labor market have somehow worsened. Nevertheless, the upward trend of the UR is still incipient; this is not meant to suggest that downward pressures upon salaries and inflation can be observed through them.

Major shocks affecting inflation have been stronger and longer than expected.

Nevertheless, a factor that may contribute to a greater persistence of inflation would be the indexing of wages to past inflation.

To date, adjustments in wages although above the ceiling of the target range, have stood below the recent inflation data. Should wages/salaries continue to increase at these rates, they might contribute to the stronger persistence of the inflationary shock. It is worth highlighting that, to the extent this shock dissipates, adjustments in wages will return to levels compatible with the inflation target.

## C. INFLATION

### 1. Inflation during the first semester of 2016

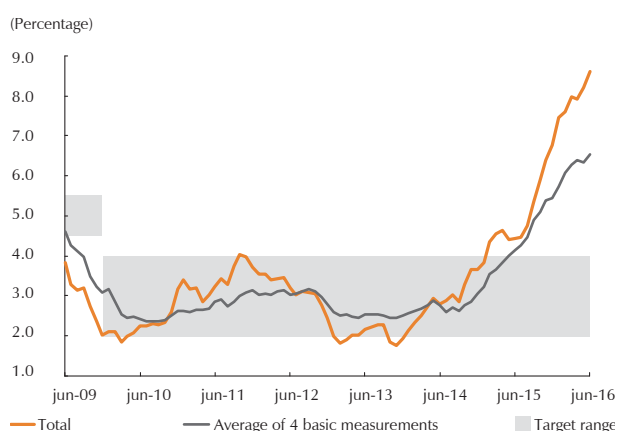
During the first semester of 2016, consumer prices continued to be affected by upward pressures arising from the accrued depreciation of the Colombian peso that has permeated a wide set of prices beyond those of tradable goods as well as from the impacts of the El Niño phenomenon on energy and agricultural-farming supply, and other temporary supply shocks having emerged in the past few months. As expected, these direct increases were reinforced by the activation of indexing mechanisms in diverse items of the consumer basket and, eventually, by upward pressures deriving from the rise of the minimum wage and other salaries wages at rates significantly higher than the 3.0% target. Both climate and depreciation shocks have been stronger and longer than anticipated by *Banco de la República's* technical staff and market analysts, and inflation observed has exceeded the forecasts made at the start of the year.

In this manner, annual consumer inflation stood at 8.60% in June, a 183 bp rise compared to the figure recorded for December (6.77%) (Graph 16). In the same way, core inflation for which changes in prices associated with supply shocks are deducted, such as those resulting from the El Niño phenomenon, did also increase

considerably albeit at levels below headline inflation. As for the average of the four indicators monitored by Banco de la República, it stood at 6.52% in June as compared with 5.43% in December 2015. All four indicators showed marked increases during the first quarter of the year; and, during the second quarter, their adjustments were more moderate (Table 3). The range within which the various indicators stood in June goes from 6.20% (CPI excluding food and regulated items) to 6.82% (core CPI 20).

About 57% of the annual consumer inflation acceleration focused on food prices, both perishables and processed. The former were the most affected by the

Graph 16  
Total Consumer and Core Inflation



Source: DANE and Banco de la República.

Table 3  
Consumer-Inflation Indicators  
(percentage)

Description	Weighting	Dec-15	Mar-16	Apr-16	May-16	Jun-16
<b>Total</b>	<b>100</b>	<b>6.77</b>	<b>7.98</b>	<b>7.93</b>	<b>8.20</b>	<b>8.60</b>
<b>Excluding food</b>	<b>71.79</b>	<b>5.17</b>	<b>6.20</b>	<b>6.02</b>	<b>6.07</b>	<b>6.31</b>
Tradables	26	7.09	7.38	7.57	7.88	7.90
Non-tradables	30.52	4.21	4.83	5.00	4.78	4.97
Regulated	15.26	4.28	7.24	5.78	6.00	6.71
<b>Food</b>	<b>28.21</b>	<b>10.85</b>	<b>12.35</b>	<b>12.63</b>	<b>13.46</b>	<b>14.28</b>
Perishable	3.88	26.03	27.09	28.62	33.44	34.94
Processed	16.26	9.62	10.83	10.89	11.04	12.09
Food outside the home	8.07	5.95	7.53	7.53	7.92	8.11
<b>Core-inflation indicators</b>						
Excluding food		5.17	6.20	6.02	6.07	6.31
“Core 20”		5.22	6.48	6.69	6.55	6.82
CPI excluding perishable foods, fuels and utilities		5.93	6.57	6.72	6.61	6.77
Inflation excluding food and regulated		5.42	5.91	6.08	6.08	6.20
<b>Average of all core inflation indicators</b>		<b>5.43</b>	<b>6.29</b>	<b>6.38</b>	<b>6.33</b>	<b>6.52</b>

Source: DANE; estimates by Banco de la República.

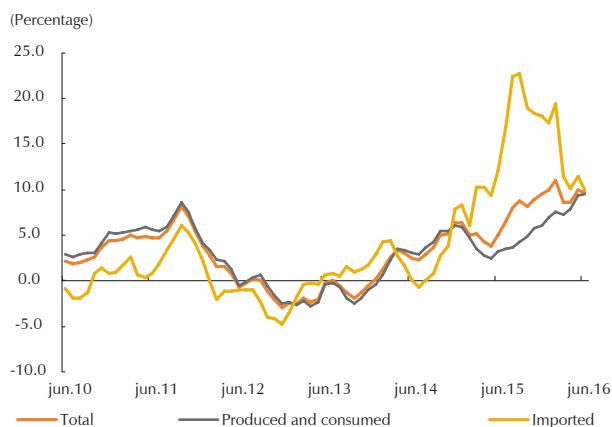
adverse weather conditions, and recently by other supply shocks like those linked to the truck drivers’ strike.

In the case of processed foods, an important source of upward pressures has been the accrued depreciation of the Colombian peso. The second component of the CPI having most strongly propelled inflation is that of regulated services, since it has also been affected by the El Niño event, as well as by supply restrictions and the Colombian peso depreciation.

At the same, price hikes continued to be generalized, also affecting tradable goods and services CPI and a broad group of non-tradable goods and services caused as well by the accrued depreciation of the Colombian peso, just as it had been occurring since the previous year. Likewise, from the beginning of the year and well into the first semester, increasing price readjustments for an important group of non-tradable services were observed, that may be attributed to the activation of indexing mechanisms, given the relatively high level last year’s inflation ended.

Likewise, it is likely that the increase in these and other prices is related to the rising labor and non-labor costs. As for the former, as is well-known, the minimum wage earned by a larger segment of wage earners in the country was adjusted by 7.0%. Other salaries, such as those in industry and commerce, seem to follow this dynamics and exhibit increases between 6.6% and 7.0%, according to the information available. The exception would be construction wages, which, having maintained relatively low adjustments (between 3.8% and 5.4%) are

Graph 17  
PPI by Provenience  
(annual change)



Source: DANE.

more in line with the 3.0% target set by the BDBR. With regard to non-labor costs, the producer's price index has been adjusted at high annual rates during the whole semester, in June at an annual 9.64%. This means that production costs of goods in the consumer basket are increasing at rates above the target set by the BDBR (Graph 17).

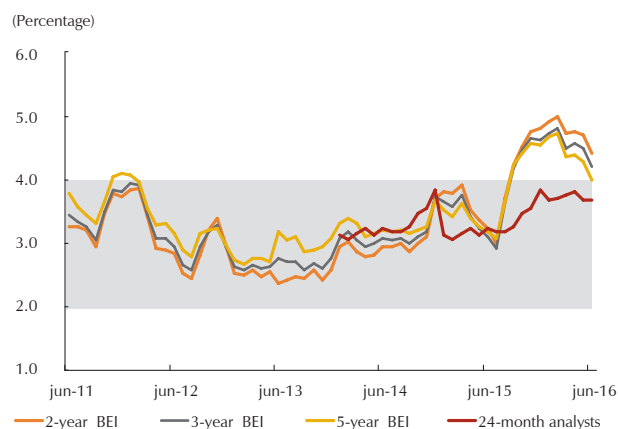
The slowdown of the domestic demand since late 2013, having growth by 1.3% in March 2016, indicate that no inflationary pressures are exerted by this variable. Output gap estimates show that it would have been in negative territory throughout the semester, or, in other words, that some excesses in productive capacity might have taken place.

This, after taking into account that the potential, non-inflationary growth of the economy, together with that of national income, might have declined as a result of the strong shock undergone by the terms of trade since mid-2014.

Given the delay with which monetary policy operates, the main effect to date of the adjustment to *Banco de la República's* intervention rates has been upon medium and long-term inflation expectations, that have ceased to increase for several months now, standing slightly above 4.0% and even showing some decline in recent weeks, despite the rising inflation. In arriving at this conclusion, the analysis of measurements obtained with the Colombian treasury bonds has been taken into account. In this case, two, three and five-year expectations stood in June at 4.47%, 4.26% y 4.07%, respectively. Likewise, the two-year expectations in the monthly survey to analysts, made by *Banco de la República*, stood at 3.68% (Graph 18).

On its part, the quarterly survey gathered in early July shows a 5.40% figure for two-years.

Graph 18  
Inflation expectations (two years and more)



Note: the BEI (break-even inflation) is derived from TES using the Nelson and Siegel method, and corresponds to the monthly average of daily data. The analysts' 24-month expectations correspond to forecasts made by banks and stockbrokers in *Banco de la República's* monthly expectations survey.  
Source: *Banco de la República*.

When analyzing the main sub-groups, slightly less than half of the increase in the annual variation of the food CPI was concentrated in perishable products, which accumulated a year and a half of almost continuous increases, reaching historically high levels around June. These surges are associated especially to the strong *El Niño* phenomenon hitting the country since the second half of the previous year up to the beginning of the second quarter of 2016. This restricted the supply of primary foods, causing a reduction in agricultural productivity and the postponement of production and planting decisions.

Prices most affected by the *El Niño* have been those of tubers, several vegetables, legumes and fruits,



About 57% of the increase of annual inflation in the first semester was concentrated on food.

which, although having a low weight in the consumer basket (3.9%) register sizeable annual increases (some of them even exceeded 65.0%, as in the case of potatoes), whereby their impact upon inflation has been acute. On dairy products, minor but still significant effects have been registered. In general, increases associated to climate events have been stronger and longer than anticipated by the technical staff of *Banco de la República*. Partly and for this reason, forecasts for this component of the CPI increased for the remainder of the year, as it will be explained later.

Besides the *El Niño* phenomenon, food prices have been affected by other events. In the first place, the depreciation of the Colombian peso that by June had led to increases between 8.0% and 20.0% for foods of imported origin, such as cereals and oils, in spite of international prices having shown great stability since the beginning of 2015 up to what have been observed in 2016. Secondly, during the second semester, beef prices have seen substantial rises, which were not fully considered by the projections. This would be explained by the retention phase that cattle farming in Colombia would be entering into, when slaughtering is reduced in order to restock the herd, thus curbing supply growth. In the third place, the rise of the minimum wage, together with the increases in food and utilities prices have put upward pressures on the segment relating to meals taken outside the home, which shifted from accounting for an annual variation of 5.95% in December to 8.11% in June. This line accounts for 8.1% in the CPI basket.

The rise of consumer inflation in the first semester was equally a product of the increase seen in the other three sub-baskets *Banco de la República* breaks down the CPI in for analysis: regulated, tradable excluding food and regulated, and non-tradable excluding food and regulated.

Regarding regulated items, the *El Niño* phenomenon, as expected, and the temporary shutdown of the Guatapé hydroelectric plant, drove natural gas and electricity rates up.

Added to this are the pressures exerted upon these two items by the accrued depreciation of the Colombian peso. In the case of energy, the saving policy promoted by the national government by means of giving incentives, allowed for sporadic price reductions in Bogotá and other cities.

The accrued depreciation of the Colombian peso has permeated a broad group of prices, beyond tradable goods.

In the case of tradable and non-tradable goods, depreciation has continued to be an important source of upward pressures. Tradable items such as vehicles, home appliances, electronic and communication devices, medicines, among others, have been the most affected. It is worth noting that the response of consumer prices to the exchange rate has not been much different from what was expected, showing a higher degree of pass-through compared to the 2006 and 2008-2009 depreciation cases, but relatively low when compared to what is observed in other countries. In any case, the magnitude of the accrued de-



Some indexing mechanisms in several CPI items reinforced the upward effects of other shocks on inflation.

preciation since mid-2014 (61.0% for the bilateral exchange rate and 43.3% for the multilateral) has implied an important rise in prices of tradable goods, contributing to the increase in annual inflation so far this year.

Lastly, consumer prices in Colombia, especially of non-tradable services, would have been affected by second-round effects derived from supply shocks, depreciation, and the rise of wages above inflation. This has been seen more clearly in services such as education and health, adjusting at an annual rate of over 6.0% in June, whereas in December were adjusting at around 5.0%. Inasmuch these items are indexed to past inflation or the minimum wage, the rises concentrated at the start of the year. On the other hand, rent, the item having the most weight in the basket (18.6%) and having explicit indexing mechanisms, slightly moderated the rhythm of adjustment in the first quarter, even though this trend partially reverted in the second quarter.

## 2. Perspectives for the remainder of 2016

In the last few months, diverse supply shocks have taken place (truckers' strike, cattle farming retention cycle, a possible La Niña phenomenon) in addition to other shocks affecting consumer prices for several quarters and that generate risks of upward pressures upon inflation for this year's second half. However, the direct effects of the shocks affecting consumer inflation in Colombia should start to wane during the second half of 2016. Given that the El Niño phenomenon ended in the second quarter and precipitation levels have increased, the agricultural supply shall tend to normalize. This is a process taking several months while the planting area recovers and the short-cycle crops are harvested, which should take place, as usual, from the end of the third quarter onwards.

Therefore, it is expected that prices of several non-processed foods, like potatoes, vegetables, and some fruits together with other semi-processed products like dairy, will start decreasing or stop increasing between June and September of this year. Besides, the decline should become more marked by the fourth quarter, thus reducing a substantial part of the upward pressures facing consumer inflation so far.

In recent months, the probability of a *La Niña* phenomenon has increased significantly (it is the counterpart of *El Niño*, with precipitations above normal). Should this phenomenon take place, its effects would start to be felt in the country during the fourth quarter of the year and its impact would extend well into the second half of the next year. Although in the past this phenomenon has had a low impact on consumer inflation, there is always the risk that changes in weather patterns play an adverse role in the country's agricultural production, altering prices, particularly when it occurs with a strong intensity.

Given that the rainfall level has increased, agricultural supply should tend to normalize.

*The effects of the depreciation of the Colombian peso on prices should also decrease thanks to the stability of the exchange rate in the past few months.*

The depreciation of the Colombian peso, the other phenomenon having the most direct impact upon inflation, should also decreased its influence over Price formation during the second semester of 2016, as long as the exchange rate maintains a relative stability, as it has since March of this year. Nevertheless, it cannot be ruled out that in the following months, phenomena such as Brexit increase volatility in the exchange market.

On the other hand, accrued depreciation is still important (between mid-2014 and June it has been 60.0%) and, given the delay it transmits to consumer prices, additional increases in the annual variation of several sub-baskets of the CPI affected by this phenomenon are to be expected in the following months (especially of tradable goods).

Even though direct shocks on prices are expected to lose their importance in the remainder of the year, consumer inflation in Colombia could continue receiving second-round effects of these phenomena beyond 2016. The above because labor costs in many cases are increasing at rates close to 7.0%, an important group of prices is still being set taking past inflation into account, and because inflation expectations over several horizons stand above the Bank's target, despite that, as already mentioned, in many cases have stopped to increase and even presented some reductions.

The increase in the intervention rates since September of last year should continue to moderate these second-round effects during the second half of the year, although its most important effect should be felt in 2017. It is worth noting that changes in the monetary policy stance have a delayed impact on consumer inflation. An increase in the policy rate is expected to aid in completing the inflation expectations' convergence to their target.

Likewise, all of that should help in moderating the growth of the demand, in accordance with the shock affecting the national income as a consequence of the permanent fall in the terms of trade. Both phenomena should decrease the importance of the role played by indexing mechanisms at the beginning of next year, by dissuading prices and wage formation agents from using past inflation as a basis.

In this manner, all forecasts made by the technical staff of *Banco de la República* indicate that annual consumer inflation would reach its maximum between June and September of this year and then would start to decline, gradually at first, markedly at the end of 2016 and particularly at the start of 2017. During the initial phase, the decline should be focused in food prices, especially of perishables. After that, when most of the impact made by the monetary policy is registered, annual inflation will decrease on account of lesser adjustments in the price of tradable and non-tradable goods (excluding food). Inflation of regulated items may cause some shocks to the non-food CPI but without set-

*According to the Bank's projections, inflation would stand below 4.0% towards the end of 2017.*

ting a trend, with the adjustment in gas and energy fees that would lower from their currently high levels.

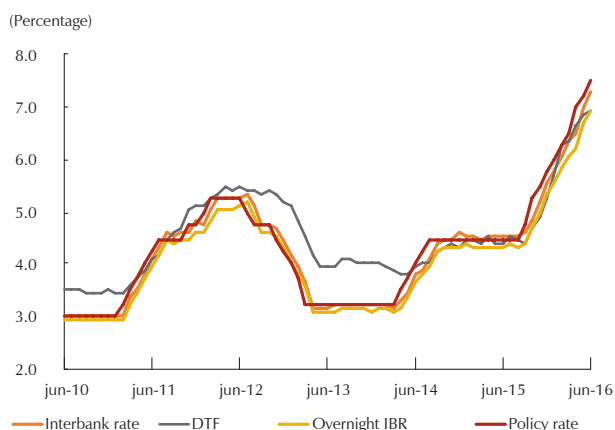
However, it should be noted that the current forecast path is higher, especially for the second half of 2016, when compared to the one contemplated in the Report of the beginning of the year, due to the already mentioned stronger-than-expected shocks upon inflation.

Headline inflation would end between 6.0% y 7.0%, below the current level, and at the end of 2017 would stand below 4.0%. Core inflation would fall more slowly, not so much this year but in 2017, and especially in 2018, when it is expected to converge to 3.0%.

As always, these forecasts are subject to upward and downward risks. Examples of the former include increases in international food prices or agricultural raw materials imported into the country, something that has been seen in recent weeks. Likewise, the cattle retention cycle may imply marked additional increases in the price of beef, as a product of its high weighting in the consumer basket, and indirectly in substitute products. This circumstance is not fully contemplated in the forecasts. Also, due to the increasing global uncertainty caused by the diverse and recent developments, to date a resumption of the depreciation cannot be ruled out; this could generate price increases in addition to those foreseen. Regarding downward risks, perhaps the most important one would be a weaker than expected economic performance, given the problems faced by the global economy.

## D. INTEREST RATES AND FINANCIAL SECTOR

Graph 19  
Banco de la República's Intervention Rate, Overnight Interbank Reference Rate (IBR), Interbank Rate and DTF<sup>a/</sup>



a/ The policy rate corresponds to the one established by Banco de la República's Board Of Directors in its monthly meeting; the remaining rates correspond to the monthly average weighted by amount  
Source: Banco de la República; estimates made with information by the Superintendencia Financiera de Colombia

### 1. Interest rates behavior so far in 2016

#### a. Banking interest rates

As already mentioned, in September 2015 the BDBR initiated a period of increasing the benchmark interest rate from a 4.50% level up to 7.50% at the end of June 2016 and 7.75% in its July meeting. Of the total, 175 base points (bp) were increased in the first semester of this year: 50 bp in the April meeting and then five increases of 25 bp each. The market overnight interest rates (interbank reference rate: IBR and overnight interbank rate: TIB), which are the first link in the transmission mechanism of monetary policy to the other rates in the economy, have increased in the same magnitude as the benchmark rate (Graph 19).

Between September 2015 and July 2016, the Bank increased the reference rate from 4.5% to 7.75%.

The transmission of increases in the benchmark interest rate to deposit rates (passive rates) and to credit rates (active, of lending rates) has also been observed. For the former, rises have been similar to those in the policy rate, with the longer terms showing the highest increases. Among the active rates, those of loans to businesses have reacted more strongly than those of loans to households<sup>4</sup> (Table 4).

Increases in the reference interest rate took place in a moment when credit institutions needed long-term, stable deposits in order to finance their loan portfolios. Indeed, the withdrawal of deposits in the financial system's public sector being moved to the single national account (CUN)<sup>5</sup>, in the second semester of 2015, generated in financial institutions the need to replace these liabilities. At the same time, these institutions had low levels of investments available to be liquidated and used as source of financing. On the deposit supply side, external financing costs were high and, besides, given the rising inflation expectations and the perspectives on the depreciation of the Colombian peso, domestic savers were motivated to ask for greater yields. All of these supply and demand facts contributed to a full transmission of increases in the policy rate to deposit rates.

As for lending rates, the rising costs of loans in foreign currency on account of the depreciation of the Colombian peso and higher country risk premiums, compared to what had been observed in previous years, as well as the volatility in the exchange rate, among other things, have encouraged the demand by businesses of credit in Colombian pesos, pushing interest rates in this modality upwards.

Real interest rates have increased in 2016 to date. The traditional methodology for calculating real interest rates is to subtract the expected inflation<sup>6</sup> (ex ante rates). In this case, real interest rates for both households and businesses grew by more than 140 bp, and the latter stand at above their historical average (calculated from September 2003 onwards). Another method consists on subtracting some measure of the observed inflation (ex post rates). If consumer inflation is used, business loan rates have increased so far this year, while those on household loans have decreased by 50 bp (Graph 20).

There has been a full transmission to the deposits and loans interest rates.

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4 Between September 2015 and June 2016, rates for ordinary loans grew by 317 bp, those for preferential loans by 390 bp and 354 bp for treasury loans, while rates for consumer loans grew by 226 bp, mortgage loans by 167 bp and credit cards by 222 bp. So far this year up to June, rates for ordinary loans grew by 237 bp, those for preferential loans by 232 bp and 239 bp for treasury loans, while rates for consumer loans grew by 149 bp, mortgage loans by 123 bp and credit cards by 146 bp.

5 In said account, liquidity surpluses of public institutions at the national level, previously held in different investment and saving vehicles in the credit establishments, went to being deposited at the *Banco de la República* and administered by the Finance Ministry's Public Credit and National Treasury Office (DGCPTN). For further details, see Box 3 of the Financial Stability Report, September 2015 issue.

6 A monthly average of five measures of inflation expectations for different horizons is used: monthly survey to analysts and quarterly one-year survey, two and three years' break-even-inflation (BEI), and two and three-year forward BEI.

Table 4  
Main Nominal Rates in the Financial System  
(porcentaje)

Date	Policy rate <sup>a/</sup>	Deposit rates <sup>b/</sup>		Borrowing rates <sup>b/</sup>						
		DTF	CDT	Consumer	Household Mortgage <sup>c/</sup>	Credit card <sup>d/</sup>	Ordinary	Commercial preferential	treasury	Total borrowing <sup>e/</sup>
Dec-13	3.25	4.06	4.40	17.63	10.77	28.90	10.24	7.03	6.88	9.96
Jan-14	3.25	4.03	4.46	18.22	10.90	28.45	10.75	7.01	7.07	11.06
Feb-14	3.25	3.97	4.39	17.68	10.94	28.08	10.26	7.02	6.97	10.64
Mar-14	3.25	3.89	4.35	17.45	10.97	27.89	10.49	7.00	7.11	10.58
Apr-14	3.50	3.81	4.18	17.19	11.10	27.82	10.50	6.88	6.83	10.57
May-14	3.75	3.79	4.30	17.23	11.14	28.24	10.48	6.96	6.95	10.61
Jun-14	4.00	3.94	4.34	17.41	11.24	27.98	10.46	7.00	6.93	10.41
Jul-14	4.25	4.06	4.48	17.23	11.31	27.91	10.82	7.41	7.28	11.39
Aug-14	4.50	4.04	4.60	17.10	11.30	27.39	10.74	7.34	7.73	11.15
Sept-14	4.50	4.26	4.65	17.28	11.08	27.34	10.93	7.38	7.59	11.34
Oct-14	4.50	4.33	4.69	17.06	11.21	27.01	10.99	7.57	7.50	11.14
Nov-14	4.50	4.36	4.69	17.08	11.05	27.15	10.91	7.58	7.44	10.97
Dec-14	4.50	4.34	4.59	16.70	11.09	27.71	10.60	7.77	7.37	10.55
Jan-15	4.50	4.47	4.85	17.75	11.03	27.49	11.19	7.81	7.43	11.71
Feb-15	4.50	4.45	4.88	17.36	11.09	27.18	10.76	7.43	7.94	11.13
Mar-15	4.50	4.41	4.75	17.40	11.09	26.87	11.18	7.73	8.33	11.33
Apr-15	4.50	4.51	4.90	17.24	11.05	26.98	11.07	7.81	8.17	10.95
May-15	4.50	4.42	4.93	17.16	11.16	27.73	11.07	7.70	8.40	11.51
Jun-15	4.50	4.40	4.75	17.17	11.09	27.75	11.08	7.55	8.17	10.98
Jul-15	4.50	4.52	4.83	16.85	10.93	27.56	11.08	8.04	8.41	11.64
Aug-15	4.50	4.47	5.38	16.84	10.90	27.13	10.82	7.76	8.50	10.84
Sept-15	4.75	4.41	5.14	16.88	10.82	27.22	11.14	7.82	8.57	11.23
Oct-15	5.25	4.72	5.66	17.27	10.99	27.71	11.07	8.06	8.84	11.61
Nov-15	5.50	4.92	5.85	17.60	11.16	27.94	11.52	8.72	9.14	12.15
Dec-15	5.75	5.24	6.05	17.64	11.26	27.98	11.94	9.40	9.71	12.33
Jan-16	6.00	5.74	6.46	18.63	11.62	28.34	12.65	9.55	10.27	12.93
Feb-16	6.25	6.25	7.07	18.45	11.87	28.14	12.61	10.70	10.63	13.33
Mar-16	6.50	6.35	7.46	18.49	11.99	28.28	13.55	10.67	11.43	13.91
Apr-16	7.00	6.65	7.64	18.73	12.19	29.24	14.25	11.43	11.80	14.77
May-16	7.25	6.83	7.76	19.01	12.43	29.46	14.29	11.44	12.11	14.82
Jun-16	7.50	6.91	7.86	19.14	12.49	29.44	14.31	11.71	12.10	14.77

a/ The date of the Board of Directors' meetings is used

b/ Monthly average

c/ Corresponds to a weighted average of loan rates in pesos and UVR (real value units) for home purchases (social housing not included). The UVR's annual change is added to the UVR loan rate before performing the weighting average.

d/ It does not include either one-payment purchases or cash advances.

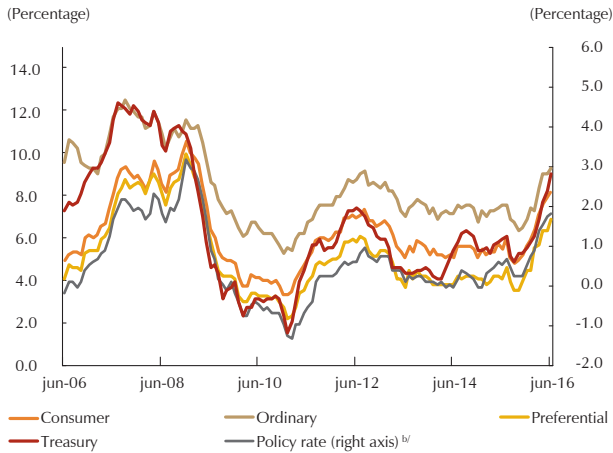
e/ Corresponds to the weighted average of preferential, ordinary and treasury credits. For treasury loans, a weighting of one fifth of their weekly disbursements was established.

Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

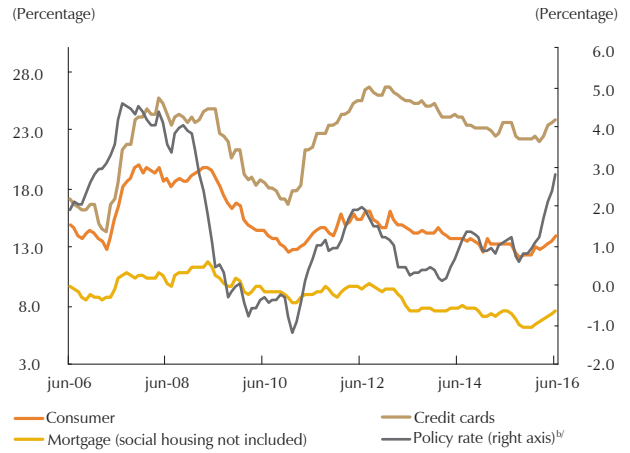
Graph 20  
Loans Real Interest Rates

A. *Ex-ante* Rates <sup>a/</sup>

i. Business Loans

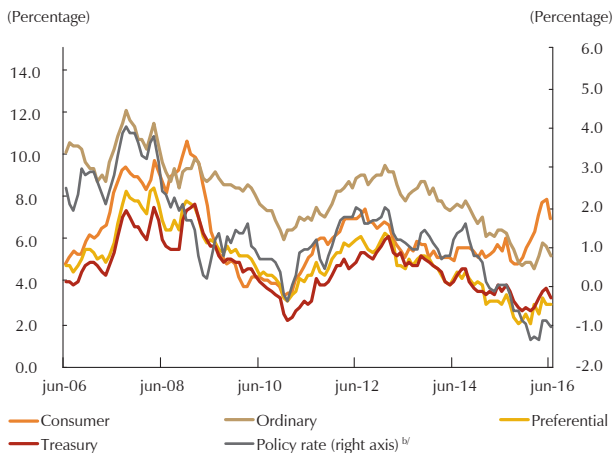


ii. Household Loans

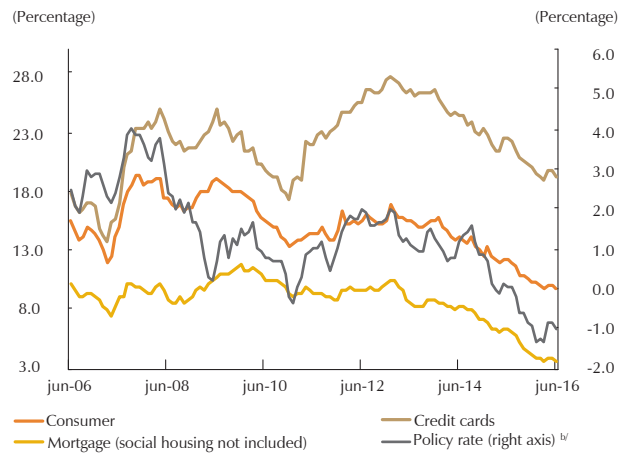


B. *Ex-post* Rates <sup>b/</sup>

i. Business Loans



ii. Household Loans



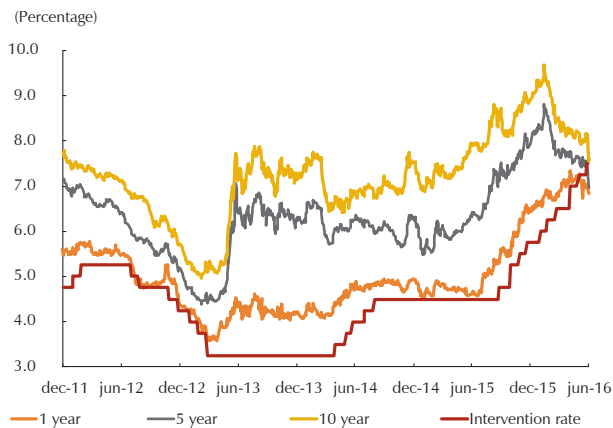
<sup>a/</sup> The average of several expected inflation measures is used as deflator: a one-year obtained from the *Encuesta Mensual a Analistas Financieros* (Monthly Survey to Financial Analysts); a one-year obtained from the *Encuesta Trimestral de Expectativas Económicas* (Quarterly Survey of Economic Expectations); the 2 and 3-year break even inflation (BEI) and the forward 2 to 3-year BEI.  
<sup>b/</sup> The policy rate corresponds to the one established by Banco de la República's Board Of Directors in its monthly meeting; the remaining rates correspond to the monthly average weighted by amount.  
<sup>c/</sup> The total CPI was used as deflator.  
 Source: Banco de la República; estimates made with information by the Superintendencia Financiera de Colombia.

b. Public debt market

During the first semester of 2016, prices of Government-issued short-term securities (TES)<sup>7</sup> continued to decrease, especially influenced, by the increase

7 There is an inverse relation between the price of a TES and its market interest rate. For example, if a bond promises to pay COP\$ 110 at maturity and its market price is COP\$ 100, then the interest rate is 10%. If the market price for the same bond rises to COP\$ 105, then its rate declines (4.8% = (110/105) - 1) because the same COP\$ 110 will be received in the end.

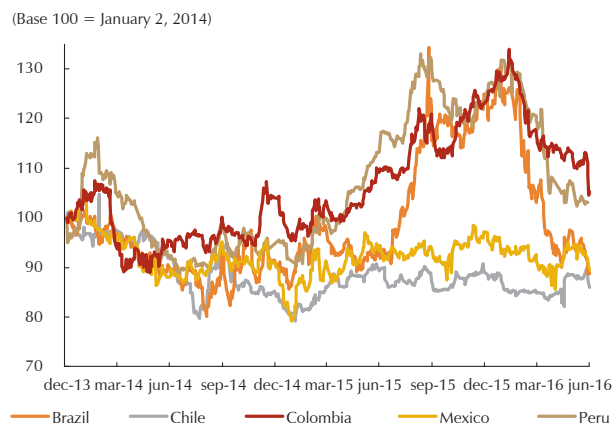
Graph 21  
Colombian Treasury Bonds Zero-coupon Peso Rate and  
Banco de la República's Intervention Rate



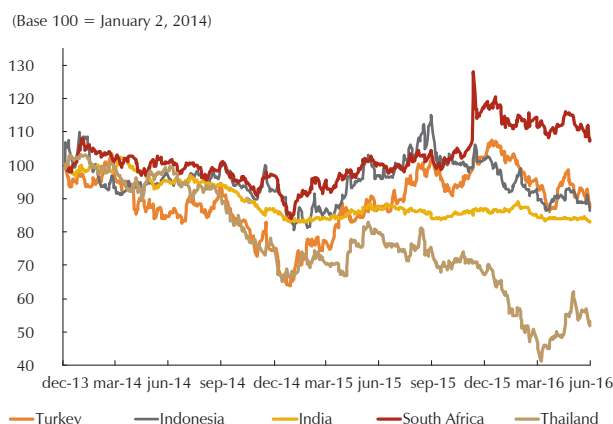
Sources: SEN (electronic trading system) and MEC (Colombian electronic market); calculations by Banco de la República.

Graph 22  
10-year Zero-coupon Rate Indices for Latin America and  
other emerging countries

A. Latin America



B. Other emerging countries



Sources: Bloomberg, SEN (electronic trading system) and MEC (Colombian electronic market); calculations by Banco de la República.

in the monetary policy rate. On its part and during that same period, prices of medium and long-term TES displayed two trends: One of devaluations until mid-February, and a second of valuations during the rest of this half of the year that more than offset the previous movements (Graph 21).

Medium and long-term TES behaved in accordance to other sovereign bonds from the region with similar maturities (Brazil and Peru), and from mid-February onwards, to sovereign bonds of other emerging economies (Graph 22).

The initial period, when bonds of the region lost value, was primarily related with the price decline of raw materials, of oil and some metals in particular. Worries about the weak global growth may be added to this, and besides these factors, the devaluation of the TES were influenced by local factors, as the heightened inflation expectations and the uncertainty surrounding the Colombian fiscal scenario due to the lower revenues from the oil sector.

As mentioned above, valuations registered since mid-February exceeded the price fall seen at the beginning of the year. This is chiefly explained by lower country risk premiums for the countries in the region, in light of the recovery shown by prices of some commodities, the economic stimulus programs announced by Europe and China and, in the last week of June, by the expectation about some additional measures on the part of central banks of developed countries in reaction to the outcome of the U.K referendum. Also, the positions of foreign investors in TES rose, consistent with lower risk premiums for Colombia<sup>8</sup>.

Lastly, it is worth mentioning that so far in 2016, the market has recovered dynamism in comparison to the observed at the end of 2015. Nevertheless, when comparing the daily traded amount in the

8 So far in 2016 (data at June 30) the position held by foreign investors has grown by COP \$7,257 t (in the forward market the balance went from COP \$1.26 trillion to COP \$0.58 trillion, and in the spot market went from COP \$36.5 trillion to COP \$44.7 trillion).



So far in 2016, the TES market has recovered dynamism compared to the end of last year.

Monetary policy decisions have an impact on the evolution of deposits, portfolio, and credit establishments' investments.

first semester, it was lower than the observed during the same period of 2015 (COP\$4.2 t vs. COP\$6.2 t).

The upward trend shown by bond prices was interrupted in some trading sessions, possibly as a result of events like the revision (that went to negative) of the outlook on Colombia's sovereign debt by Standard and Poor's<sup>9</sup>, the balance of trade deficit known in May<sup>10</sup> and the swap of TES with the DGCNTP, which implied an increased supply in the long tranche of the curve of Colombian peso-denominated bonds, in exchange of a contraction of those in UVR ("real value units") close to reach maturity<sup>11</sup>. It is underscored that particularly in May and June bond dynamics were influenced by the changes in expectations regarding U.S. monetary policy.

## 2. Credit establishments' main accounts<sup>12</sup>

The policy measures taken by monetary authorities play a role in the evolution of deposits, the loan portfolio and the investments of the financial system, which constitute the main liabilities (deposits) and the credit establishments' main assets (loan portfolio and investments). In this section, the most important components of the credit establishments' statement of financial situation are presented<sup>13</sup> and their evolution in 2016 up until June.

During the first semester of the year the increased demand for deposits (reserve liabilities) on the part of the credit establishments, which had been observed since the end of last year, remained. Reserve liabilities, that by its very nature represent the credit establishments' main liability, registered a COP\$376,029 t, and a COP\$34,455 t (10.1%) annual variation. On its part, net liquidity operations (repos with *Banco de la República*) had a COP\$2,284 t at the end of June, with a nega-

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9 On 9 February 16, 2016.

10 Above market expectations.

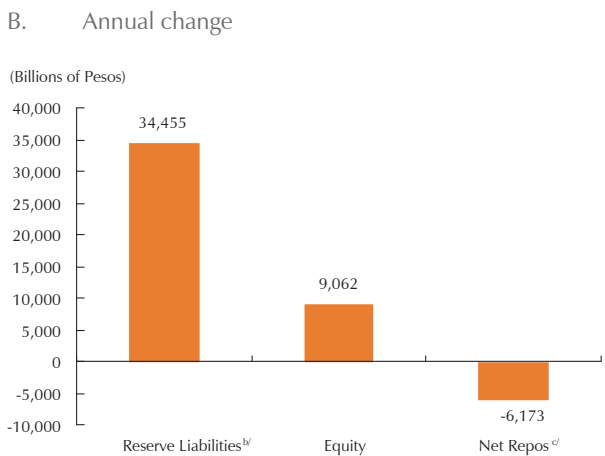
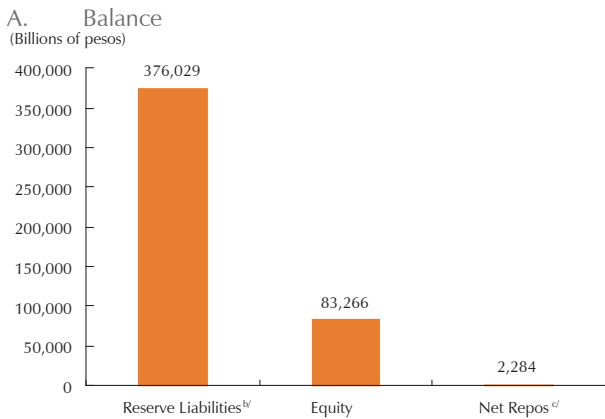
11 Transaction for COP \$3.2 t made on May 17. This swap consisted in the exchanging of UVR-denominated TES with a 2017 maturity date for Colombian peso-denominated TES maturing on years 2020 and 2024. COP \$3,242 t from UVR-denominated TES maturing on May 17, 2017 were received and Colombian peso-denominated TES maturing on July 24, 2020 and July 24, 2024 amounting COP \$1,740 t and COP \$1,000 t, respectively, were delivered.

12 Information on credit establishments in this section is obtained from the Office of the Financial Superintendent of Colombia's form 281. Figures correspond to Friday July 1, 2016, while annual comparisons are made with Friday July 3, 2015. Because from January 1, 2015 onwards, credit establishments report their balance sheet information following the International Finance Reporting Standards (IFRS), in order to compensate for the effects brought by the change in methodology, statistical adjustments are included.

13 With the IFRS implementation, the balance sheet is now called *financial situation statement*.

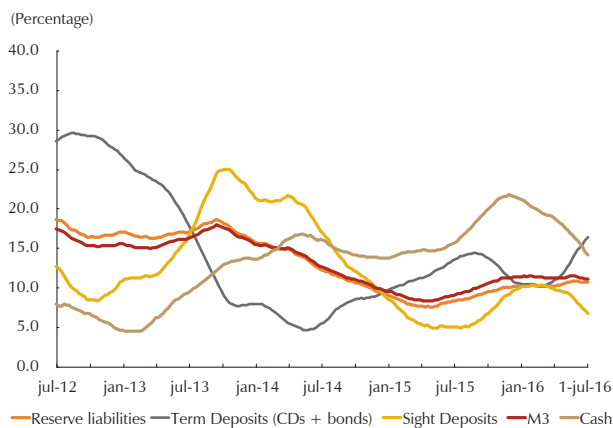


Graph 23  
**Net Repos, Reserve Liabilities and Credit Establishments' Equity**<sup>a/</sup>  
 (At June 2016)



a/ Balance at Friday, July 1, 2016; annual change at Friday, July 3, 2015.  
 b/ Pertains to sight and term deposits in the credit establishments.  
 c/ Net remunerated non-reserve deposits.  
 Source: Banco de la República; estimates made with information supplied by the Superintendencia Financiera de Colombia

Graph 24  
**Annual Growth of M3, Cash, Reserve Liabilities (Total, Sight and Term Deposits)**  
 (Moving 13-week average)



Source: Superintendencia Financiera de Colombia; estimates by Banco de la República

tive annual variation of COP\$6,173 t (73.0%)<sup>14</sup>, assets amounting to COP\$83,266 t, with a COP \$9,602 t (12.2%) annual variation (Graph 23).

Unlike what had been observed in the last months of 2015, deposits so far this year up to June showed a rebalancing of portfolio in favor of term reserve liabilities that brought as a result an increase in interest rates on CD. On average, the annual growth rate for this kind of deposits increased, shifting from 10.2% at the end of 2015 to 19.4% in June 2016. On the contrary, the nominal annual variation of sight deposits showed decline (Graph 24).

Reserve liabilities, together with cash, make up a broad monetary aggregate called M3, which represents the totality of resources available to economic agents to carry out payments in Colombian pesos.

The nominal annual growth of cash slowed down, from rates close to 20% at the beginning of 2016 to annual variations of 13% in the recent period. This originated an annual M3 increase of 10.1% in June 2016, about 158 bp less than the observed at the end of December 2015.

With regard to assets, the main component is the gross loan portfolio in legal tender, amounting COP\$364,318 t<sup>15</sup> with an annual increase of COP\$43,935 t (13.7%) at the end of June 2016 (Graph 25). This represents a slight reduction in its growth pace, consistent with the rising loan interest rates, consequence of the current monetary policy stance. Net investments in legal tender, which are the second most participating asset in the financial statement of the CEs, exhibit a balance of COP\$77,433 t at the closing of May, which accounted for an annual decline of COP\$5,103 t (6.2%). Nevertheless,

14 See the shaded text Monetary Base and Box 2 "Liquidity supply on the part of Banco de la República, 2008-2016," in this Report. Data for these sections are as of June 30, 2016.

15 The portfolio series was revised to include adjustments for operational leasing. As a consequence of the entry into effect of the IFRS in 2015, a part of this line item was included within the commercial portfolio.

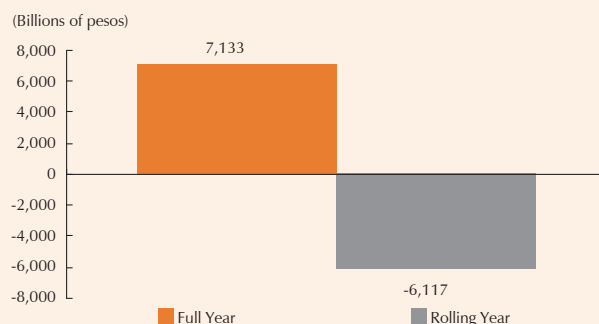
## MONETARY BASE

As of June 30 2016, the balance of the monetary base amounted to COP\$76,402 b and exhibited an annual nominal growth of 10.3%, equal to a COP\$7,133 b increase. The annual growth rates for cash and the banking reserve were 10.5% (COP\$4,596 b) and 10.0% (COP\$2,537 b) respectively.

In the first half of the year, the monetary base was reduced by COP\$6,117 b. This contractionary impact was especially caused by the COP \$16,855 b increase in the remunerated deposits of the General Public Credit and National Treasury Authority (DGCPTN). Other contraction factors were the reduction of the COP\$423 b central bank's short-term monetary operations with the financial system, and sales in the foreign exchange market of *Banco de la República* currencies in the amount of COP \$781 b. This was offset in part by net purchases of TES securities for COP \$11,448 b<sup>1</sup> and the monetary effect of other items, mainly Bank expenses, for COP \$488 b (Graph A, panels 1 and 2).

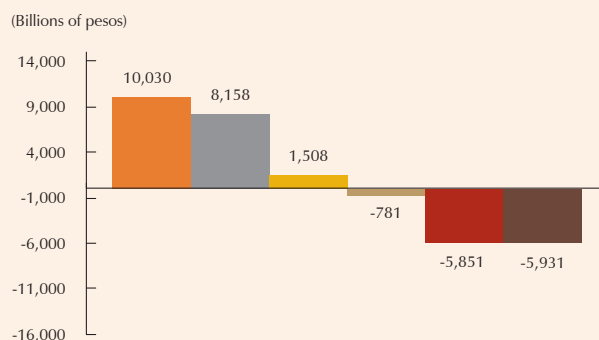
Graph A  
Monetary Base at June 30th, 2016 <sup>a/</sup>

### 1. Annual Change of the Monetary Base

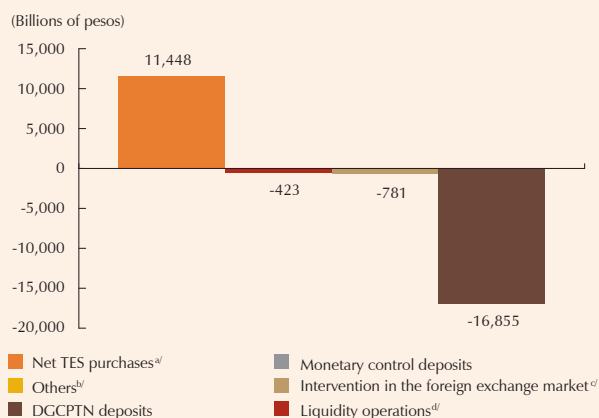


### 2. Origin of the Monetary Base

#### i. Full year



#### ii. Rolling year



a/ It is the balance of purchases less sales and maturation of securities held by *Banco de la República*.

b/ Within this item the monetary effect of *Banco de la República*'s profit and loss statement is included.

c/ Corresponds to the exercising of the call option for decumulation of international reserves

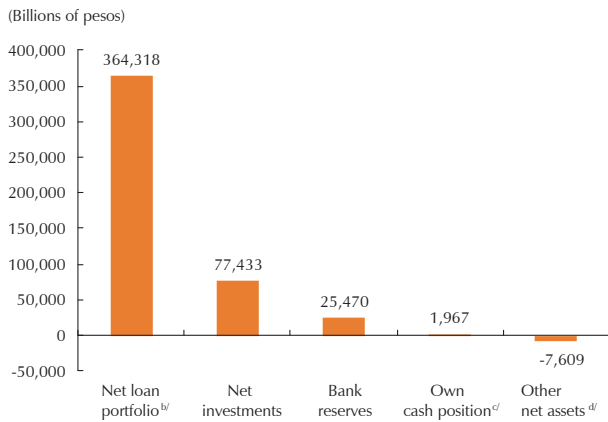
d/ Relates to net operations, that is, it takes into account expansion repos and balance of non-reserve interest-bearing deposits at all maturities.

Source: *Banco de la República*

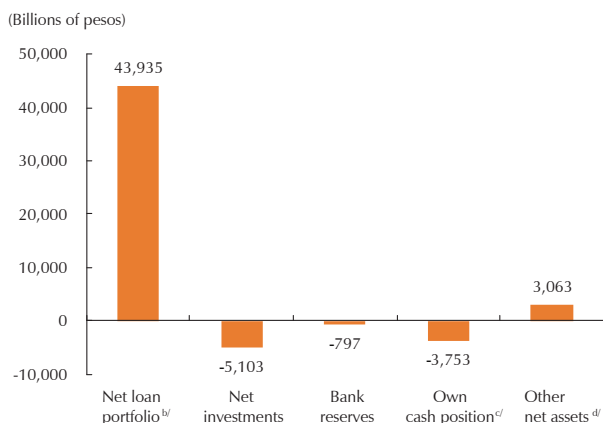
1 Includes the impact of maturities of the TES securities in the hands of *Banco de la República*.

Graph 25  
Credit Establishments' Main Assets <sup>a/</sup>  
(At June 2016)

A. Balance



B. Annual Changes



a/ Balance at Friday, July 1, 2016; annual change at Friday, July 3, 2015.

b/ Mortgage-loan securitizations and any other operation involving divestments of portfolio to be managed through fiduciary rights are not included. Part of the former are included under investments, and the latter under other assets. In order to compensate for the effect caused by the coming into force of the IFRS and in this way be able to compare current figures with previous ones, statistical adjustments are included.

d/Net liabilities different from net reserve-liability and non-reserve deposit repos.

Source: Superintendencia Financiera de Colombia; estimates by Banco de la República

this reduction can be explained by the accounting impact or the reclassification of investments from legal tender to foreign currency<sup>16</sup> (about COP\$7 t) and TES maturity in June 2016 (COP\$3,544 t). In spite of these impacts, the balance of net investments in legal tender increased during a great part of the first half of year 2016. Finally, the banking reserve had an annual growth rate of 3.0%, which meant a COP\$797 b increase in its balance.

When adjustments in the CE's loan portfolio figures were included in order to take into account the mortgage credits and portfolio sales for management through trust rights, the adjusted gross loan portfolio amounted to COP\$368,772 b, with an annual nominal increase of COP\$42,507 b (13.4%). By types, over the first half of year 2016, the consumer loan portfolio slowed down while the mortgage portfolio showed a slight increase in its growth rate. The commercial one, which accounts for nearly 60% of the portfolio total, maintained an annual variation close to 14% (Graph 26, panel A). However, the most recent data observed suggest a slowdown in the margin in all types, with the exception of the mortgage portfolio (Graph 26, panel B). In real terms, and due to the inflation increase, a decline was noticed so far this year in the growth of the portfolio and all the modalities thereof (Graph 27)

On the other hand, the amount in Colombian pesos of the portfolio in foreign currency exhibited a negative annual variation of 9.4%, affected by the annual Colombian peso depreciation experienced in June 2016. By considering adjustments for the

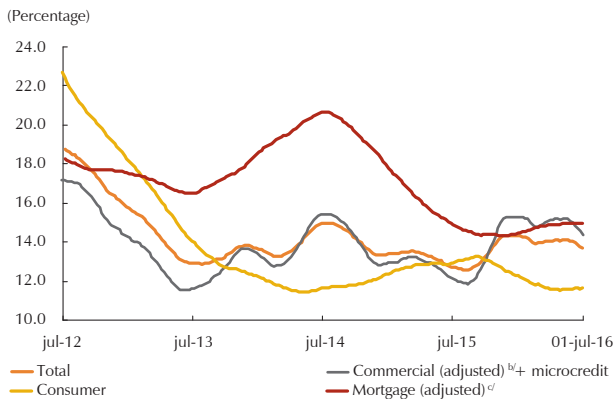
behavior of the exchange rate, foreign currency portfolio was reduced by an annual rate of 18.3%.

Finally, the leverage level pertaining to the ratio between assets and equity grew so far this year, due to a rise in the asset balance being mainly financed with an increase in the liabilities total. In this manner, both assets and liabili-

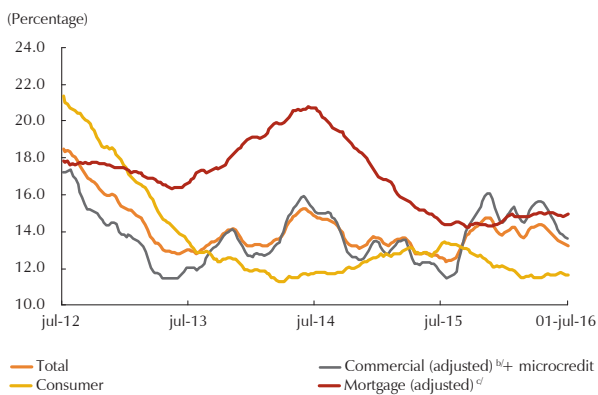
16 Reclassification took place as a response to adjustments in the financial statements of establishments with investments abroad, deriving when adopting the IFRS (International Financial Reporting Standards). The posting of these items is regulated by the External Circular Letter "Circular Externa 034 de 2014" of the Office of the Financial Superintendent of Colombia.

Graph 26  
Annual Growth of Loan Portfolio in National Currency By Modality<sup>a/</sup>

A. 13-week moving average

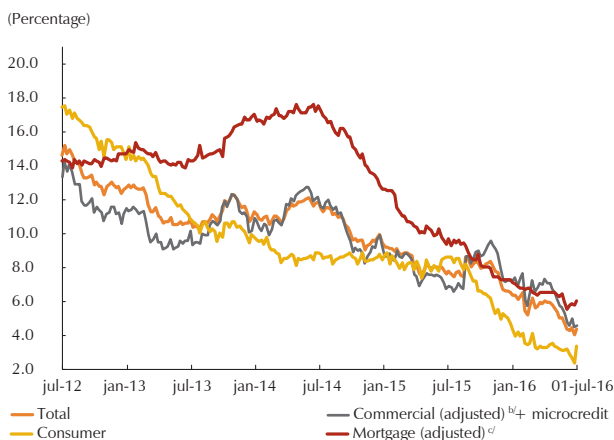


B. 4-week moving average



a/ Loans to employees are not included.  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

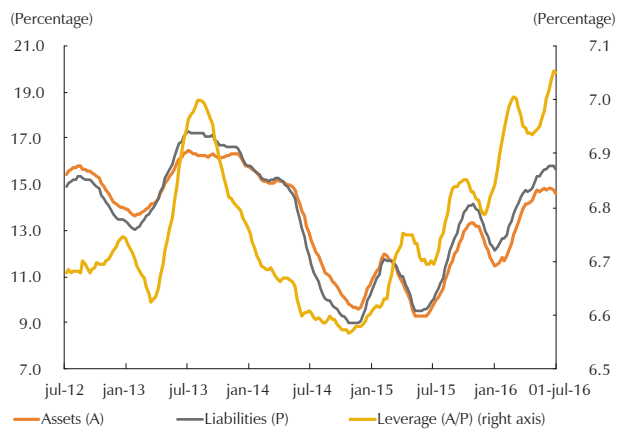
Graph 27  
Real Annual Growth<sup>a/</sup> of Loan Portfolio in Legal Tender By Modality<sup>b/</sup>



a/ Deflated by the CPI.  
b/ Loans to employees are not included.  
c/ Adjustments to operational leasing are included  
d/ Mortgage-backed securities are included  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

ties exhibited annual nominal variation, in this case of 13.4% and 13.6%, respectively (Graph 28).

Graph 28  
Annual Growth of Assets and Liabilities and Leverage Level of Credit Establishments (Moving 13-week average)



Source: Superintendencia Financiera de Colombia; estimates by Banco de la República

### 3. Some risk measures in the financial sector

Below, CE's exposure to credit and funding risks is shown and the risk in the Colombian treasury bonds portfolio is analyzed. In April 2 2016, the RQI (quality indicators by risk) and the DQI (default quality indicators) with and without punishments<sup>17</sup> showed mild deterioration, although they continue to register historical low levels close to the past five years averages. Although no significant materializations of the credit risk have been seen, the present macroeconomic outlook evidences the importance of going on monitoring the evolution of these indicators.

On the other hand, the liquidity indicator suggests that the financial system has enough liquid resources

17 The risk-quality indicator or quality indicator by risk (RQI) is defined as the proportion between the risky and the total portfolios (the former pertains to all credits with ratings other than A within an A to E range where A is the best credit score). The DQI without punishments is defined as the ratio between the past due and total portfolios (the past due portfolio includes the credits having been left unpaid for a period equal to or longer than thirty days), while the DQI with punishments is determined as the ratio between the past due and the total portfolios adding the punishments (that in turn are assets that because they are deemed to be uncollectible or lost have been written off the balance in the income statement in accordance with the legal provisions in force).

Portfolio quality indicators continue to show historically low levels.

as required to sufficiently meet its short-term contractual and non-contractual obligations and, when an adverse scenario in liquidity terms is considered, it can be seen that no group of entities would pose difficulties at the time of having to cover their requirements within a thirty-day term.

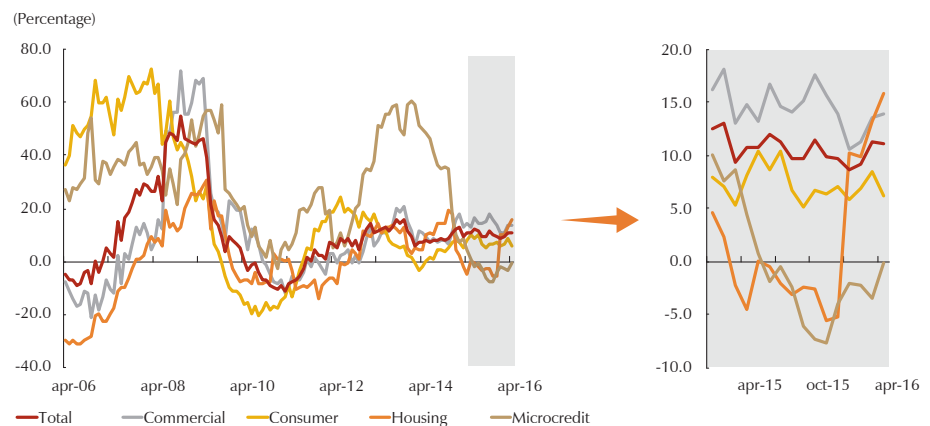
As for the market risk in the TES portfolio, the exposure relating to these securities increased as a response to the higher balance showed by those denominated in real value units (RVU). The behavior exhibited by the market risk measure for the system was worse as a consequence of higher volatility in the public debt market. Growth in this case was more accentuated for funds managed by the trust companies.

a. Credit risk

In April 2 2016, the risky loan portfolio grew at a real annual rate of 11.1%, thus entailing an acceleration with respect to what had been observed a year before when the rate was 10.8%. In contrast, the total loan portfolio recorded a lower real annual pace when by shifting from 10.7% in April 2015 to 4.7% in the same month of 2016. This led to an increase in the total risk quality indicator (RQI) that grew 39 bp and reached a 6.9% figure, thus lightly lower than the five years' average (7.0%).

By type, the risky commercial, consumer and microcredit portfolios registered slow-downs in the last year, the latter being the only one exhibiting negative real growth rates (-0.1%). On the contrary, the grow rate reported for the risky mortgage portfolio was 15.9%, in this case higher by 20.3 pp than what had been observed a year earlier (Graph 29). In spite of the already mentioned deceleration for the various types of risky portfolios, the RQI showed deteriorations in all of them. The highest increase was that of the commercial loan portfolio (54 bp) when it stood at 7.1% in

Graph 29  
Real Annual Growth of Risky Loans



a/ Deflated by the CPI. Special financial institutions (second-tier banks) are not included. Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

March 2016, while those of consumer, mortgage and microcredit portfolios were 20 bp, 28 bp, and 35 bp respectively during the same period (Table 5).

With regard to the total past-due portfolio, a real annual variation of 8.9% was registered as of April 2016, this figure being lower than the one posted in April 2015. By types, it is observed that in comparison with the same month in 2015, commercial and microcredit portfolios showed increases, standing at 11.2% and 4.3% respectively (3.1 pp and 1.2 pp more than in March 2015, in that order). Meanwhile, the credits' past-due balance in the consumer and mortgage types had a real annual slowdown during the same period and stood at 5.4% and 12.6%, respectively (Graph 30).

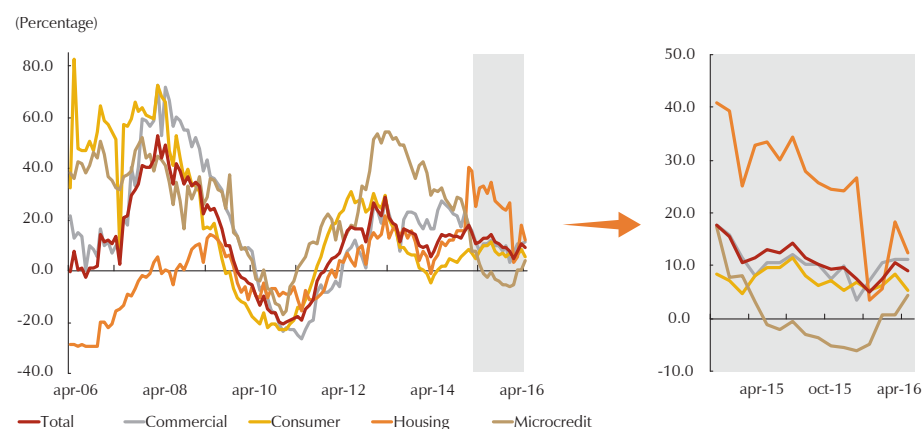
Moreover, the DQI with and without punishments increased by 40 bp and 14 bp between April 2015 and April 2016 respectively, reaching levels up to 7.5% and 3.6%, in that order (Graph 31); nevertheless, these figures are found in historically low values close to the past five years' average for both total portfolio and the consumer, commerce and housing modalities; it is important to stress

Table 5  
Default and Risk Quality Indicators for the gross loan portfolio by Credit Modality (percentage)

Modality	Default Indicator (without penalties)			Default indicator (with penalties)			Quality indicator		
	Apr-15	Apr-16	May 2010 to April 2016 average	Apr-15	Apr-16	May 2011 a/ to April 2016 average	Apr-15	Apr-16	May 2010 to April 2016 average
Total loan portfolio	3.50	3.64	3.43	7.11	7.51	7.29	6.52	6.91	6.97
Commercial	2.37	2.50	2.28	4.75	4.95	4.69	6.54	7.08	6.86
Consumer	4.83	4.93	4.85	11.87	12.81	12.30	7.34	7.54	7.71
Mortgage	5.35	5.62	5.69	5.96	6.13	7.86	3.50	3.78	5.08
Microcredit	6.40	6.90	5.85	12.13	13.33	12.29	10.48	10.83	9.22

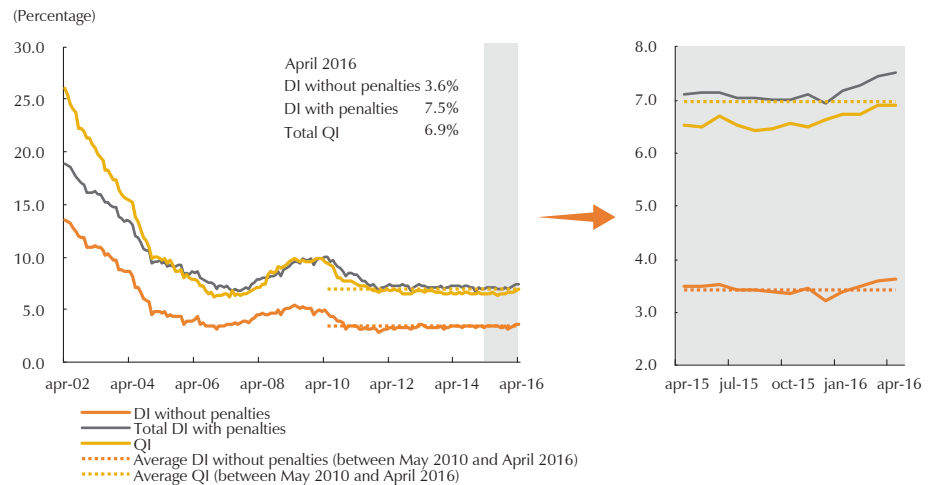
a/ Information on penalties by credit modality is only available from 2011 onwards  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

Graph 30  
Real Annual Growth of Non-Performing Loans



a/ Deflated by the CPI. Special financial institutions (second-tier banks) are not included.  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

Graph 31  
Default and Gross Loan Quality Indicators



Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

that all the modalities showed increases in the DQI without punishments, with microcredits exhibiting the highest by shifting from 6.4% in April 2015 to 6.9% in the same month of year 2016 (Table 5).

On the other hand, the coverage indicator calculated as the ratio between provisions and the past-due portfolio recorded a 127.0% value in April 2016, similar to that registered a year before. This performance was observed for all loan portfolio types, although a fall of 8.8 bp was evidenced and its indicator ended at 101.4% in April 2016.

In short, risk indicators have suffered deteriorations in spite of their levels having remained close to the past five years' average and below those posted between 2008 and 2009, at the time risky and past-due portfolios were growing at a fast pace. Notwithstanding these factors, given the current macroeconomic conditions and trends evidenced by the indicators, keeping on monitoring the credit risk and its implications in the system's stability is important.

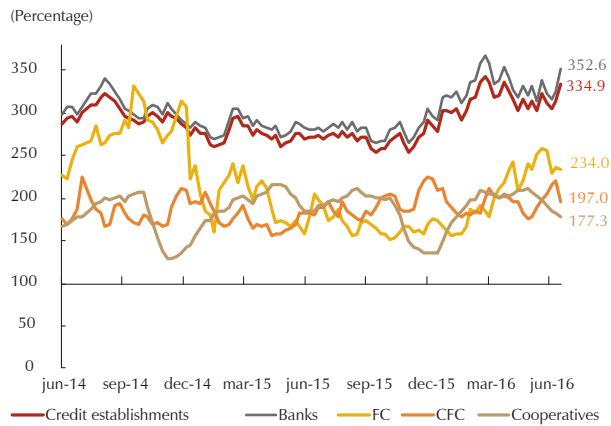
#### b. Liquidity risk

In order to assess the liquidity of entities enabling them to meet their short-term obligations, the IRLR is used, defined as the ration between the liquid (disposable and liquid investments) asset balance and an estimate of net short-term liquidity requirements (30 days). If the IRLR is above 100%, this shows that the entity has enough liquidity to meet its thirty-day obligations; otherwise, it might have problems to confront them in the short-term.

*As of 1 July 2016, the liquidity level in credit establishments grew in comparison with the previous year.*



Graph 32  
30-Day Liquidity Risk Indicator <sup>a/</sup>  
(4-week moving average)



a/ Corresponds to a four-week moving average.  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

As of 1 July 2016, the liquidity level in the credit establishments grew with relation to what had been observed one year before. By types of intermediaries, the indicator's moving average exhibited increase in banks, commercial financing companies (CFC) and financial corporations (FC) by 71.1 pp, 29.8 pp, and 16.6 pp respectively. The only group of intermediaries having shown lower liquidity levels with respect with what had been observed in 2015 was that of the financial cooperatives, since their indicator was marginally decreased; nevertheless, no credit establishment shows difficulties to cover its short-term obligations (Graph 32).

By construction, the IRLR includes deductions to its composing elements (net liquidity requirements and liquid assets) for the purpose of simulating a stressed scenario. In order to assess whether the CEs can meet their short-term obligations in the face of an even more adverse scenario, an exercise is carried out where higher levels are assumed in deposit withdrawals, in the non-renewal of contractual obligations, in portfolio collection defaults and in costs associated with asset stripping<sup>18</sup>. Results show that even in this scenario none of the groups of entities having been analyzed had problems to meet their short-term obligations.

### c. Risk in the Colombian sovereign bonds market

Financial institutions can have Colombian sovereign bonds (TES) securities as a part of their assets (own position) or of those clients' resources they administer (third-party position). As of 1st July 2016, the value of the financial system's TES portfolio in own and third-party positions amounted to COP\$186.6 t, where the major shares pertain to either the position administered by the trust companies (37.4%) or to the resources managed by pension and severance funds (35.5%) , and to the commercial bank's own position (17.6%). The share of resources administered by trust companies mainly responds to the holding of TES by foreigners that at the analysis date amounted to COP \$44.9 t. With regard to 3 July 2015, the financial system's TES balance increased by COP \$14.6 t (8.4%)<sup>19</sup>.

18 It is important to highlight that different levels are taken into account for each type, estimated on the basis of observed historical data.

19 The 32.8% increment in the balance of the "UVR" (real value unit) stands out in part due to the unit's increase in the year (8.0%).



By type of entity, the higher TES balance is the result of the increase in trust companies' third-party positions (COP \$11.7 t) and pension and severance funds (COP \$5.4 t). It is worth noting that the increase in the holding of TES in portfolios administered by trust companies was due, to a higher degree of growth in investment by foreigners in the local market (COP \$14.4 b) (Table 6).

Table 6  
Balance of Colombian Treasury Bonds (TES) in the Financial System by Type of Entity (trillions of pesos)

Credit Establishments	03-jul-15	01-jul-16
<b>Commercial banks</b>		
Financial corporations	35,8	32,8
Financing companies	3,1	3,0
Financial cooperatives	0,0	0,0
<b>Non-bank financial institutions (NBFI)</b>	0,0	0,0
Pension funds, own position		
Pension funds, third party position	0,1	0,1
Brokerage firms, own positions	60,8	66,3
Brokerage firms, third party position	0,5	0,1
Trust companies, own position	1,8	1,0
Trust companies, third party position	1,8	1,8
Foreign	58,1	69,7
Insurance companies and capitalization	30,5	44,9
<b>Financial system</b>	10,1	11,7
<b>Other</b>	<b>172,1</b>	<b>186,6</b>
<b>Total TES Balance<sup>a/</sup></b>	<b>30,6</b>	<b>27,9</b>
<b>Saldo total de TES<sup>a/</sup></b>	<b>202,7</b>	<b>214,5</b>

a/ Corresponds to the total balance of TES issued  
Source: Superintendencia Financiera de Colombia; estimates by Banco de la República.

Just like the other TES holders, financial entities can face revaluation losses in the face of a fall in the price of these securities. That risk is quantified through the evolution of the exposed balance of TES and using a measure known as value at risk- VaR that, from returns observed, estimates the maximum loss that an institution can experience in its investment or administered portfolio in a one-day horizon, for a given confidence level<sup>20</sup>. It is important to mention that a proper financial market risk measure is the own position's VaR, since losses associated to portfolios managed by the system are confronted by the investors.

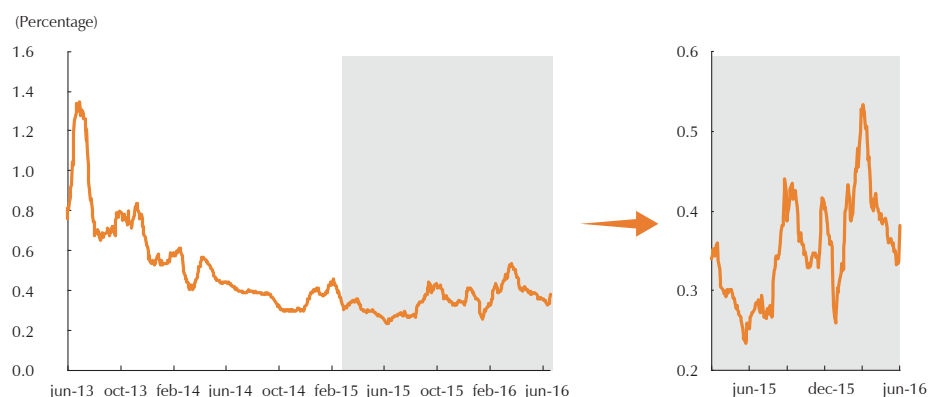
20 In an illustrative fashion, it can be said that if the VaR of a financial institution is 5.0% at a 99% confidence level, it indicates that the maximum loss that this entity would face in a day would be 5.0% of its portfolio value, and surpassed with only with a 1.0% probability.

As of 1 July 2016, the average monthly VaR of the financial entities' own position recorded a slight increase with respect to what had been shown a year before (0.4% against 0.3%). The most significant growth took place during January and March 2016, after having experienced increases in the zero coupon volatility curve of TES denominated in Colombian pesos and RVU. However, the indicator does not register levels as high as those shown in 2013 when volatility in financial markets increased as a result of announcements about the likely taking down of the US Federal Reserve's asset purchase program (Graph 33, panel A).

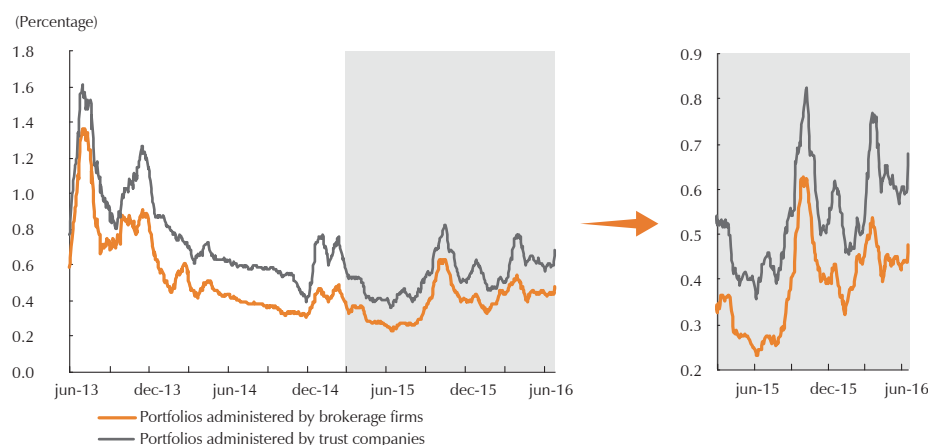
On the other hand, the VaR of portfolios managed by brokerage firms shifted 0.3% on 1 July 2015 to 0.5% a year later. Moreover, for portfolios administered by trust companies, the indicator increased from 0.4% to 0.7% over the same period. Generally, a performance similar to that exhibited by the system's own position portfolio, with the highest VaR in the case of portfolios administered

Graph 33  
Financial System's VaR as Percentage of Exposed Balance  
(weekly moving average)

A. Own position



B. Third-party position



Source: DCV ("Depósito Central de Valores" -Central Securities Deposit-); estimates by Banco de la República.

*The highest volatility in public debt markets has affected the financial system's market risk measures.*

by the trust companies, due to their longer duration<sup>21</sup> as compared with those managed by the brokerage firms (Graph 33, panel B). Nevertheless, these levels are below those observed in the course of year 2013.

In the case of the third-party position of pension and severance funds, the VaR is not an adequate measure of the vulnerability these portfolios are exposed to, the objective of which is succeeding in obtaining the payment of a pension for affiliates. One of the schemes through which pensioners have access to this monthly flow of funds is the lifelong income (“la renta vitalicia”). There, the pension amount is obtained by taking the value of the pensioner’s portfolio at the time of retiring, and projecting a flow into the future with this money for the years during which the payment is to be delivered to them. As any flow over time, this has to be discounted at a given interest rate. Consequently, when long-term interest rates increase, although the portfolio drops, it is true that the discount value does fall too and this make the pension amount remain stable. In this sense, the VaR does not measure the change affecting the flow of the future pension, this being the contributor’s major risk.

## E. EXTERNAL BALANCE AND FOREIGN EXCHANGE POLICY

### 1. The Colombian external balance in the first quarter of 2016

Since mid-2014, the Colombian economy was initially affected by a significant reduction of its terms of trade, mainly due to the serious plummeting of the oil price, which has meant less dynamic in the national income, as well as less foreign capital inflows. This occurred in the context of a widening current deficit widening that, as a GDP proportion, grew from 3.2% in 2013 to 4.4% in the first quarter of 2014 (prior to the shock).

In the course of 2015, the sharp fall of the oil price and some other of the country’s main export products resulted in an acute contraction of revenues from the export of goods partially offset by the lower expenditures for imports of goods, which entailed a considerable increase in the commercial deficit. Notwithstanding this fact, the current deficit was reduced (USD \$734 m)<sup>22</sup> in comparison with what had taken place in 2014, thanks to the decline in net outflows for services and factor income, and higher income from transfers.

*In the first quarter, the deficit in the balance of payments' current account amounted to USD \$3,381 m, equal to 5.6% of the quarterly GDP.*

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21 Duration is a measure in the sensitivity of the price of a bond in the face of interest rate variations. The higher it is, the higher the risk in the face of fluctuation of the interest rate exhibited by the portfolio.

22 As a GDP proportion, the current deficit in 2015 was 6.4%, this meaning an increase of 1.3% *vis-à-vis* 5.1% in 2014. Therefore, the rise in the deficit as a GDP proportion does not reflect the lesser value of the current account deficit in US dollars but, instead, it is explained by the reduction of current GDP in US dollars due to the 37% depreciation of the Colombian peso with respect to the United States currency in that period.

*The deficit was reduced in comparison with the one observed a year before thanks to a decline in expenditures higher than the decrease recorded in revenues.*

The results of the balance of payments as of the first quarter of 2016 also show an adjustment in the country's current deficit, as a consequence of a decline in expenditures higher than the decrease recorded in revenues. In US dollars, the deficit in the first quarter of the year is mainly explained by the reduction in the value of imports of goods and services, and due to lesser profits generated by companies with foreign capital. From the point of view of real activity, the above is consistent with the slowdown seen in consumption and investment that, in turn, reflects that the economy has gone on adapting to the new path of the national income. Higher revenues from current transfers did also contribute to reducing the deficit.

During the first quarter of 2016, the country's balance of payments current account recorded a USD \$3,381 m deficit, lower by USD \$1,809 m than that of a year before (Table 7). As a quarterly GDP proportion, the deficit amounted to 5.6%, this meaning a 1.4 pp reduction in comparison with the same period of 2015 when it was equal to 7% of GDP in that quarter. The current deficit was financed through net capital inflows amounting to USD \$3,240 m (5.4% of quarterly GDP), mostly associated with foreign direct investments and, to a lesser degree, with portfolio investments, loans, and other external credits. On account of international reserves, USD \$98 m were accumulated, this amount pertaining to yields deriving from portfolio administration, since during the first quarter of 2016 *Banco de la República* did not take part in the purchase and sale of currencies in the exchange market. Errors and omissions were estimated at USD \$140 m.

It is necessary to stress that the balance in the current account of the Colombian balance of payments bears a close relationship with the evolution of the balance of goods due to the high share of exports and imports of goods in the total of the country's current income and expenditures<sup>23</sup>. For this reason, whatever occurs with the external trade of goods is translated into either accentuation or softening of the current deficit.

Thus, in the first quarter of 2016, the reduction of the trade balance deficit was USD \$324 m against what had been reported in the same period one year before (Table 7). The country's external purchases of goods totaled USD \$10,168 m, with an annual decrease of 24.5% (USD \$3,308 m). The fall in the imports value was generalized, where the lesser purchases of inputs and capital goods for the industry (USD \$1,264 m) and transport equipment (USD \$1,229 m) stood out. The downturn in imports has been the result of a less dynamic demand as compared with the previous year, along with the impact of real depreciation on the quantities of external goods demanded and the generalized reduction affecting import prices in United States dollars, especially those for intermediate goods (fuels and by-products).

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23 The analysis of both the structure and evolution of current account income in the course of the past fifteen years reveals that external sales of goods are their main component by taking part between 70% and 81% of the total revenues. As for expenditures, their most significant component is the import of goods, which, on average, accounted for 64% of total income (68% in 2016).

Table 7  
Balance of Payments of Colombia  
(Annual flows in millions of dollars)

	2015 Jan-Mar (av)	2016 Jan-Mar (av)	Variation (USD)
<b>Current account (A + B + C)</b>	<b>(5,190)</b>	<b>(3,381)</b>	<b>1,809</b>
(Percentage of GDP)	(7.0)	(5.6)	
A. Goods and services (1 + 2)	(4,564)	(3,669)	895
1. Goods (a - b)	(3,421)	(3,096)	324
a. FOB Exports	10,055	7,071	(2,984)
b. FOB imports	13,476	10,168	(3,308)
2. Services (a - b)	(1,144)	(573)	571
a. Exports	1,781	1,802	20
b. Imports	2,925	2,374	(550)
B. Factor income	(1,782)	(1,021)	762
Revenues	1,120	1,199	78
Outflows	2,903	2,220	(683)
C. Current transfers	1,157	1,309	152
<b>Financial account and variation of gross international reserves(A+B+C+D)</b>	<b>(5,289)</b>	<b>(3,240)</b>	<b>2,049</b>
(Percentage of GDP)	(7,2)	(5,4)	
A. Direct investment (ii-i)	(2,925)	(3,594)	(668)
i. Foreign in Colombia (FDI)	3,160	4,568	
(Percentage of GDP)	4.3	7.6	
ii. Colombian investment abroad	235	974	
B. Portfolio investment (1+2)	(700)	(1,805)	(1,106)
1. Public sector (ii-i)	177	(2,250)	
i. Foreign portfolio investment (a+b)	2,910	1,711	
a. International markets (bonds)	2,500	1,427	
b. Domestic market (TES)	410	284	
ii. Portfolio investment abroad	3,087	(539)	
2. Private sector (ii-i)	(877)	445	
i. Foreign portfolio investment (a+b)	1,151	458	
ii. Portfolio investment abroad	274	902	
C. Other capital flows (public sector + private sector)	(1,733)	2,060	3,793
D. Reserve assets	69	98	30
Errors and omissions	(100)	140	240
Memo item:			
Financial account without change in international reserves	(5,358)	(3,339)	2,019
Change in international reserves	69	98	

pr: Preliminary.

Note: Results from now on will be presented following the recommendations by the FMI in its Balance of Payments Manual, sixth version. For additional information and methodological changes, see <http://www.banrep.gov.co/balanza-pagos>  
a/ The negative sign in the financial account's net flows (A, B, C and D) reflects financial resources coming into the Colombian Economy; in that sense positive variations imply less external financing in the balance of payments

Source: *Banco de la República*.

*The value of imports in US dollars plummeted from USD \$3,308 m (24.5%), while that of exports was USD \$2,984 m (-29.7%) compared with the first quarter of 2015.*

Moreover, exports of goods stood at USD \$7,071 m with an annual decrease of 29.7% (USD \$2,984 m) (Table 7). This reduction in the exported value was mostly originated in the declining external sales of oil and oil by-products (USD \$2,033 m), and, to a lesser extent, as a result of the fall in the value of coal shipments (USD \$477 m) y industrial products (USD \$222 m). The decrease in the value of crude oil and coal sold is associated with the reduction affecting both their export price (44% and 29%) and volumes shipped (21% and 11%) respectively.

As for the services account deficit, it contracted by USD \$571 m in the elapsed part of the year through March (Table 7), due to a reduction in the external service demand and the increase experienced in exports. On the side of imports, the drop of income linked with the rendering of services by the oil activity stands out in coherence with the lower sector's dynamism, as well as due to the more reduced imports associated with the payment of transport services (particularly maritime freights) and the declining spending of Colombian travelers abroad. This behavior can be mainly explained by the country's lower economic growth rhythm, particularly in the mining sector and the rise in imports due to Colombian peso depreciation with respect to the United States dollar. On the other hand, the increase of revenues originating in the increasing number of travelers not residing in the country stands out, as well as their higher spending in the Colombian economy.

On the other hand, given that external financing has been associated to a large extent with direct investments, payments for its utilization reflects as net factor income payments in the current account. In the first quarter of 2016, the drop in net factor expenditures had basically originated due to lower profits generated by companies provided with direct investment having fallen USD \$746 m (-46%). on an annual basis. This result is especially associated with the losses of firms operating in the oil activity, as the reflection of an outlook of lower crude oil export prices and volumes.

Also the reduction experienced in the profits of firms in the mining sector (without oil) and commerce, the overall amount of which was reduced 90% (USD \$366 m), contributed to this contraction. These decreases were partially offset by the increase of profits experienced by the foreign enterprises operating in the transport and communications, electricity, gas, and water sectors (USD \$207 m).

Finally, current transfers increased by USD \$157 m *vis-à-vis* what had been observed in the first quarter of 2016, therefore contributing to a smaller deficit.

*The deficit of the services account contracted compared with the first quarter of 2015.*

The country's current deficit reduction entailed, in addition, less financing needs. Just like in most countries in the region, foreign capital flows for Colombia have been reduced by both external and internal factors. However, the country continues to receive important amounts of these funds.

*The country continued to receive significant capital inflows, though lower than those recorded in 2015.*

In financial account terms<sup>24</sup>, during the first quarter of 2016 net capital inflows were recorded for USD \$3,240 m (5.4% of quarterly GDP), lower by USD \$2,049 m to what had been observed in the previous year when they totaled USD \$5,289 m (7.2% of quarterly GDP). Particularly, during the first quarter of the year, net foreign capital revenues were registered USD \$7,475 m, as well as outflows of Colombian capital designed to constitute assets abroad for USD \$4,326 m, revenues from derivative instruments for USD \$190 m, and variations in international reserves for USD \$98 m (Table 7).

The financing structure shows that foreign direct investment –FDI– flows accounted for 61% of total foreign capital revenues received by the country, followed by the placement of securities in international markets (19%), and portfolio investment in the local market (10%); the remaining 10% was relative to loans and other external credits (Table 7).

On account of FDI, resources entered the country in the amount of USD \$4,568 m (7.6% of quarterly GDP), with an annual growth of 44.5%. The significant increase of investment in the electric sector<sup>25</sup> has to be stressed, followed by transport and communications (17%), manufacturing (9%) and mining and oil (7%). On the other hand, Colombian direct investment abroad was estimated at USD \$974 m, as mostly carried by enterprises in the mining and oil, financial, electricity, gas, and water sectors.

On its side, and during the first quarter of 2016 the country received USD \$2,169 m relative to foreign portfolio foreign investment, this sum being lower by USD \$1,892 m to the amount obtained a year before. 65.8% of these resources came from the placement of long-term debt securities in the international markets, issued by public sector entities, and the remaining 34.2% restante in the purchase of TES and shares in the local market by foreign investors. Colombian capital outflows relating to this item reached the amount of USD \$363 m and they especially pertain to portfolio investments carried out by private sector's enterprises, while public entities recorded settlements (Table 7).

Finally, for other capital flows the country constituted assets abroad in the amount of USD \$2,060 m mostly originating in deposits made by public sector entities. This amount contrasts with the net disbursements for USD \$1,733 m received one year before.

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24 According to the sixth version of the Balance of Payments Manual proposed by the IMF, the financial account appears with the same current account's sign. The financial account is the result of the difference between active and passive flows. If the current account is a loss-making (deficit) one, then the financial account is negative, which indicates that the Colombian economy has had to resort to external financing (liabilities) and/or settle its external assets in order to finance its current excess spending. On the contrary, if the current account is a positive (surplus) one, the financial account is also showing a positive sign pointing out that the country has a capacity to lend financial funds to the rest of the world.

25 Largely explained by resources from the sale of the Government's share in Isagen to foreign investors.



*For 2016, a current account deficit lower than that observed in the previous year has been forecast.*

## **2. Balance of payments projections for year 2016**

As already mentioned, the current account deficit has been showing adjustment signs in the past few quarters in the face of the hard terms of trade shock being registered since mid-2014. This adjustment is being implemented through a significant reduction in imports in United States dollars of both goods and services and by a decrease in net outflows from the remittance of profits particularly associated with the new reality of income in the mining-energetic sector enterprises and the impacts of depreciation on the accounting in US dollars of other sectors' profits.

With regard to the outcomes of the first quarter of 2016, the adjustment observed in the current account deficit was above the estimates made some months back, this being the result of a more pronounced reaction of profits remitted by companies with FDI which were subject to a reduction the magnitude of which exceeded the expectations, and a larger decrease in the balance of services' net expenditures. In this sense, it has been estimated that the adjustment trend of the current external unbalance observed in the first quarter will be maintained for the remainder part of the year, which would be additionally favored by a better than expected price scenario for raw-materials in the second half of the year in the previous Report.

In terms of revenues from abroad, the projection for the whole year 2016 takes into account a forecast of international commodity prices that although they have been kept at low levels, had been revised upwards given the upturns in international pricing experienced in the past few months (see Chapter I in this Report). Particularly, the best outlook for the price of crude oil for the year average reduces the fall of external revenues from these exports vis-à-vis what had been estimated in the beginning of the year.

On the contrary, in what concerns exports other than commodities, less revenues are being considered given the poorer prospects on the behavior of the major trade partners in a context of increasing uncertainty surrounding the global economic performance.

On the other hand, external expenditures would continue to keep an important annual contraction pace. Particularly, it has been projected that the value of imports of goods will plummet in a significant manner according to what has been observed in the first half of the year. For capital goods imports, a contraction larger than that of 2015 is expected due to the anticipated cuts in investments, especially in the mining-energy sector. Likewise, for consumer goods investments, a contraction associated with both a slowdown in household spending and the substitution of some items of domestic production is expected given the real depreciation having been observed. For external purchases of intermediate goods, a contraction with respect to the previous year is foreseen because of the lower prices of these products in United States dollars and the prospective slowdown



of domestic demand. In addition, the opening and starting into production of the Reficar refinery since the end of 2015 would continue to contribute in a positive manner to the reduction of imports of fuels, mostly in the second part of the year when the plant is expected to reach its maximum production capacity. Therefore, a lower trade balance deficit is estimated for 2016 than what was observed for 2015, and below the estimate made at the beginning of the year.

Added to this adjustment to the value of imports there is further reduction to that observed in 2015 in the services trade deficit as propelled by the impacts of depreciation on the net balance of some services such as those addressed to business and tourism, and price reductions in those of an imported nature like cargo transportation. However, it is important to stress that the highest estimates in the oil price happen to slow down the adjustment pace rate in service imports for the remainder of the year, particularly due to the impact that any such revision would have on the value of freight services for cargo transportation.

Likewise, it has been estimated that net factor income outflows will continue to contribute to the current account adjustment though more moderately in the rest of the year, because of the positive effect that the recovery of crude oil and other commodities prices has on the mining-energy companies' operational results. For the remaining sectors, the reduction of profits estimated for the year remains being associated with the lesser economic activity's growth prospects, and the impact of acute depreciation on the US dollar value of profits remitted. On the other hand, net transfer revenues would continue to contribute in a positive manner to the external unbalance adjustment by addressing the performance of these revenues in the first months of the year, added to improved labor conditions in both the United States and Spain, since these actually are a major workers' remittance source.

Accordingly, the balance of payments projection for 2016 shows a current account deficit lower than that of the previous year, given a further reduction of outflows vis-à-vis the current inflow contraction. In the most likely scenario, the deficit estimate in the current account stands at around 5.3% as a GDP percentage.

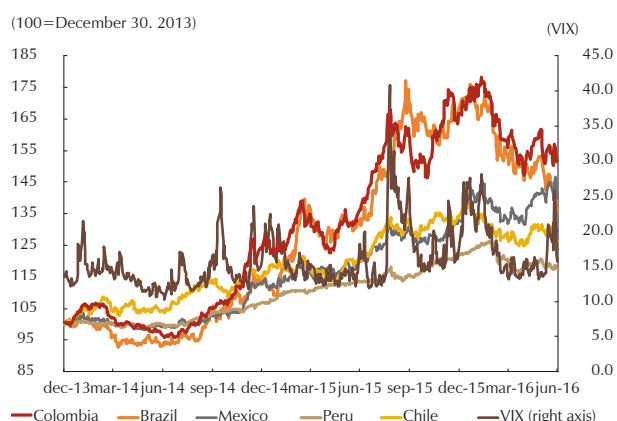
That adjustment will be reflected in a moderation in net capital flows towards the country. On one hand, moderation has been projected with respect to FDI resources against what had been observed in the first quarter of the year when the inflow of most part of funds from the sale of Isagen took place. This moderation is framed within a context of reducing investments in the mining-energy sector and poorer growth prospects for those in the remaining sectors. Lower net financing for portfolio investment resources has been calculated as well with respect to the previous year, due to a lower assessment of foreign capital flows towards the local public debt and a more reduced placement of bonds in international markets by both the public and the private sectors. All this would be offset, in part, by larger flows expected from other capital revenues, mostly from loans towards the public non-financial sector.

*A reduction in external expenditures higher than the one expected for revenues has been projected.*

### 3. Foreign exchange rate evolution during the months elapsed in year 2016

During the first semester of 2016, the appreciation trend of the United States currency maintained since mid-2014 turned around and the US dollar weakened in general terms vis-à-vis the currencies of both developed and emerging countries. Specifically speaking, so far this year through June 30, its depreciation was 3.8%<sup>26</sup> with respect to major currencies and 4.5% in relation to those of the emerging countries<sup>27</sup>. Growing stronger against the United States dollar were the Brazilian real (18.8%), the Colombian peso (7.3%), the Chilean peso (6.4%), and the Peruvian sol (3.6%), while the Mexican peso depreciated (5.2%). Notwithstanding this change, the US dollar in comparison in what concerns the average exchange rate seen in the first half of year 2015 shows appreciations against the currencies of the developed and the emerging countries (2.4% and 11.5% respectively, and 18.0% on average vis-à-vis the general region's currencies (Graph 34).

Graph 34  
Exchange Rate Indices Against the Dollar for Some Latin American Countries and VIX



Source: Bloomberg.

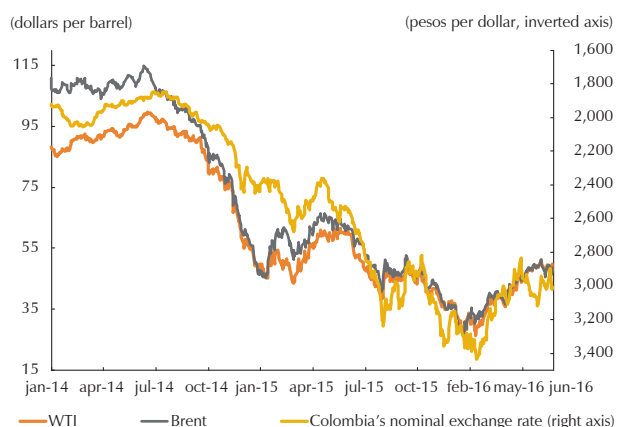
In the first half of year 2016, the appreciation of the region's currencies including the Colombian peso was in line with the evolution of both the international risk perception and the international commodity prices. Although up until mid-February perception of risk indicators remained at high levels by reason of poor growth expectations, mainly from China, as well as due to the plummeting of commodity prices and a sharp uncertainty with regard to the stability of the European financial system<sup>28</sup>, these prices were subsequently reduced through late April as a response to the stimuli measures announced by certain central banks, the increase in commodity prices and the recovery of some economic figures in China. Between May and June, the region's currencies were weakened as a reaction to uncertainty concerning the United States' monetary policy and the likely exit of the United Kingdom from the European Union.

26 According to the Bloomberg dollar spot index (BBDXY) which includes the currencies of Europe, Japan, Canada, Mexico, United Kingdom, Australia, Switzerland, South Korea, China, and Brazil. These currencies belong in the group of the United States' major trade partners combined with those enjoying higher liquidity levels (as revealed by the BIS' triennial survey).

27 As per 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.

28 Between December 31 and February 11, currencies were depreciated in the region (the Mexican peso 10.13%, the Colombian peso 7.72%, the Brazilian real 0.71%, the Peruvian sol 2.87%, and the Chilean peso 0.83%), influenced by the increasing perception of risk as measured by the VIX (54.53%) and the fall of oil prices WTI (29.24%), the Brent (13.17%), copper (11.22%) and aluminum (0.9%).

Graph 35  
Colombia's Nominal Exchange Rate and Oil Prices



Source: Bloomberg.

Generally, in the Colombian case, the correlation between the behavior of the foreign exchange rate and the international price of oil was maintained<sup>29</sup>, with exception of the period between May 16 and June 3. In the course of these three weeks, that correlation weakened mainly due to the fact that the Colombian peso moved according to the anticipations of a rise in the short run of interest rates by the Federal Reserve, which soon faded as a result of the publication of negative national employment data (Graph 35). Thus, in January and February when the crude oil quotation hit the minimum prices since early 2004, the market representative rate (“TRM”) reached its historical maximum (COP\$3,434.89 per United States dollar), a behavior that was reinforced in February by the Standard and Poor’s rating shift in Colombian risk

perspective from stable to negative. Subsequently, both the oil price and the exchange rate returned to levels similar to those shown in the second half of 2015. Other local factors that might have strengthened the Colombian peso appreciation trend maintained since March were the publication of better figures than those expected by the market concerning the performance of the economy<sup>30</sup>, and the statements of the Ministry of Finance’s Public Credit authority with relation to the likelihood of the Government being interested in including in the tax reform a reduction of the tax paid by foreigners on their profits on portfolio investment.

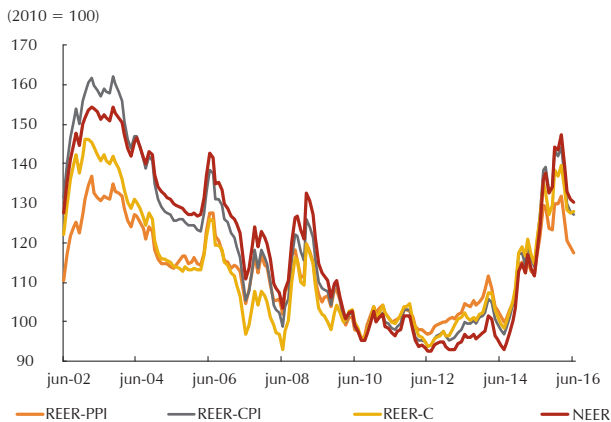
*Vis-à-vis* all of the major trading partners, the Colombian peso also depreciated in the first two months of the year and became stronger since March, in both nominal terms (“ITCN”) and real terms, that is, once variations in prices in Colombia and the other countries are adjusted (real exchange rate index: “ITCR”). If that adjustment is carried out using consumer prices (“ITCR-IPC”), so far this year as of June the Colombian peso appreciation was 11.5% with respect to December 2015 data, and 9.5% if producer prices are used. In comparison with major coffee, bananas, flowers and textiles competitors in the United States, the real appreciation in the same period was 7.6%. However, in the January-June average, it weakened in real terms against the same period of 2015<sup>31</sup> (Graph 36).

29 In the first half of 2016, the correlation coefficient between the Brent oil price and the Colombian peso-US dollar market representative exchange rate (“TRM”) was -83.4%. During 2015, that correlation was -78.1%.

30 In March, it became known that in January, the retail sales variation (expected: -0.2%) was 2.2%; the February’s 12-month inflation (expected: 7.74%) was 7.59%, and GDP growth in the fourth quarter (expected: 3.1%, this data having been revised at 3.4%) was 3.3%. In April, it was known that the retail sales variation (expected: 2.7%) was 4.6%.

31 When comparing the January-May average in the nominal exchange rate index (“ITCR”) *vis-à-vis* the same period in year 2015, real depreciation according to the real exchange rate index adjusted by producer prices (“ITCR-IPP”) was 8.8%, 15.2% as per the index adjusted by consumer prices (“ITCR-IPC”), and 12.1% according to the “ITCR-C”.

Graph 36  
Exchange Rate Indices (Real and Nominal)



Note: The NEER shows the evolution of the Colombian Peso's nominal exchange rate against our main trade partners as a whole; the REER-PPI and REER-CPI compare the Colombian Peso's purchasing power against our main trade partners', using the PPI and CPI as deflators, respectively while With the REER-C (C for competitiveness) a comparison with our main competitors in the U.S. coffee, banana, flowers and textiles markets is made.

Source: Banco de la República.

#### 4. International reserve indicators

*Banco de la República* acknowledges the importance of having an adequate international liquidity level, not only to confront capital outflows but also to invigorate confidence in the country<sup>32</sup>. In order to determine whether or not international reserves are sufficient to face prevent and face external shocks, several indicators are used, as described below (Table 8). Generally, international markets believe that the low levels of these indicators may provide early warning signs about the external vulnerability of the economies.

In order to establish the economy's response ability in the face of capital outflows triggered by a speculative attack, the reserve level is compared with that of monetary aggregates like M2 or M3. The net reserves/M3 ratio shows an improvement in the indicator up until year 2015, with a slight decrease in the 2016 projection. The indicator's improvement in the past few years was associated with the reserve accumulation carried out by the Bank until December 2014 and with the slow-down of the monetary aggregate's growth rate since mid-2013, particularly due to the impact of depreciation over the past two periods on the valuation of the M3 in United States dollars. For 2016, the reserve level having been assessed is similar to that of the previous year, while the growth rate of the M3 in US dollars would be positive and this reduces the value of the estimated indicator.

The ratios among net reserves to total external debt repayments and current-account deficit show the country's capacity and ability to meet its credit obligations towards the rest of the world in an extreme scenario where access to international financing would be totally closed. These indicators generally register values above 1<sup>33</sup>.

The ratios among net reserves to total external debt repayments and current-account deficit show the country's capacity and ability to meet its credit obligations towards the rest of the world in an extreme scenario where access to international financing would be totally closed. These indicators generally register values above 1<sup>33</sup>.

On the other hand, the quotient between net reserves and total imports of goods and services shows the number of external purchase months that an economy

32 Besides the reserve accumulation strategy, Colombia has since May 2009 a line of contingent funding with the IMF, this line being granted to member countries with a good economic performance, prudent policies, and a sound economic policy framework. On 13 June 2016, the IMF passed a new agreement for access by Colombia to contingent resources for an amount of approximately US\$ 11.5 b. Although the economic authorities do not foresee making use of these funds, nonetheless they deem it prudent to count on them against the likelihood of an abrupt cut of external financing. Countries such as Poland and Mexico also enjoy this line of credit.

33 According to the IMF "Debt and Reserve Related Indicators of External Vulnerability", 2000, there is empiric evidence for a sample of emerging economies allowing for establishing as a reference the value of 1 for this type of reserve indicators. Specifically speaking, the Guidotti-Greenspan rule exposes the idea 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 sufficient reserves as to be capable of withstanding a massive withdrawal of their short-term external capital.

Table 8  
International Reserves Indicators for Colombia

	2012	2013	2014 (pr)	2015 (pr)	2016 (proj)
<b>Balance</b>					
Net international reserves (millions of dollars) <sup>a/</sup>	37,467	43,633	47,323	46,731	47,273
<b>Indicators</b>					
<b>A. External debt amortization indicator</b>					
External debt amortization (millions of dollars)	22,348	16,582	21,557	23,512	21,804
Net reserves / current year external debt amortization	1.68	2.63	2.20	1.99	2.17
Net reserves / next year external debt amortization <sup>b/</sup>	2.26	2.02	2.01	2.14	1.82
<b>B. Adequate external liquidity position</b>					
NIR/ (current year debt servicing)	1.45	2.16	1.85	1.67	1.82
NIR/ (next year debt servicing) <sup>c/</sup>	1.86	1.71	1.69	1.80	1.52
NIR/ (current year debt amortization + current year, current account deficit)	1.11	1.51	1.15	1.11	1.29
NIR/ (next year debt amortization + next year, current account deficit) <sup>d/</sup>	1.29	1.06	1.12	1.27	1.21
<b>C. Other international reserve indicators</b>					
NIR as months of imports of goods	7.9	9.2	9.2	10.8	12.9
NIR as months of total imports	6.5	7.5	7.6	8.8	10.5
NIR/M3 (percentage)	22.0	24.7	30.5	35.5	32.5
NIR/GDP	10.1	11.5	12.5	16.0	16.8

(pr): preliminary (calculations based on preliminary data of balance of payment estimates)  
(proj): projected

<sup>a/</sup> Balance of net international reserves include contributions made to the Latin American Reserve Fund (FLAR)

<sup>b/</sup> 2016 and next year's amortizations correspond to projected external debt payments of the existing external debt at the balance of payment's closing.

<sup>c/</sup> 2016 and next year's interests relate to projected payments at the closing of the balance of payment projections.

<sup>d/</sup> The current account deficit for 2016 and next year's is projected.

Source: Estimates by Banco de la República.

Graph 37  
International Reserves/M3



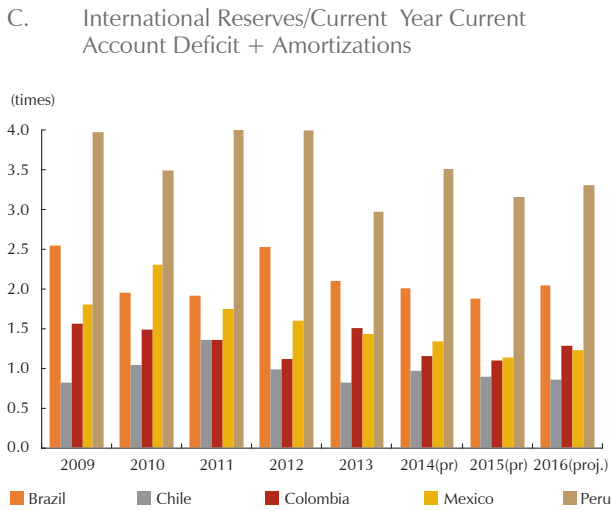
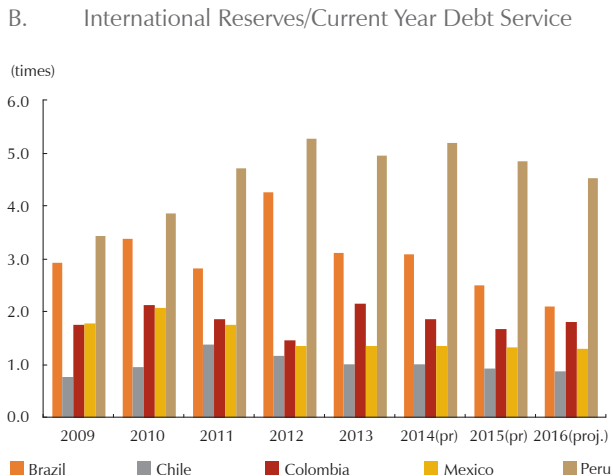
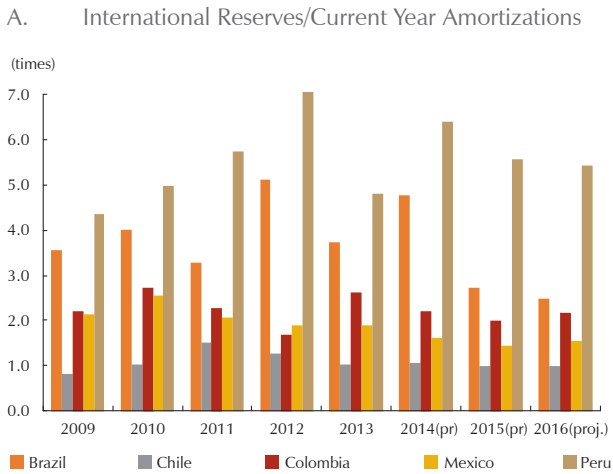
Source: Central banks, The Economist Intelligence Unit (updated February 2016) and Banco de la República.

has the capacity to cover making use of its international reserves in the face of an abrupt change in the trade balance. This indicator has been estimated at 10.5 months for 2016, higher than the average since year 2000. When calculating this indicator for imports of goods, it can be seen that it amounts to 12.9 months.

When comparing the different Colombian international liquidity indicators with those of the countries in the Region, it can be seen that the quotient between reserves and M3 registers levels above those of Brazil, Chile, and Mexico and below those of Peru<sup>34</sup> (Graph 37).

34 This ratio's growth and level has to be highlighted for Peru, since local banks can attract deposits in United States dollars, and the legal reserve thereof is posted as reserves.

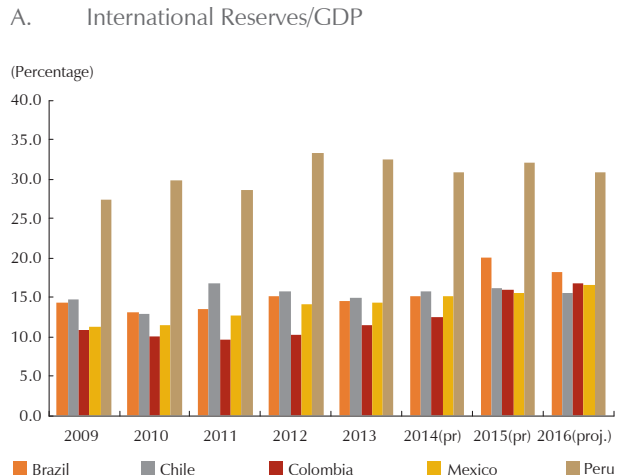
Graph 38  
Adequate External Liquidity Position Indicators



(pr): preliminary.  
(proj.): projected.  
Source: Central banks, The Economist Intelligence Unit (updated June 2016) and Banco de la República.

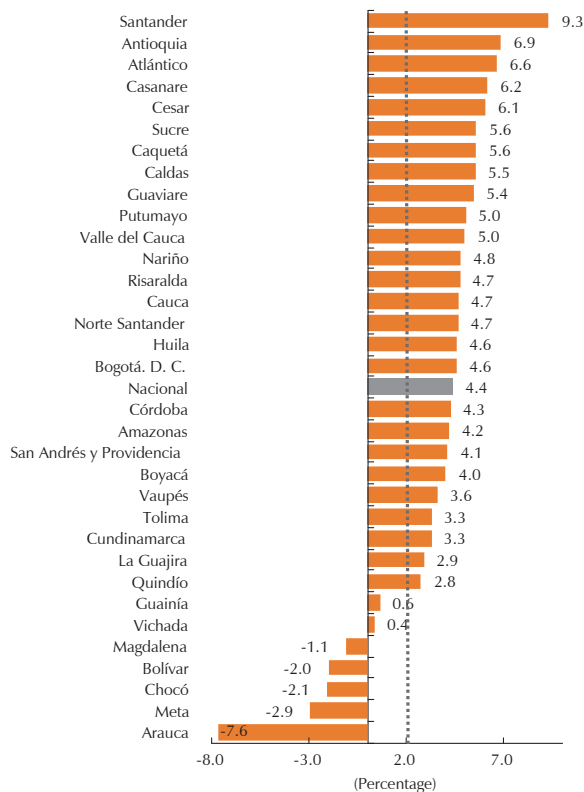
In the international reserves to repayments, debt service and current account deficit plus amortizations ratio, Colombia is historically recording levels higher than those of Chile and lower than those of Brazil and Peru (Graph 38). On the other hand, the reserve indicator-to-GDP stands at lower levels than those observed in the remaining peer countries in the Region, with the exception of Chile and Mexico that, with an estimated information as of 2016, stand below Colombia. As for reserves measured in months of goods imports, they show that Colombia has a relative position above those of Chile and Mexico, and below those Brazil and Peru (Graph 39).

Graph 39  
Other International Reserve Indicators



(pr): preliminary.  
(proj.): projected.  
Source: Central banks, The Economist Intelligence Unit (updated February 2016) and Banco de la República.

Graph 40  
Annual GDP Growth by Department, 2014



Source: DANE; estimates by Banco de la República

## F. COLOMBIAN REGIONAL ECONOMY

### 1. The departmental economies in 2014

GDP results by departments in 2014<sup>35</sup> show that 28 Colombian territories (27 departments and the Capital District of Bogota) out of the total 33 increased their output with respect to 2013.

In 17 territorial bodies, production expanded at a rate higher than that of the national average (4.4%), while 11 grew at a slower pace than the country's total rhythm, and five recorded a fall (Graph 40).

Departments having exhibited the best performance in terms of growth, as well as the larger contribution to the national outcome and GDP increase per capita show a diversified economic structure. Among them, Santander, Antioquia, and Atlántico stand out with more than a half of their product coming from sectors such as construction, commerce and business services<sup>36</sup> having grown above the national average.

Santander was the department with the most outstanding product growth in 2014 at an annual rate of 9.3%, the highest in the past eighteen years (Graph 40). This is mainly a consequence of the good outcome of sectors like construction, followed by mining and quarrying. Likewise, its contribution to the growth of the country's economy was the third most important after Bogota and Antioquia (Graph 41). Lastly, its gross domestic product per capita experienced the fastest expansion by shifting from 172% of national GDP per capita in 2013 to 187% in 2014. Its level is the third highest, after Casanare and Meta.

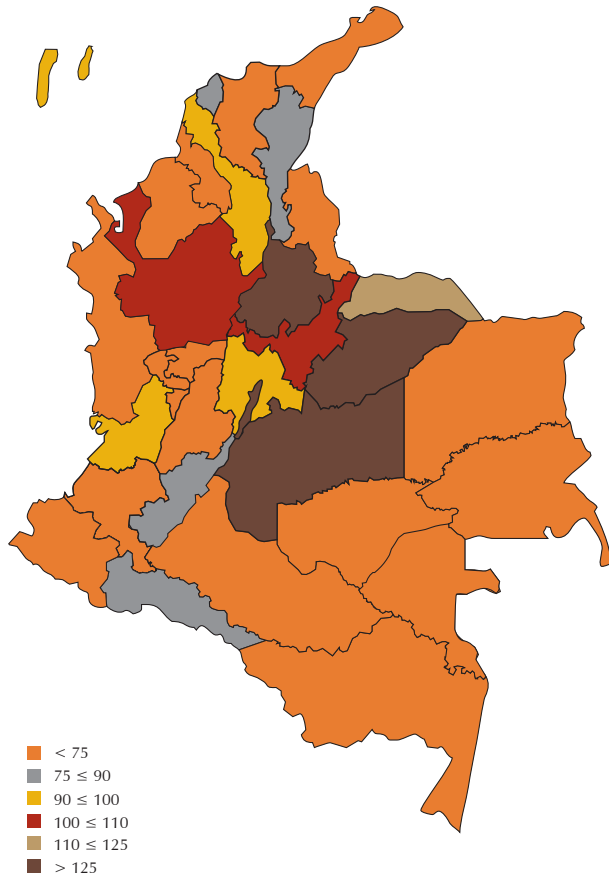
Also, Antioquia and Atlántico increased their product per capita with relation to national GDP, though in a smaller proportion (Map 1 and Map 2). They recorded the second and third higher GDP growth rate, i.e. 6.9% and 6.6% respectively. Along with Bogota, Santander, and Valle del Cauca, these five departments contributed with 80% of national production (Graph 41). In particular, the contribution of the Capital District of Bogota was 26.5% and Antioquia amounted to 20.8%.

35 DANE publishes the Departmental GDP for 33 territories in the country. The closing of the most recent information available is as of year 2014.

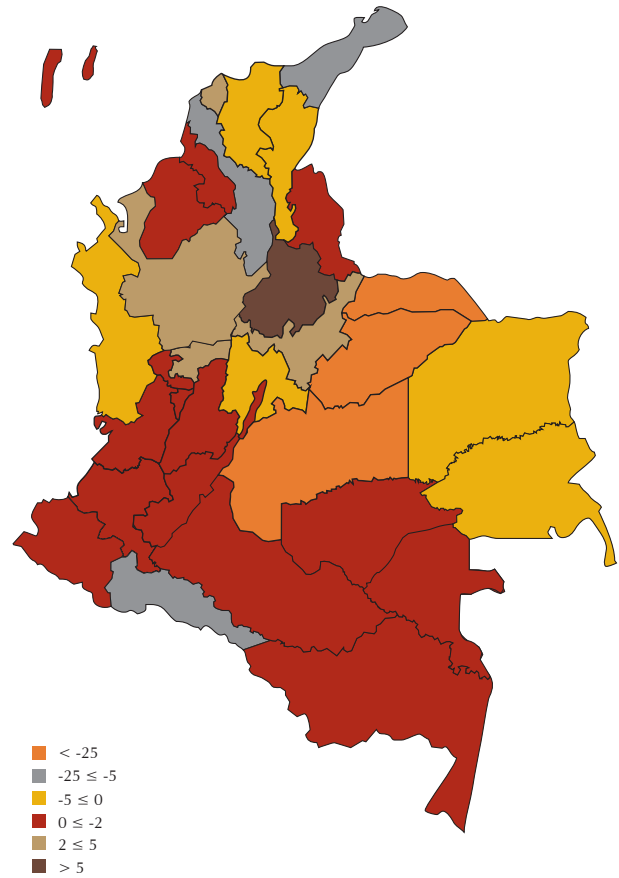
36 Business services: financial establishments, insurances, real estate activities, and services to businesses.



Map 1  
Per Capita GDP by Department, 2014  
(percentage of the national per capita GDP)



Map 2  
Change in the Departmental GDP, 2013-2014  
(percentage of the national per capita GDP)



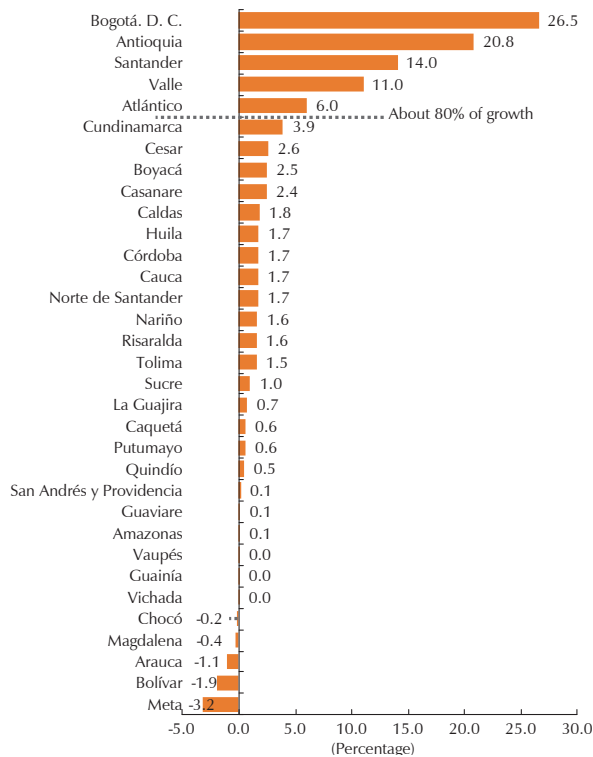
Source: DANE; cálculos del Banco de la República.

Territories having experienced a drop in their output were characterized by concentrating a great part of their economic structure in one single sector (the departments of Arauca and Meta) and by local backwardness in their productive composition (departments of Choco, Bolivar and Magdalena). Arauca experienced the most pronounced GDP fall among the country's territories, followed by Meta. These territories had based at least a half of their economy in crude oil and natural gas extraction, these activities belonging in the mining sector which was the only one experiencing a decline in the national order. In addition, their GDP per capita as a proportion of the gross national product had been significantly decreased and, along with Casanare, were showing the largest reductions. Nevertheless, they remain among the departments exhibiting the highest per capita product.

In the department of Bolivar, industry which is the main sector with a contribution of 22.8% in departmental economy, was affected (-17.8%) due to the closure of the Cartagena Refinery (Reficar) since March 2014, because of the enlargement



Graph 41  
Contribution by Department to the National Annual GDP,  
2014



Source: DANE; estimates by Banco de la República

and modernization of the industrial complex<sup>37</sup>, this process being concluded in its first stage in October 2015. The GDP decline observed in the department of Magdalena was the result of the reduction in the building activity having experienced an annual 33.7% contraction despite the fact that this sector had been the most dynamic in the national context. This was especially caused by the sharp 40.7% drop experienced in building construction. On its side, Choco concentrated a little more than half its GDP in the mining and social services sectors<sup>38</sup>. Specifically speaking, activities dealing with the extraction of metal ores and also with public administration and defense were the main causes of the departmental production fall due to annual contractions of 22.1% and 5.4%, respectively..

## 2. Labor market in 2015, per Departments

According to the most recent data available by departments as of year 2015<sup>39</sup>, labor indicators in the different territories of the country have shown performances like those having been observed in the national context. The reduction in the unemployment rate - UR - observed in the previous years was maintained, although in less magnitude. Despite the decrease seen in most departments, increases were recorded in Atlántico, Bolivar, La Guajira, Magdalena, Norte de Santander, and Tolima (Table 9). Only eight out of the 24 included in these data, i.e., the departments of Quindío, Norte de Santander, Choco, Valle del Cauca, Risaralda, Tolima, Meta, and Cauca, had kept a two-digit UR.

On a national average, the UR in 2015 went down in spite of an increase in labor supply, as measured by the global participation rate (“Tasa Global de Participación - TGP”) because an effective increase in demand took place, as measured by the employment rate-ER (in the sense of exercising a regular activity, job, work, profession...). This behavior was identified in almost a half of the country’s territories.

The most significant decreases in the departmental UR were recorded in territories having exhibited the highest indicators in previous years. Graph 42 shows

37 Garavito, A.; Gaitan, C.; Parra, D. (2014). “Nueva Refinería de Cartagena: impacto en la producción y balance del país”, (literally: New Refinery in Cartagena: An impact on the country’s production and balance) in Informe sobre Inflación (Inflation Report) September 2014, Bogotá: Banco de la República.

38 Social Services: social, community, and personal services.

39 DANE’s calculations are made with on an annual basis for 23 departments and Bogota, D. C. The departmental total refers to these 24 territories.

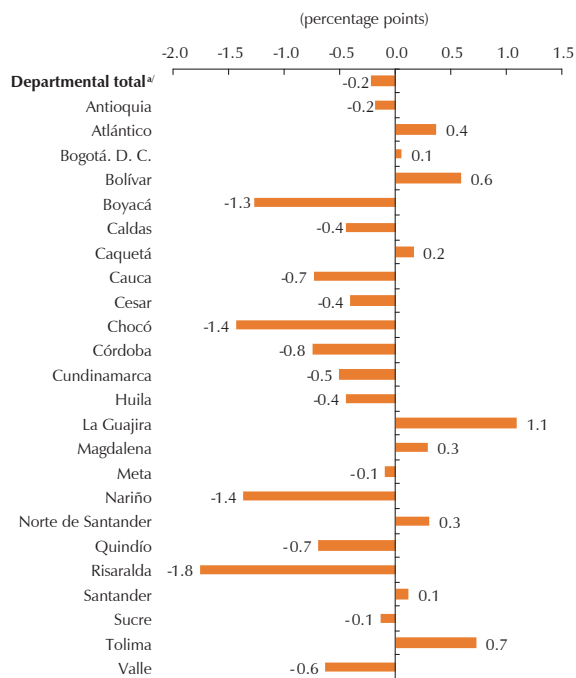
Table 9  
Labor Market Indicators By Department  
(percentage)

Departments	Labor Force Participation Rate (LFPR)			Employment Rate (ER)			Unemployment Rate (UR)		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
<b>Departmental Total<sup>a/</sup></b>	<b>64,3</b>	<b>64,5</b>	<b>65,0</b>	<b>58,1</b>	<b>58,6</b>	<b>59,2</b>	<b>9,6</b>	<b>9,1</b>	<b>8,9</b>
Antioquia	63,9	63,5	62,7	57,7	57,5	56,9	9,7	9,4	9,2
Atlántico	60,1	60,9	63,4	55,6	56,3	58,4	7,5	7,6	8,0
Bogotá, D. C.	71,9	72,5	71,6	65,5	66,2	65,4	9,0	8,7	8,7
Bolívar	59,2	59,1	59,6	54,9	55,3	55,4	7,3	6,4	7,0
Boyacá	58,3	60,8	63,0	53,2	56,3	59,1	8,9	7,5	6,2
Caldas	53,4	54,3	56,7	48,4	49,5	51,9	9,2	8,8	8,4
Caquetá	51,0	53,6	54,9	46,8	49,5	50,7	8,2	7,6	7,8
Cauca	56,7	58,5	59,6	50,4	52,1	53,6	11,3	10,8	10,1
Cesar	55,9	55,4	56,5	51,3	50,2	51,4	8,3	9,3	8,9
Chocó	51,7	44,9	48,7	45,9	39,3	43,3	11,2	12,4	11,0
Córdoba	60,1	59,7	62,4	54,9	55,6	58,6	8,6	6,8	6,0
Cundinamarca	69,1	71,5	71,4	63,3	65,5	65,8	8,3	8,4	7,9
Huila	64,0	61,1	64,2	58,5	56,2	59,3	8,6	8,1	7,6
La Guajira	68,8	67,2	67,6	63,9	63,1	62,7	7,1	6,1	7,2
Magdalena	55,8	56,6	57,1	51,4	52,6	52,9	7,9	7,1	7,4
Meta	61,1	61,4	64,0	54,8	55,1	57,4	10,4	10,3	10,2
Nariño	67,6	67,6	68,4	60,1	60,5	62,1	11,0	10,5	9,2
Norte de Santander	61,6	59,6	59,2	53,6	52,3	51,8	13,0	12,2	12,5
Quindío	62,7	63,6	63,3	52,8	55,0	55,2	15,8	13,5	12,9
Risaralda	60,9	62,3	62,6	53,1	54,6	56,0	12,8	12,3	10,5
Santander	69,2	68,9	68,7	64,2	64,4	64,1	7,3	6,5	6,7
Sucre	59,1	59,3	57,6	53,6	54,3	52,8	9,4	8,4	8,3
Tolima	67,2	66,8	68,4	60,7	60,3	61,3	9,7	9,7	10,4
Valle	66,0	65,7	66,9	57,5	58,0	59,6	12,9	11,7	11,0

a/ The departmental total includes 23 departments and Bogota D.C.  
 LFPR = (economically active population/working age population) X 100  
 ER = (employed / working age population) X 100  
 UR = (unemployed / economically active population) X 100  
 Source: DANE (GEIH); estimates by Banco de la República.

Risaralda as the department having displayed the most notorious decrease in the unemployment rate, as a consequence of a growth in the demand for jobs (the number of employed individuals increased by 14,000) which exceeded the higher labor supply (global participation rate “TGP”) (6,000 new people entered the labor market in search of work). Notwithstanding the foregoing, the department of Risaralda continues to maintain a two-digit unemployment rate that exceeds the total departmental rate by 1.7 pp. It is followed by

Graph 42  
Change in the Unemployment Rate, by Department, 2014-2015

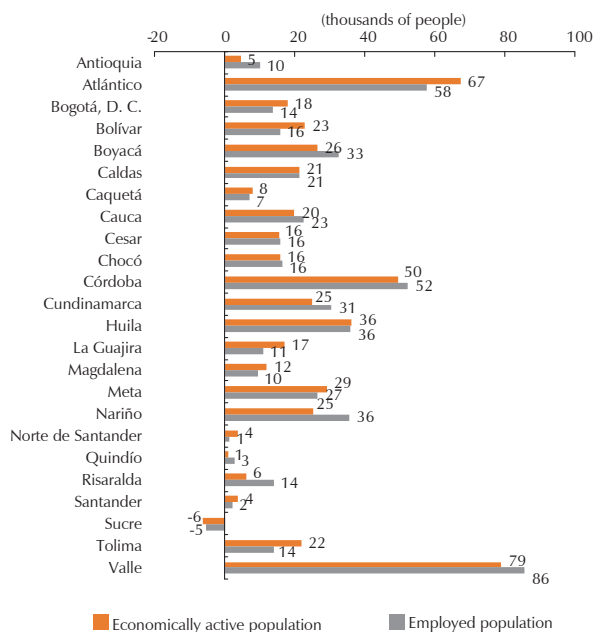


a/ The departmental total includes 23 departments plus Bogota D.C.  
Source: DANE; estimates by Banco de la República

Choco and Nariño, these departments having as well increased their ER and “TGP,” but still keep an UR above the national average. Other departments in this group with a high UR but with a significant decrease were Quindío, Cauca, and Valle del Cauca.

With respect to the creation of jobs, Graph 43 shows the absolute changes within the economically active population and the number of occupied people in 2015 when 529,000 new jobs were created in the 23 departments and Bogota, Capital District. The department of el Valle is in the first place with the larger number of new job posts (79,000), this having contributed to a 60 bp drop in the UR; even so, this department continued to exhibit a two-digit unemployment rate, in this way exceeding by 2.1 pp the departmental total. It is worth pointing out that the share of financial and real estate establishments’ activities along with those of commerce, hotels, and restaurants was 38.6% en 2014<sup>40</sup>. These sectors are characterized by high labor intensity and they were those showing the topmost growth within national GDP in 2015.

Graph 43  
Change in the Economically Active Population and the Number of Employed, by Department, 2014-2015



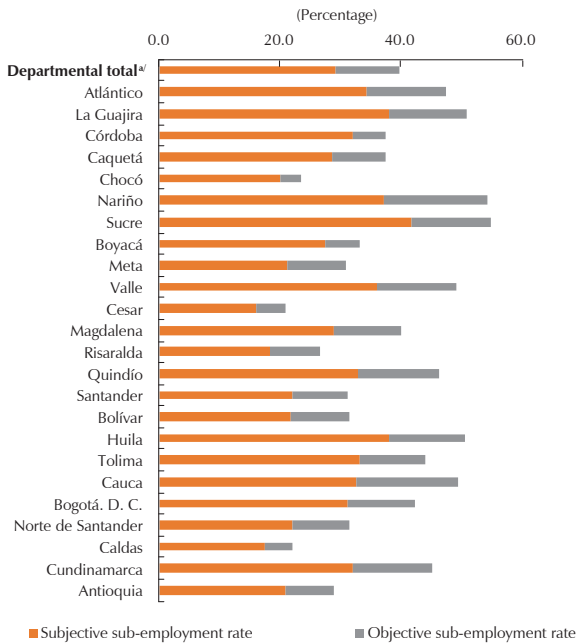
Source: DANE; estimates by Banco de la República

A part of advances in the ER observed throughout the different territories of the country coincides with the increasing number of the underemployed, a particular occurrence in the departments of Atlántico, Cordoba, Caquetá, Choco, Nariño, and Sucre, this in spite of having maintained for the departmental total the percentage considered as underemployed<sup>41</sup> (39.8%), 10.8% of which took steps and/or carried out procedures in order to improve their conditions (objective underemployment) and 29% at first reported their dissatisfaction but without undertaking any actions (subjective underemployment). In all the territories, the underemployed consideration at first responded to

40 According to DANE’s departmental “GDP” statistics.

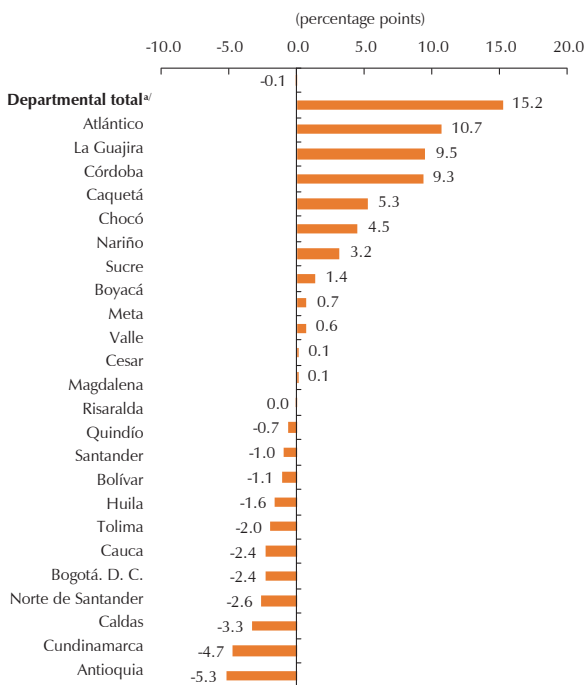
41 Subjective underemployment refers to “the simple wish expressed by workers to improve their income, the number of hours worked, or to have a job more suited to their personal skills. Objective underemployment includes those who nurture this wish but, in addition, have taken steps to make their aspiration come true and are willing to carry out this change” (Source: DANE [GEIH42).

Graph 44  
Subjective and Objective Underemployment Rates, by Department, 2015



a/ The departmental total includes 23 departments plus Bogota D.C.  
Source: DANE; estimates by Banco de la República

Graph 45  
Change in the Total Underemployment Rate, by Department, 2015



a/ The departmental total includes 23 departments plus Bogota D.C.  
Source: DANE; estimates by Banco de la República

inadequate income-related working conditions<sup>42</sup>, followed by inappropriate skills-related requirements<sup>43</sup>, and insufficient time-related conditions<sup>44</sup>.

Sucre, La Guajira, and Huila had the highest subjective underemployment rates, close to 40%, while the lowest underemployment rates were exhibited by Caldas, Cesar, and Choco (Graphs 44 y 45). In some of the 24 departments (including Bogotá, D. C.), total underemployment<sup>45</sup> exceeded over half of the occupied population. This was the case of Sucre (54.7%), Nariño (54.2%), La Guajira (50.8), and Huila (50.5%).

In the first three cases, an annual increase in this indicator occurred in 2015, while it has been declining in the department of Huila. On the other hand, the department of Nariño recorded the highest percentage of people having taken steps or carried out formalities designed to make their aspirations come true (objective underemployment) with more than 16%, therefore above the departmental total (10.7%).

Regarding labor income and according to DANE's Great Integrated Household Survey (GEIH) information available for 23 capital cities, real hourly wage grew 3.1% in 2015. Earned income increased above the average in six of these cities (Graph 46). Pasto, where salaried workers having most increased their income were those with no formal higher education (10.2%) (Graph 47); however, the annual growth gap between these and those with over fifteen years of studies (university) remains high.

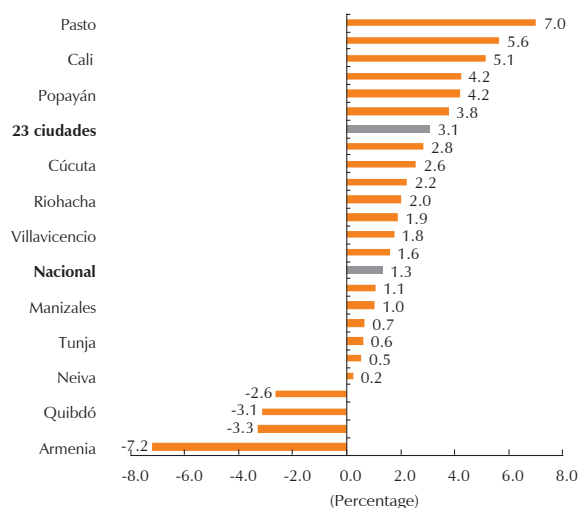
42 Includes "all the occupied people wishing or seeking during the reference period to change their current employment situation in order to improve their limited income" (Source: DANE [GEIH]).

43 Includes "all the people who work that during the reference period wish or try to change their present job situation in order to make better use of their professional competences, and are available to do so" (Source: DANE [GEIH]).

44 Includes "the occupied wishing to work more hours at either their main or secondary job and have a working-day schedule below 48 hours per week" (Source: DANE [GEIH]).

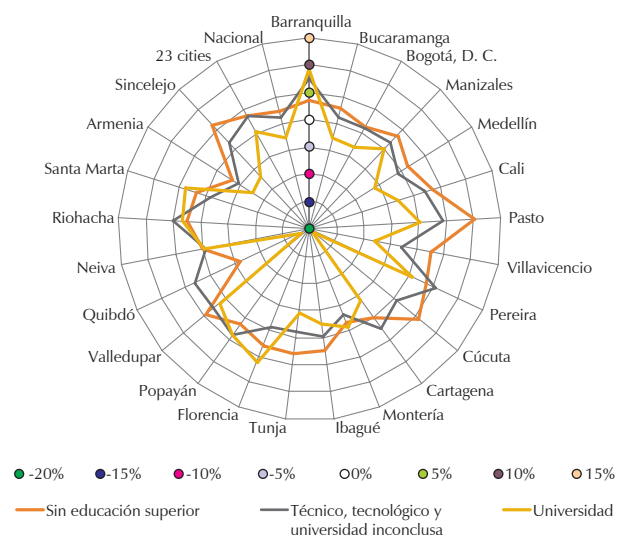
45 Underemployment rate: (number of underemployed people / economically active population) x 100.

Graph 46  
Annual Growth of the Real Median Hourly Earnings of  
Workers, 2015



Source: DANE; estimates by Banco de la República

Graph 47  
Annual Growth of the Real Median Hourly Earnings of  
Workers by Education Level



Source: DANE; estimates by Banco de la República

On the other hand, Barranquilla, the second city with the highest increase in this indicator, the best progresses took place for those with more than fifteen years of education (9.3%) and among technicians and technologists (T&T) and unfinished university studies (7.5%); a person at this last level earns on average half what those with a university education obtain.

On the other hand, Armenia, Quibdó, Bogotá, and Montería showed a decline in the indicator; in the other three cities, the most significant decrease was seen in the earned income of people with a university education.

### 3. Consumer inflation by cities in 2015

Annual consumer inflation in 2015 came to a close above the record of the previous year for the 24 cities analyzed, in this way consolidating a growing trend in the past 2 years. Major variations took place in Manizales (7.97%) and Sincelejo (7.78%), well above the national total (6.77%), while smallest variations occurred in Cucuta (5.58%) and Bucaramanga (6.02%) (Table 10). As for the Consumer Price Index with no foods, the variation was lower than total inflation in each town, while food CPI exhibited higher acceleration. Manizales, in addition to showing the highest total inflation among the 24 cities, it recorded the most serious acceleration in 2015 as compared with that of a year back (467 bp) just like in the case of foods the increase of which, namely 866 bp, placed it at 13.15% for 2015.

On behalf of the phenomenon of El Niño's strength and lengthening, foods were the group most contributing to total inflation in the majority of the 24 cities. In all of them, with the exception of Santa Marta, Medellín, and Bucaramanga, increases exceeded 10% with Pasto standing out with the highest (13.96%).

The perishables subgroup, that is calculated for thirteen cities<sup>46</sup> was the one displaying the highest rising rate (above 25% for nine out of these thirteen towns), followed by processed items (only three below 9%), and take-out food/eating outside home (all the cities within a range between 3% and 7%).

46 Thirteen cities would follow, where DANE figures are disaggregated not only by spending groups but also by subgroups, class, and base spending: Barranquilla, Bogota, Bucaramanga, Cali, Cartagena, Cucuta, Manizales, Medellín, Montería, Neiva, Pasto, Pereira, and Villavicencio.

Table 10  
Inflation Indicators by Cities

City	Total Inflation (percentage)		Change (bp)	Non-food (percentage)		Variación (bp)	Food (percentage)		Change (bp)
	2014	2015		2014	2015		2014	2015	
Armenia	3.39	6.95	356	2.75	5.11	236	5.26	12.22	696
Barranquilla	3.42	7.65	423	2.70	6.44	374	5.17	10.55	538
Bogotá, D. C.	3.77	6.62	285	3.72	5.01	129	3.88	10.86	698
Bucaramanga	4.32	6.02	170	3.89	4.17	28	5.15	9.64	449
Cali	3.79	6.85	306	3.27	4.71	144	5.19	12.48	729
Cartagena	3.54	7.40	386	2.98	5.99	301	4.84	10.61	577
Cúcuta	2.87	5.58	271	1.85	3.25	140	4.93	10.10	517
Florencia	3.36	6.80	344	2.52	4.46	194	5.20	11.75	655
Ibagué	4.12	6.73	261	3.73	4.75	102	5.01	11.20	619
Manizales	3.30	7.97	467	2.84	5.90	306	4.49	13.15	866
Medellín	3.44	6.82	338	2.80	5.93	313	5.44	9.56	412
Montería	3.74	6.78	304	2.76	5.23	247	6.27	10.62	435
Neiva	3.79	7.20	341	2.95	4.31	136	5.48	12.91	743
Pasto	4.00	7.58	358	2.71	4.64	193	6.92	13.96	704
Pereira	3.12	6.87	375	2.32	5.54	322	5.34	10.42	508
Popayán	3.47	6.88	341	2.14	4.60	246	6.49	11.86	537
Quibdó	2.77	6.27	350	1.96	3.62	166	4.28	11.13	685
Riohacha	3.53	7.11	358	2.44	5.04	260	5.51	10.76	525
San Andrés	3.77	7.25	348	2.81	4.96	215	5.40	11.00	560
Santa Marta	3.39	6.70	331	2.68	5.58	290	4.84	8.96	412
Sincelejo	3.51	7.78	427	2.14	6.03	389	6.28	11.18	490
Tunja	3.60	6.07	247	2.84	4.30	146	5.37	10.13	476
Valledupar	4.29	6.76	247	3.77	5.36	159	5.60	10.19	459
Villavicencio	3.30	6.56	326	2.64	4.50	186	4.70	10.84	614
<b>National Total</b>	<b>3.66</b>	<b>6.77</b>	<b>311</b>	<b>3.26</b>	<b>5.17</b>	<b>191</b>	<b>4.69</b>	<b>10.85</b>	<b>616</b>

Source: DANE; estimates by Banco de la República.

The behavior for perishables in the course of 2015 was particularly influenced by a significant drop in precipitations in most part of the country. Among the different statistical data available as provided by the Monthly Climatologic Bulletin of the IDEAM (the Colombian Hydrology, Meteorology, and Environmental Studies Institute) for different zones, a stronger impact can be noticed in the Caribbean and Andean regions. For instance, Neiva, Palmira-Valle and Riohacha-La Guajira were the territories where rains throughout all the months of the year remained much below the historical average while in Bogota, Cucuta-Norte de Santander and Lebrija-Santander they persisted for over a half of the year. In other cities and zones, it was from May that the evidence of a decline in rainfall was more notorious while, in almost all measuring points in the national territory, December was the month with the most considerable rainfall deficit in comparison with the historical shortage. In parallel, throughout 2015, also monthly average temperature stood above the historical mean in most zones. Besides, in the course of the year, an upward trend was perceived in the

increase of the gap between monthly average temperature and the historical mean in the areas referred to in the subject dealing with rainfall, such as Neiva, Cucuta-Norte de Santander, Lebrija-Santander, Bogota, and in Quibdó-Chocó.

With respect to the inflation indicator without foods and with no regulated items<sup>47</sup> for the group of the thirteen major cities, acceleration was observed during 2015, with Cucuta being the town with less annual variation (2.79%), while Medellin was characterized by the higher record above 6% (Graph 48). By expenditure groups, a higher generalized increase in annual consumer inflation was seen. Two behaviors stood out: 1) the only deflation took place in Cucuta for clothing (-7,2%), and 2) there was a regional pattern in the conduct of inflation in the housing group, since only cities in the Caribbean coast exhibited variations higher than 6% (the highest, Barranquilla with 8.9%).

Graph 48  
Non-Food, Non-Regulated Inflation, Thirteen Cities



Source: DANE; estimates by Banco de la República

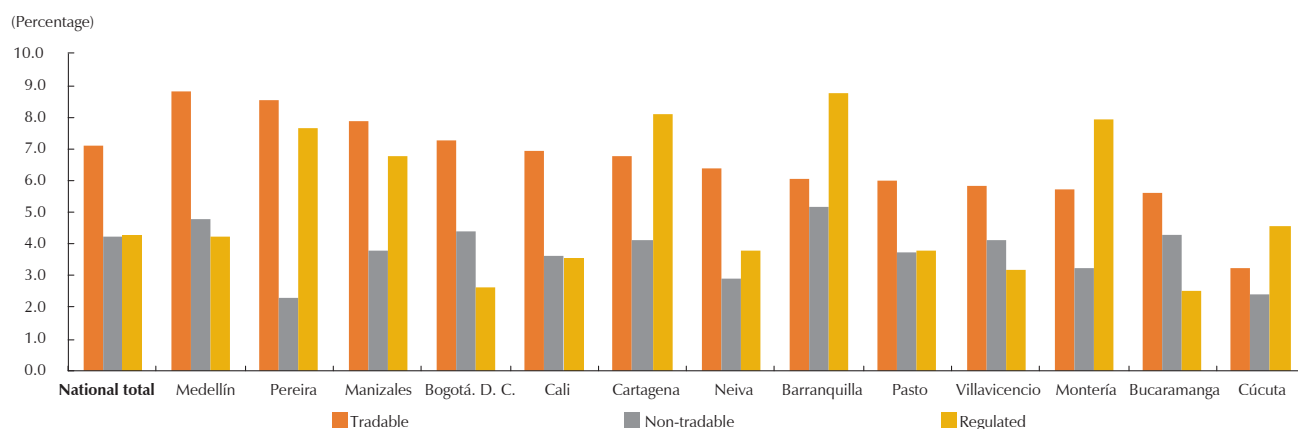
47 Calculations made by Banco de la República using DANE information.



The upward trend in the inflation evolution seen in the different cities in 2015 was as well marked by the pass-through of the acute depreciation to the prices of imported products that ended up impacting on foods and tradable segments.

The segment of tradables (with neither foods nor regulated items) showed acceleration in the evolution of prices by shifting in 2014 from an inflation in a range between 1.3% and 2.6% for the different towns, to another one between 3.2% and 8.9% in 2015, vis-à-vis a national range the annual variation of which jumped from 2.03% to 7.09%. This shift is largely attributable to the transfer of Colombian peso depreciation to the costs of imported items and from these to the final consumer goods. Medellín held the highest record of tradables without foods and regulated items (8.83%), where household appliances and vehicles, among other items had advances higher than 10%, while Cucuta reached the lowest record (3.22%) (Graph 49).

Graph 49  
CPI of Tradable<sup>a/</sup>, Non-tradable<sup>a/</sup> and Regulated Items,  
Thirteen Cities, 2015



a/Excluding food and regulated  
Source: DANE; estimates by Banco de la República

On the other hand, for inflation in the non-tradable segment without foods and regulated items, Barranquilla was characterized for being the town with the highest upturn (5.20%), above the national record (4.21%) at the closing of 2015. In this case, and to a large degree this was attributed to the basket's goods and services associated with housing, while increases in the other towns (with the exception of Neiva, Cucuta and Pereira) were between 3.0% and 5.0%.

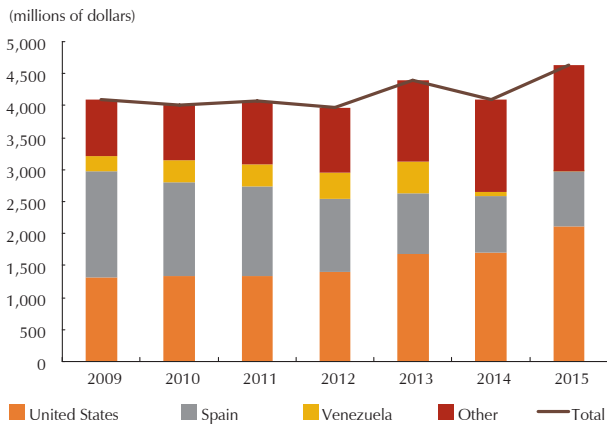
Finally, as for the inflation of the group of regulated items (fuels, utilities and public transport), even having remained at levels similar to those of 2014 for the national total, there were some towns with important increases in utilities, particularly in the Caribbean region. An important contribution in these increases was that of the significant variation in gas and electric energy (31.2% and 21.7% respectively on average for the three Caribbean cities), relating to a larger extent to new gas tariffs stipulated by the Energy and Gas Regulation Committee (CREG) and, to a lesser degree, by the effects of *El Niño*.



#### 4. Behavior of international remittances

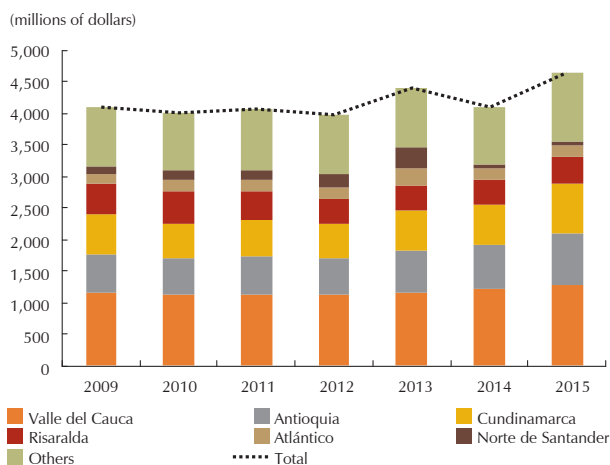
Currently, at least 2.5 million Colombians live abroad<sup>48</sup>, and their remittances to their country are a very significant source of income for their households. The most recent statistics point to an average annual inflow of USD \$4,178.6 m on this account between 2009 y 2015, of which nearly 66% enter from the United States and Spain. While remittances from the United States grew in a sustained manner during this period, those from Spain showed a downward trend. Venezuela occupied a third place in remittance volume, even if they have been dropping dramatically since 2014 as a consequence of economic contraction and restrictions imposed by the neighbor country on the forwarding of foreign currency (Graph 50).

Graph 50  
International Remittances by Country of Origin



Note: Preliminary data subject to revision.  
Remittances by department correspond to those received through foreign exchange intermediaries. Within Cundinamarca Bogota is included, and under "others," remittances from unidentified origins are included.  
Source: Banco de la República

Graph 51  
International Remittances by Department



Note: Preliminary data subject to revision.  
Remittances by department correspond to those received through foreign exchange intermediaries. Within Cundinamarca Bogota is included, and under "others," remittances from unidentified origins are included.  
Source: Banco de la República

In year 2015, remittances reached a peak of USD \$4,635.5 m that accounted for an annual growth of 13.2% with respect to the previous year. This was mainly due to the 24.5% increase in remittances from the United States and this can be explained by this country's improved economic situation. The other factor likely to have encouraged remittance forwarding was the heavy devaluation of the Colombian peso with respect to foreign currencies.

Revenues from remittances are concentrated in a few Colombian regions. In the 2009-2015 period, the departments of Valle del Cauca, Antioquia, Cundinamarca (including Bogota) and Risaralda having received about 69% of the total remittances stood out. In order of importance they were followed by Atlántico, Norte de Santander, Quindío, Caldas, Bolivar, and Santander, with a share close to 19% (Graph 51 and Table 11). In per capita terms, the department being the largest recipient of remittances between 2009 and 2015 was Risaralda, with an annual average close to USD \$464 per inhabitant, followed by Quindío, Valle del Cauca, San Andres and Providencia, and Norte de Santander (Graph 52). Generally speaking, remittances reached the regions of origin of international migrants. According to the 2005 census, 85.1% of households having reported

48 DANE's official statistics indicate that, in 2005, 3.28 million Colombians were residing on a permanent basis abroad. The World Bank most recent estimations indicate that there were 2.53 million migrants in 2013.

Table 11  
International Remittances by Departments and Countries of Origin  
(millions of dollars)

	2013					2014					2015				
	United States	Spain	Venezuela	Other	Total	United States	Spain	Venezuela	Other	Total	United States	Spain	Venezuela	Other	Total
Valle del Cauca	436.0	347.3	72.0	301.8	1,157.1	414.0	317.3	7.0	465.3	1,203.6	499.4	282.2	0.2	481.8	1,263.6
Antioquia	438.6	186.8	8.0	26.4	659.8	406.8	118.0	0.8	187.2	712.8	512.6	103.7	0.1	228.1	844.5
Cundinamarca	295.0	86.5	14.6	249.3	645.4	300.5	88.1	3.4	253.9	645.9	365.9	73.7	0.4	337.0	777.0
Risaralda	89.0	105.5	0.5	196.1	391.1	133.5	134.9	0.3	121.2	389.9	157.0	131.7	0.0	139.6	428.3
Atlántico	96.6	21.4	66.2	81.9	266.1	77.9	17.8	10.1	60.0	165.9	92.0	14.4	0.1	66.6	173.1
Norte de Santander	29.4	21.3	198.7	89.6	339.0	12.9	9.5	13.2	45.0	80.6	19.5	8.3	1.7	29.9	59.5
Quindío	62.2	49.4	0.9	27.6	140.0	56.8	43.3	0.1	51.4	151.7	73.8	39.2	0.0	58.3	171.3
Caldas	27.8	26.4	0.6	49.3	104.1	40.3	32.8	0.1	40.7	113.9	47.8	28.3	0.0	47.1	123.2
Bolívar	19.6	7.1	21.9	77.3	125.9	33.9	9.3	3.7	31.8	78.8	41.7	7.8	0.1	30.2	79.8
Santander	46.9	29.6	33.5	1.2	111.2	30.8	22.1	1.0	34.2	88.1	39.6	21.1	0.1	37.6	98.4
Other	139.4	66.1	75.0	180.9	461.3	189.5	99.2	11.4	162.1	462.2	263.1	152.8	0.1	200.9	616.8
<b>Total</b>	<b>1,680.4</b>	<b>947.2</b>	<b>492.0</b>	<b>1,281.4</b>	<b>4,401.0</b>	<b>1,696.9</b>	<b>892.2</b>	<b>51.3</b>	<b>1,452.8</b>	<b>4,093.2</b>	<b>2,112.5</b>	<b>863.3</b>	<b>2.6</b>	<b>1,657.2</b>	<b>4,635.5</b>

Note: Preliminary data subject to revision

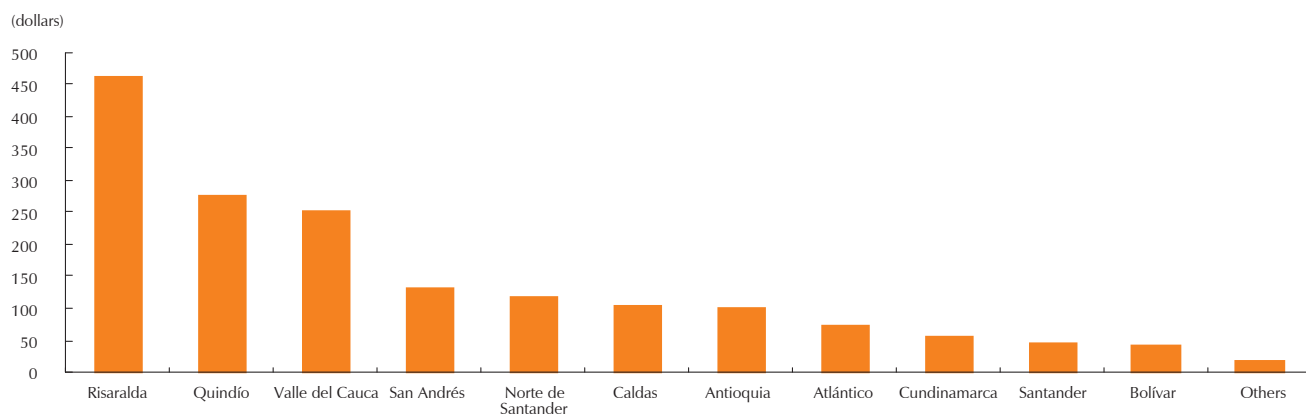
Remittances by department correspond to those received through foreign exchange intermediaries. Within Cundinamarca Bogota is included, and under "others", remittances from unidentified origins are included.

Source: Banco de la República.

at least one relative living abroad resided in one of the ten leading departments in the list of remittance recipients.

Since 2014, a heavy decrease in remittances received in the departments of Atlántico, Norte de Santander, and Bolívar was reported, caused largely by the plummeting of those from Venezuela. The most critical case is that of Norte de Santander where they shifted from USD \$339 m in 2013 a USD \$59.5 m in 2015. On the other hand, the departments having most contributed to remittance growth in 2015 were Cundinamarca (including Bogota), Antioquia, Valle del Cauca, and Risaralda. In total, all those received by these departments increased by 12.2% between 2014 and 2015. These territories are the major recipients of remittances forwarded from the United States and, therefore, those having most benefited from that country's economic recovery.

Graph 52  
 International Remittances, Per Capita by Department:  
 Annual average, 2009-2015



Note: Preliminary data subject to revision.

Remittances by department correspond to those received through foreign exchange intermediaries. Within Cundinamarca Bogota is included, and under "others," remittances from unidentified origins are included.

The departmental population corresponds to population projections for 2015 made by DANE

Source: *Banco de la República*

Box 2  
PRIMARY LIQUIDITY SUPPLY  
BY BANCO DE LA REPÚBLICA, 2008-2016

Monetary policy in Colombia is ruled by an inflation target scheme seeking to maintain a low and stable inflation rate and to reach a product growth consistent with the potential capacity of the economy. The main instrument in this framework is the reference interest rate (intervention or policy rate) whereby the Board of Directors of *Banco de la República* (BDBR) sends its policy signals. A higher interest rate tells agents to reduce or moderate their indebtedness, consumption, or investment, and vice versa.

In order to achieve that the market interest rate<sup>1</sup> stands very close to the defined intervention rate, *Banco de la República* affects the supply of the monetary base. The monetary base is the amount of money the economy uses for operating, and, as with any other asset, agents demand more of it to the extent its price (the interest rate) falls, and vice versa. Consequently, in order to ensure that the market interest rate is around the intervention interest rate, *Banco de la República* needs to provide the economy with the amount of money it demands at that price.

A fundamental difference between the inflation target scheme and prior monetary policy implementation schemes is that *Banco de la República* does not seek to lead the monetary base (or another monetary aggregate) through a specific path, but to balance the market at the desired interest rate. That, not the amount of money, is the instrument of policy.

The demand for the base fluctuates daily around an upward trend due to multiple factors. Such a trend occurs because a growing economy needs increasingly more money to operate. When faced with demand of monetary base, *Banco de la República* must supply to or drain liquidity from the market so as to keep the overnight interbank interest rate close to the benchmark rate. To do this, it has several instruments available. The various ways in which *Banco de la República* gives to and withdraws liquidity from the market are explained, as well as the changes seen in the use of these mechanisms during the last nine years.

The first section presents some general guidelines contemplated by the Bank when determining how the monetary

1 In the Colombian case, the market rate the Bank wishes to steer toward a value similar to that of the policy rate is the interbank rate (TIB). The TIB refers to the interest rate at which financial intermediaries lend funds to one another overnight. These loans are not collateralized; therefore, its rate reflects the credit risk associated with the counterparts involved in the operations.

base expands or contracts; , the second presents an account of the liquidity supply during the 2008-2014 and 2015-2016 periods.

**1. Some considerations about the monetary base supply**

The demand of monetary base is the sum total of cash and bank reserves that the credit establishments have, either as deposit accounts opened for that purpose at *Banco de la República* or as vault cash. As already noted, both depend inversely on the short-term interest rate and directly on the nominal value of the transactions of the economy. Banking reserves are also determined by the legal reserve requirements. Cash, on the other hand, also responds to seasonal factors, such as weekends, holidays, payroll payments, etc.

On its part, since the monetary base is a liability of the Central Banks with the public, movements of items in the Bank's balance sheet affect the supply. The balance scheme of a central bank like Colombia's is as follows (Table B2.1):

Table B2.1  
*Banco de la República's* Balance Scheme

Assets	Liabilities
International Reserves	Monetary base
Investments in debt securities	Government deposits
Active operations with the financial system (active repos)	Financial system's non-reserve deposits
Others – Net	Equity
	Capital and earnings

Source: *Banco de la República*.

As with the balance of any other agent, accounts must always be balanced. Correspondingly, changes in international reserves, in the balance of investment in Government bonds (TES), in Government deposits and the Government's active and passive operations with the financial sector will affect the monetary base.

For instance, when *Banco de la República* buys United States dollars in the market, it is delivering pesos to its counterpart, thus expanding the monetary base. Con-

versely, if the Bank sells TES in its possession, the agents will give it Colombian pesos in exchange, thus contracting the base. Generally, the supply of the base may vary due to decisions external to the Bank, like an increase or decline in the Government's deposits, or because *Banco de la República* affects it in order to reach some policy objective (e.g.: the buying or selling of international reserves).

Fluctuations of the supply or the demand may alter the balance between both and induce variations in the short-term market interest rate deviating it from the level the policy rate is at. For instance, an increase of Government deposits at the Bank will reduce the supply of monetary base and, given the demand, will push the interest rate upwards. Also, a seasonal increase in the demand for cash given a fixed supply of monetary base will cause upward pressures upon the interest rate. In cases such as the above, *Banco de la República* may adjust the supply of monetary base, this way matching supply and demand to the level of the policy interest rate.

For that purpose, *Banco de la República* grants or drains liquidity by way of the following instruments (that may be derived from the balance displayed in Table B2.1):

1. Buying or selling public-debt securities<sup>2</sup>. When *Banco de la República* buys a debt security, it grants liquidity to that security's term. At its maturity, the issuer (e.g. the Government, in the case of a TES) will have to pay the capital sum to the Bank, and at that moment, the base will contract again. In this respect, the term of the liquidity granted by the Bank in this kind of operations is just as short or as long-term as the security. Likewise, *Banco de la República* seeks to be a price taker in the market in order not to alter the yield curve.

2. Performing transitory operations with the financial system. For the purpose of expanding or contracting the base, *Banco de la República* also may perform the so-called repo operations. When it wants to make an expansion, it gives funds to a financial agent (placement agents of OMOs<sup>3</sup>), and this one in turn, delivers a public debt security backing the operation in case of default. These transactions are very short-term, normally overnight, after which the operation is reversed. Usually, the agent will

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2 Since the issuance of Act 1238 / July 2009, securities issued by *Banco de la República* itself for its monetary operations may be used. Likewise, private-debt securities may be used (External Resolution ["Resolución Externa"] 11 / 2012).

3 The placement agents of OMOs for transitory operations are credit establishments and brokerage firms belonging to the Ministry of Finance and Public Credit's Market Creators (article 9, External Resolution 24 / 1998 by *Banco de la República*).

pay the intervention interest rate on these resources, with this *Banco de la República* aiming at balancing the market around said reference.

Whenever the monetary authority wants to perform a contraction, it may invite agents to make deposits that *Banco de la República* will remunerate on at the intervention rate minus a margin (remunerated non-reserve deposits ["DRNCE"<sup>4</sup>]), which, as their name indicates, are not part of banking reserves. *Banco de la República* sets the horizon for this kind of operations at the time of opening the call for agents to participate in monetary intervention auctions, and this typically is overnight.

3. Finally, as already mentioned, *Banco de la República* might need to intervene in the foreign exchange market in order to meet some policy objective and then find out that the impact on the monetary base is the one required in behalf of its monetary objectives. In such an event, the monetary effects of the foreign exchange operation will not be offset by other movements of the base supply and it will be permanent in nature. However, it is important to underscore that the original purpose of the exchange operation is not altering the base, but this being the consequence thereof<sup>5</sup>.

*Banco de la República* makes use of the instruments described above, aiming at avoiding a net short-term debtor position with the financial market; that is, a situation in which the required transitory contraction operations are greater than the expansion operations. The above is due to past instances when *Banco de la República* was faced with this kind of situation, whereby marked negative deviations of the overnight interbank rate (TIB) from the reference rate hindered the transmission of monetary policy. This happened in short periods between 2007, 2008 and 2010, and again between 2013 and 2014 (Graphs R2.1 and R2.2).

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4 This kind of deposit was created in 2004 and regulated in April 2, 2007 (Circular Reglamentaria Externa ODM 148 – Asunto 10), and replaced the mechanism of reverse repo operations (in reverse repos, *Banco de la República* receives contraction deposits and hands over securities to the financial market). However, in 2007 the balance of investments held by *Banco de la República* was very low compared to the needed contraction liquidity in the primary market, whereby the DRNCE mechanism was created.

5 Several are the reasons that can explain the intervention in the foreign exchange market, among which are: 1) to reach an adequate level of reserves with regard to the country's external payments, allowing for improved access conditions to the international financial markets and minimizing the country's vulnerability to external shocks, 2) to mitigate movements in the exchange rate not reflecting the behavior of the fundamentals of the economy, and 3) to moderate episodes of excessive exchange volatility.

In order to handle this situation, the DRNCE and monetary-control deposits<sup>6</sup> were used. The latter proceed from the placement of monetary-control TES by the Government, whose resources are deposited in *Banco de la República*. The first monetary-control deposits were made in November 2012 and were extended until November 2014, with terms from three months to three years. These deposits are characterized by remaining at *Banco de la República* until maturity.

On the other hand, a great degree of overnight leverage of the financial market with *Banco de la República* is to be avoided, in the event that the latter is in a net creditor position, since this might generate undesired upward pressures upon the TIB and an excessive mismatch in the intermediaries' balance<sup>7</sup>. As displayed by Graph B2.2, when balance of *Banco de la República*'s expansion repos increase in substantial amounts, a greater positive difference of the TIB against the policy interest rate is seen. In order to prevent this situation, the monetary authority can make final purchases of TES and repos with terms longer than one day.

## 2. Liquidity supply in the 2008-2016 period

Table B2.2 shows the sources of the supply of monetary base for the period between 2008 and June 2016, divided into two distinct periods: 1) 2008 to 2014, and 2) 2015 to June 2016.

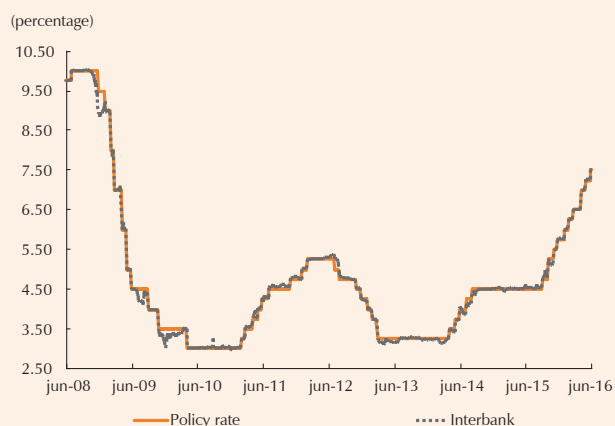
### a. 2008 to 2014

During these years, *Banco de la República* maintained an active participation in the foreign exchange market by means of the direct currency purchase auction program. These purchases amounted to USD \$24,768 b between June 2008 and December 2014, and implied a primary liquidity expansion of COP \$45,972 t during the period. As a result, this mechanism became the main source of permanent supply of monetary base, and in some periods, these resources were even greater than the growth

6 See "Circular Reglamentaria Externa DODM 276", November 14, 2012

7 When there is a considerable increase in the amount of one-day expansion operations, intermediaries may start restricting the number of securities they held as collateral for them, the perception of risk may increase due to the high dependence on this instrument for their funding, and the maturity mismatch in the balance rises, since the very long-term liabilities increase while the maturity of the asset is maintained. These circumstances, among others, may bring the TIB to stand above the benchmark interest rate.

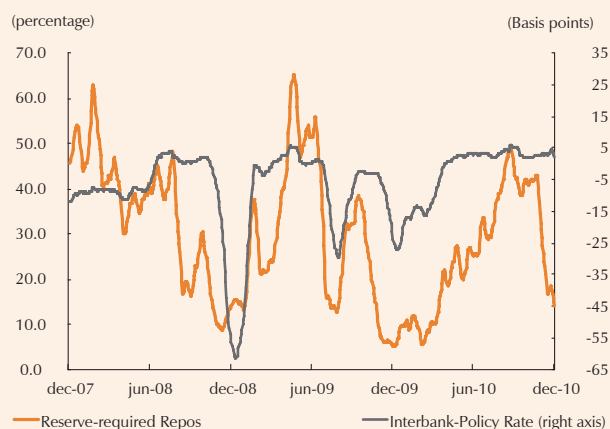
Graph B2.1  
Interbank and Policy Rates



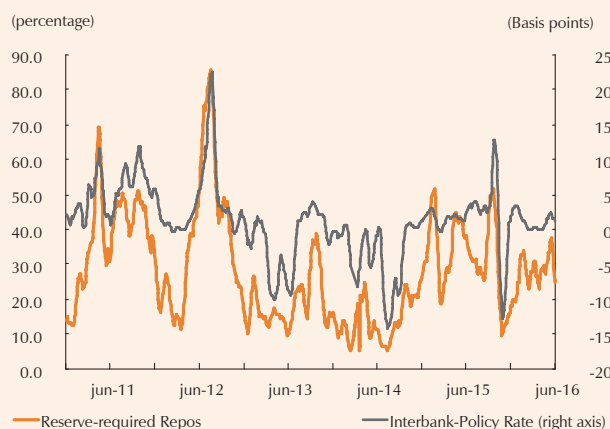
Source: *Banco de la República*.

Graph B2.2  
Total Reserve to Repos rate vs. Interbank-Policy Rates  
(15-working day moving average)

### A. 2008-2010



### B. 2011-2016



Source: *Banco de la República*.

Table B2.2  
Sources of the Monetary Base  
(billions of pesos)

Concept	annual change <sup>a/</sup>								(Variation in the year so far) Jun-16
	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Dec-15	
<b>I. Government</b>	<b>3,559</b>	<b>169</b>	<b>(769)</b>	<b>(2,363)</b>	<b>(2,914)</b>	<b>(5,972)</b>	<b>(6,330)</b>	<b>11,717</b>	<b>(16,856)</b>
Transfer of profits in pesos	1,415	0	0	0	0	0	0	0	0
Deposits at <i>Banco de la República</i>	2,144	169	(769)	(2,363)	(872)	1,971	(3,221)	3,559	(16,856)
Monetary-control interest-bearing deposits	0	0	0	0	(2,041)	(7,943)	(3,108)	8,158	0
<b>II. Liquidity-regulating TES</b>	<b>(496)</b>	<b>2,444</b>	<b>(2,446)</b>	<b>(325)</b>	<b>(442)</b>	<b>(1,037)</b>	<b>(1,369)</b>	<b>(36)</b>	<b>11,449</b>
Outright purchases	653	3,000	0	0	0	1,091	0	1,860	15,033
Outright sales	(960)	(499)	(1,999)	0	0	(1,111)	(1,236)	0	0
Maturities	(189)	(57)	(448)	(325)	(442)	(1,016)	(133)	(1,896)	(3,584)
<b>III. Banco de la República liquidity operations</b>	<b>(5,221)</b>	<b>(293)</b>	<b>1,974</b>	<b>1,534</b>	<b>(1,255)</b>	<b>2,017</b>	<b>2,914</b>	<b>(259)</b>	<b>(423)</b>
Expansion <sup>b/</sup>	(3,856)	(1,087)	2,079	1,210	(1,220)	1,557	2,799	23	(574)
Contraction <sup>c/</sup>	(1,365)	794	(105)	323	(35)	460	115	(282)	150
<b>IV. Foreign-exchange operations<sup>d/</sup></b>	<b>3,899</b>	<b>265</b>	<b>5,822</b>	<b>6,790</b>	<b>8,695</b>	<b>12,586</b>	<b>7,914</b>	<b>0</b>	<b>(781)</b>
Put options for volatility control	932	1,154	0	0	0	0	0	0	0
Call options for volatility control	(535)	(888)	0	0	0	0	0	0	0
Call options for decumulation of reserves	0	0	0	0	0	0	0	0	(781)
Options for accumulation of reserves	798	0	0	0	0	0	0	0	0
Direct-purchase auction	2,705	0	5,822	6,790	8,695	12,586	7,914	0	0
<b>Other<sup>e/</sup></b>	<b>2,037</b>	<b>766</b>	<b>750</b>	<b>828</b>	<b>1,039</b>	<b>1,035</b>	<b>1,449</b>	<b>1,425</b>	<b>494</b>
Total change in the base	3,778	3,352	5,330	6,464	5,124	8,630	4,578	12,848	(6,117)
Monetary-base balance	36,193	39,545	44,875	51,339	56,463	65,093	69,671	82,519	76,402

a/ Figures relate to the end of the calendar month.

b/ Including one-day, overnight and medium-term repos

c/ Including one-day and term contractions

d/ Excluding operations with international organizations

e/ Within "others" the monetary effect of the Bank's P/L is included

Source: *Banco de la República*.

of the demand of monetary base<sup>8</sup>. This resulted in *Banco de la República* being in a net debtor position towards the financial system in some occasions, leading it to perform sterilization operations through final sales of TES to the market.

As observed in the Table, net sales and TES reaching maturity reduced permanent liquidity in the primary market in

the amount of COP \$3,671 t during the period<sup>9</sup>. However, the balance of TES held by the bank was not enough to compensate for the monetary expansion originated by the foreign-exchange intervention, because of which using additional mechanisms became necessary, among which are:

- Larger deposits by the national government at the Bank through the placement of monetary-control TES, which started in November 2012. The balance of these deposits amounted to COP \$13,093 b in

8 Except for 2009, when the increase in the demand of the base amounted to COP\$ 3,352 t, while the exchange intervention had an expansion effect in the amount of COP\$ 265 b.

9 This figure results from the total of line II in Table B2.2 for the 2008-2014 period.



late 2014 and their maximum balance was COP \$13,915 b in November of the same year<sup>10</sup>.

- The DRNCE, with average balance of COP \$663 b during the period, and a maximum amount of about COP \$5,137 b in April 2013.
- Finally, the reduction of the quota for expansion repo operations also contributed to the draining of permanent liquidity originated in foreign currency purchases by the monetary authority.

#### **b. 2015 to June 2016**

Starting in December 12, 2014, *Banco de la República* suspended the intervention in the exchange market through direct purchase auctions. Hence, since then *Banco de la República* has provided the primary liquidity to the financial system by means of other mechanisms.

In 2015, the growth of the monetary base amounted to COP \$12,848 b. Part of that increase was generated in the reduction of COP \$11,717 b of the deposits made by the DGCPTN at *Banco de la República*. Of this amount, COP \$8,158 b corresponded to the reduction in remunerated deposits of monetary control, as a result of the maturity of monetary-control TES. As shown, changes in deposits by the DGCPTN at *Banco de la República* create movements in the balance that affect the monetary base. These changes are not determined by the monetary authority but are a source of strong movements of the base. The remaining demand was provided through expansion repos, which registered an average balance of COP \$5,867 b for one-day repos and of COP \$2,200 b for longer-term repos.

To June 2016, the Government increased deposits at *Banco de la República* by COP \$16,856 b in order to meet its cash requirements and, in particular, to meet the maturity of TES scheduled for June and amounting COP \$10,964 b<sup>11</sup> For this reason liquidity shrank by an amount greater than the seasonal reduction of the demand of the base (COP \$6,117 b). The strong amount of the DGCPTN balance for a relevant time, led *Banco de la República* to use the following combination of instruments:

1. Net final TES purchases amounting COP \$15,033 b. As already mentioned, by participating in these operations, it seeks to be a price taker (not maker) and to act in the

short tranche of the curve in order to affect the monetary base at those terms. As much as possible, *Banco de la República* purchased securities nearing maturity that, being instruments typically not traded in the market, do not lead to concentration risks. When it must participate in longer-term securities, the monetary authority avoids concentrating ownership of any particular reference so as not to negatively affect its liquidity.

2. Active repos of terms over one-day, averaging COP \$3,759 b from last January 21 to June 24, and representing an average 48% of the total expansion repos (Graph B2.3). The remaining liquidity was provided by overnight active repos.

Since monetary expansion so far this year has been primarily conducted through TES purchases and expansion repo auctions, a change in the asset composition of *Banco de la República*'s balance sheet was seen. In particular, the active balance of monetary regulation securities went from COP \$118 b to COP \$12,548 b between December 2015 and June 2016.

With this strategy, it has been sought to provide the liquidity demanded by the market at the reference interest rate. In view of the great amount of liquidity that the DGCPTN has to withdraw from the market at certain junctures, *Banco de la República*'s strategy has been to combine short-term repo operations with some long-term ones and final purchases of securities. This combination of instruments seeks to minimize the chances of the market interest rate deviating from the reference rate, something that has taken place in the past where the expansions of the base through overnight repos have been of broad amounts, and not to exacerbate maturity mismatches in the financial intermediaries' balance. Purchases are concentrated in securities a few days from reaching maturity and, when necessary, in debt instruments with longer remaining terms, whereby it takes care of not affecting the reference's liquidity. In every case, *Banco de la República* tries to be a price taker in the secondary market of public-debt securities so as not to weaken the signal of its monetary policy.

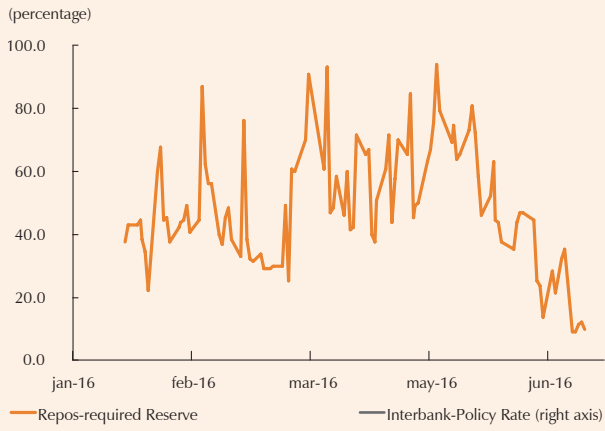
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<sup>10</sup> The remaining balance of these securities matured on July 2016.

<sup>11</sup> Nominal value at maturity, including coupons amounted to COP\$ 11,759 b.



Graph B2.3  
Term Repos/Total repos <sup>a/</sup>



a/ Information for working days. Balance of term repos between January 21 and June 24, 2016 are shown.  
Source: Banco de la República

### Box 3

## FOREIGN DIRECT INVESTMENT IN COLOMBIA: CHARACTERIZATION AND RECENT DYNAMICS CARACTERIZACIÓN Y DINÁMICA RECIENTE

### 1. Introduction

Receiving external capital resources using the foreign direct investment method (FDI) is crucial for an economy with poor capital endowment, like in the case of Colombia. Some of the advantages of this type of financing lies in the fact that this is a long-term source with more stability than other capital flows (debt and portfolio investment) that, in turn, favors access to new technologies and knowledge transfer, and it creates incentives to the modernization of the productive capacity (Dunning, 1976).

Between 2005 and 2015, Colombia recorded a significant increase in FDI inflows: at the end of the period they totaled USD \$11,942 m (4.3% of GDP), this being a higher amount than those observed in the 80's and 90' when they reached on average USD \$426 m (0.9% of GDP) and USD \$1,774 m (1.8% of GDP), respectively. Even in the first quarter of 2016, resources flowing from FDI maintained important levels (USD \$4,568 m), which indicates that the national economy continues to be attractive to foreign investors.

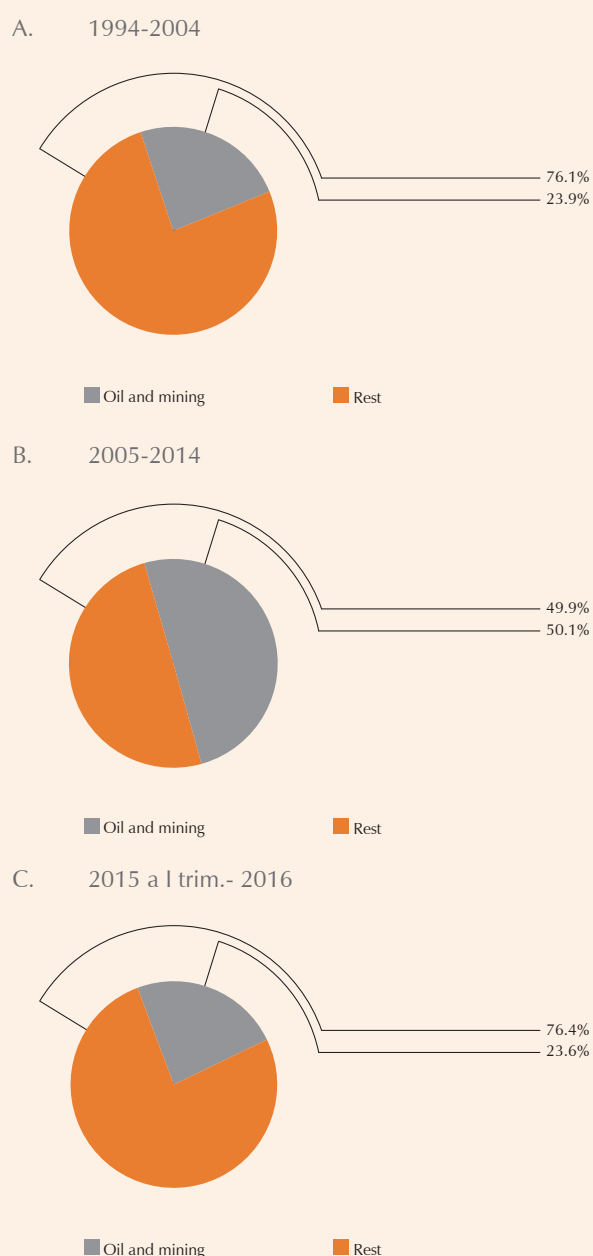
There are various reasons that can serve as an explanation for this growth: Colombia enjoys abundant natural resources, especially those of mining and energy nature, this being attractive for foreign direct investment oriented towards the exploitation and development of this kind of goods. Additionally, the incorporation of improvements into the institutional and contractual framework, as well as the boom of raw material prices (Asiedu, 2013) created the proper conditions for the FDI mass arrival in that sector for the 2005-2015 period.

Now, it is true that macroeconomic stability, domestic demand growth, larger investments in infrastructure and technology have as well favored the continued inflow of historically high amounts of FDI into the Colombian economy towards another type of productive activities. This is how sectors oriented towards the internal market received in 2015 a total of USD \$8,349 m (2.9% of GDP). In the light of the foregoing, this Box reviews some of the reasons why the FDI flow arrived into the country in such unprecedented amounts and how the levels of these financial resources have not been substantially reduced, particularly by the dynamics of activities intended to meet domestic demand.

### 2. Evolution of FDI in Colombia

Between 1994 and 2004, prior to the historical increase of raw material prices, FDI in Colombia was characterized for average annual amounts of USD \$2,500 m that were concentrated in branches oriented towards the domestic market. These sectors were mainly those connected with the supply of utilities (elec-

Graph B3.1  
FDI Flows into the Oil and Mining Sector (% share)



Source: Banco de la República.

tricity, gas, water and telecommunications), the manufacturing industry, and financial services, while altogether accounting for over 76% of the total flow (Graph B3.1, panel A).

Then, between 2005 and 2014, FDI flow in Colombia grew in a significant manner and reached annual average levels of USD \$11,300 m. These increase was in particular propelled by the larger foreign capital channeled to the exploitation of hydrocarbons and mines, these activities having obtained about 50% of the total value of FDI (Graph B3.1, panel B). These resources are as well oriented, though in a lesser degree, towards the infrastructure, transport, technology, and communications sectors.

Given the sharp fall of oil and coal prices recorded since mid-2014, a lower share of the mining and energy sector in the total flow, similar to that registered during the years preceding the spike in commodity prices (Graph B3.1, panel C), since no significant contraction has been observed in the total FDI flow. This shows that activities oriented towards the domestic market continue to be attractive to foreign investors and eligible for receiving higher external resources.

### a. FDI in the exploitation of natural resources in Colombia

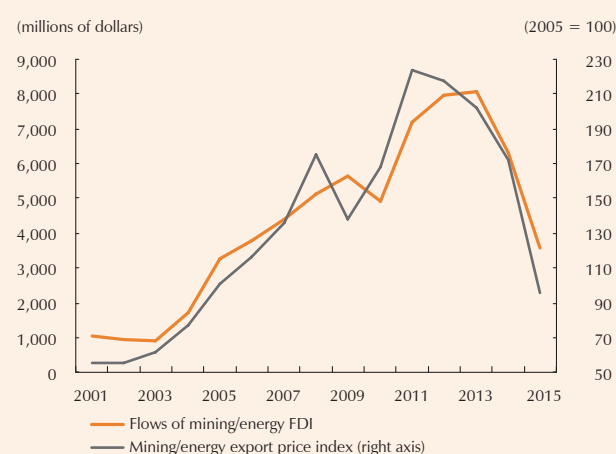
According to economic literature, the reasons serving to explain the arrival of FDI to the mining and energy sector can be exposed according to the performance of three of its determinants: 1) A relative abundance of natural resources; 2) an institutional-contractual framework, and 3) international raw material prices. In the first place, Colombia is a country with abundant natural resources, among them mineral and energy goods. An example of the foregoing is coal, of which Colombia would have sufficient measured reserves to ensure 71.5 years of production (UPME, 2015), what in turn explains the fact that the country is the maximum producer of this mineral in the region with a share of 87.7% in the Latin American market<sup>1</sup>. In the second place, different reforms leading to improve the country's competitiveness and intended to reinforce

and simplify the regulation<sup>2</sup> have been introduced within the institutional-contractual framework.

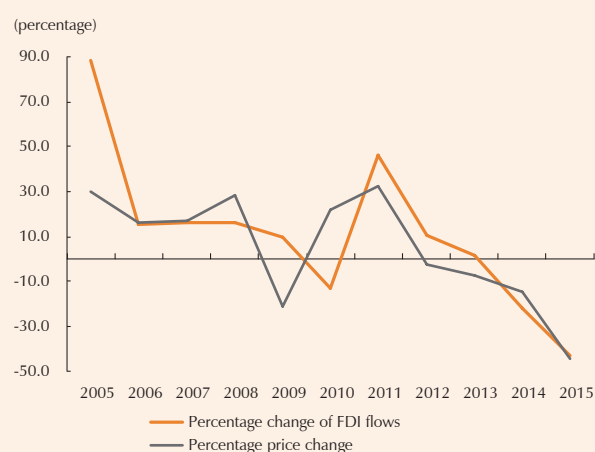
So far the 21st century, a close link among the dynamics of raw material prices, the behavior of FDI flows and the gains registered by companies with foreign capital has been witnessed (Graph B3.2). Particularly, there is a strong positive relationship between price variation in the current period (t) and mining and energy FDI a period forward (t+1) with a correlation coefficient of 76%. In other

Graph B3.2  
Prices vs. FDI Flows into the Mining and Energy Sector

#### A. Levels



#### B. Percentage Change



Source: Banco de la República.

1 As for oil, and despite the fact that proven reserves are relatively low (2,308 million barrels) with respect to other crude oil producers in the region (Venezuela and Brazil), there is a potential for an increase in the rate of recovery from existing wells, the use of new technologies, and the exploration of new areas. For the remaining mining energy goods, similar prospects emerge: nickel production is about 50,000 tons on average, which means a growth close to 100% with respect to the nineties, and the gold production during the past decade grew in a sustained manner and reached its historical maximum in 2012, with a total of 2,127 thousand troy ounces, this implying an important national gold potential (UPME, 2015).

2 Among the most recently created major public bodies like the National Mining Agency ("Agencia Nacional de Minería ANM"), the National Hydrocarbon Agency ("Agencia Nacional de Hidrocarburos – ANH") and the Mining- Energy Planning Unit ("Unidad de Planeación Minero Energetica – UPME"), that, with the support of the other government entities responsible for sector's regulation have made mining steps and formalities easier through the Integrated Mining Administration System ("Sistema Integrado de Administración Minera" – ANM", 2014).

words, it can be seen that FDI increase in this sector is preceded by a rise in prices, especially since year 2007.

Overall, the abundance of natural resources and a favorable institutional and contractual context attracted significant FDI flows towards enterprises connected with the mining and energy activity. Besides, as a consequence of high prices and the larger production volume observed during 2005 and 2015, it has been estimated that the average implicit profitability<sup>3</sup> of mining and oil in Colombia was above that of the FDI recipients sectors (14.7% as compared with 8.3% of the rest), which did also help attract important flows of external capital towards these activities.

Nevertheless, in the past two years, this trend was reverted as a result of the plummeting of the international prices of these raw materials, and it has translated into a sharp decline of the mining and energy activity's average implicit profitability to levels of 5.2%, standing below those of the other activities (7.5%). Therefore, when expectations of higher gains for investors were seriously affected, investment for the exploitation of natural resources in the country has contracted.

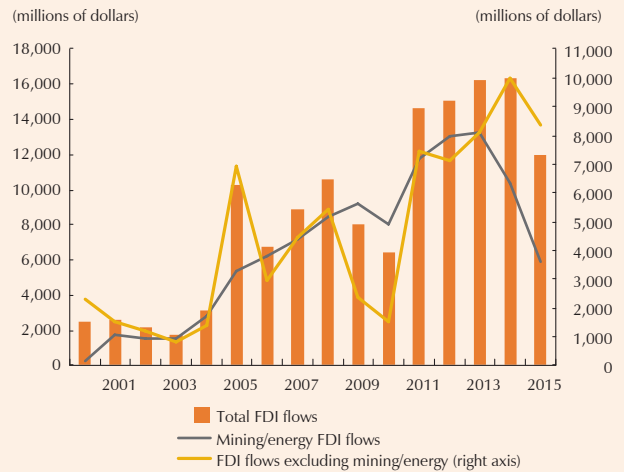
**b. FDI in Colombia in productive sectors focusing on the domestic market**

The recent evolution of FDI flow in economic activities oriented towards the domestic market is offsetting in part the reduction in flows destined for the exploitation of natural resources, and this is based in the fact that the other sectors continue to receive a FDI flow that has even reached its historical maximum en 2014, with a total amount of USD \$10,011 m (Graph B3.3).

Unlike the mining energy sector, FDI received by the other economic activities has focused mainly on making the best use of advantages offered by a dynamic domestic market of a large size like Colombia's. An evidence of this is the low share of exports in the total income of enterprises with FDI different than the one received by mining or oil companies: between years 2005 and 2014, their external sales accounted on average for 11.1% of their total revenues, in contrast with the 78.9% of those of the mining and energy sector.

In this same period, the sectors oriented towards the domestic market having received larger FDI were the

Graph B3.3  
FDI Flows



Source: Banco de la República.

manufacturing industry (particularly in the preparation of food and beverages and the making of chemical, paper and carton products) with 35.2% of the accumulated FDI flow; financial establishments (19.7%); transport, storage, and communications (17.4%), and commerce, restaurants and hotels (17.3%). In this manner, sectors focusing on the supply of utilities and on meeting the growing domestic demand concentrated the great majority of FDI (Graph B3.4), this tendency having become even more evident in the past few months, mainly due to investment received by the electricity and water supply sector in an accumulated amount of USD \$2,667 m.

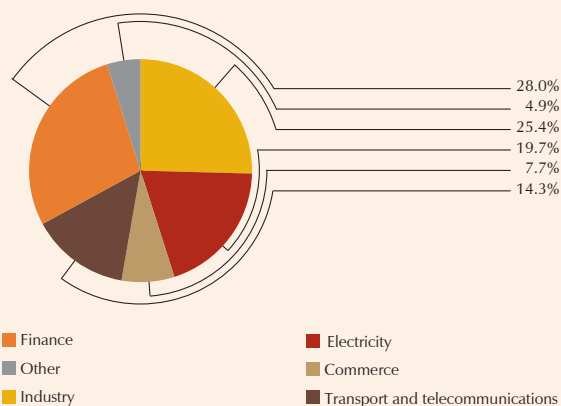
It can be said that, in the past five years, 43% of FDI in sectors other than natural resources has taken place through the purchase of capital shares, 20% through the granting of debts, and 37% from the companies' decision to reinvest their profits<sup>4</sup> It is worth stressing the high share of the reinvestment of profits in Colombia as a FDI invigorating factor. Between 2000 and 2015, sectors other than mining energy reinvested almost 52% of their profits generated, the most outstanding in this aspect being transport, storage and communications (82.2%), commerce, restaurants and hotels (65%) and the manufacturing industry (49.4%). Again, this fact is the result of growth in production, sales, and profits of companies with foreign capital, since these factors allow them to make the decision of reinvesting their profits in order to expand their businesses.

3 The calculation of this profitability corresponds to the relation between total profit in the t (UT) period and balance of direct investment at the end of the same (ID t) period:  $(UT t / ID t) \times 100\%$ .

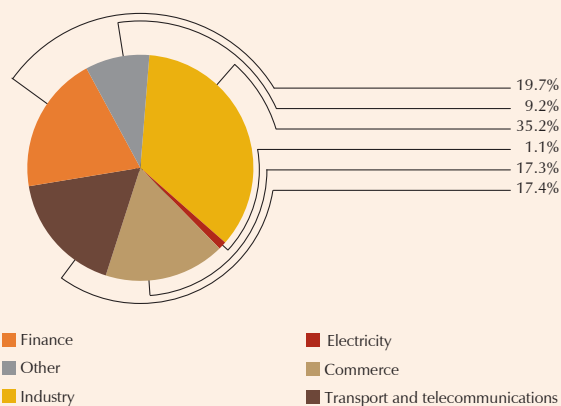
4 According to the IMF (2009), three types of FDI are presented: 1) the purchase of capital shares in a company; 2) the granting of debts to companies where shares had been previously purchased, and 3) the company's decision to reinvest those profits to which its foreign investors are entitled.

Graph B3.4  
FDI Flows by Economic Sectors Other Than Mining and Energy

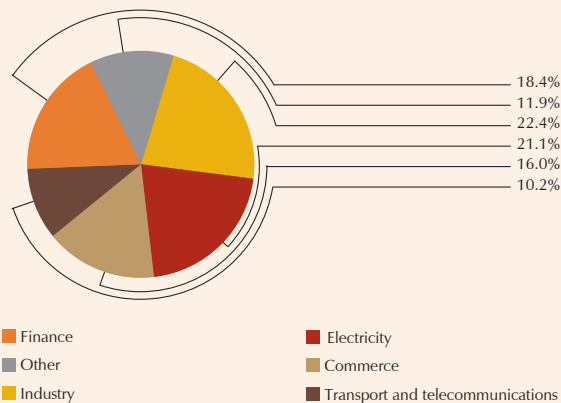
A. 1994-2004



B. 2005-2014



C. 2015- Q1 2016



Source: Banco de la República.

### 3. Conclusions

Between 2005 and 2014, the FDI oriented to the extraction of natural resources (oil, coal, ferronickel) grew in a sustained manner; therefore, the FDI value received in 2014 doubled the amount arrived in 2005. Among the reason serving to explain this situation, worth mentioning are the high international prices (including crude oil) that enhanced the business profitability, a more favorable contractual framework for the private sector, and the expectations concerning the possibility of finding important (particularly oil) deposits.

Among the benefits of the inflow of larger FDI in natural resources, the increase in the production of minerals and crude oil is to be mentioned together with higher revenues and profits per enterprises in this sector, as well as rising fiscal revenue (taxes and royalties) and more liquidity in the foreign exchange market, among other aspects. Nevertheless, since mid-2014, this scenario change in a dramatic manner with a reduction of over 60% in the international price of minerals, and this situation was reflected in a similar reduction of FDI flows for the extraction of natural resources.

In this context, activities oriented to the domestic market are regaining the relevance they had prior to the boost of raw materials, because they never ceased to receive external financing from their foreign investors and its higher profit reinvestment level. In fact, FDI in sectors other than natural resources grew 16% in the past year, and this allowed for a softer contraction in the total FDI flow, which was merely reduced by 15%. These resources are particularly intended to develop the country's infrastructure, transport, technology, and communications, in this way contributing to enhancing competitiveness.

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### III. INTERNATIONAL RESERVES

*As of the closure of June 2016, net international reserves were (USD \$47,025.08 m), USD \$293.98 m higher than the figure recorded in December 2015.*

*This increase can be explained by the profitability of reserves and the strengthening of the other reserve currencies with respect to the US dollar.*

Consistently with Act [“Ley”] 31 of 1992, *Banco de la República* administers international reserves according to public interest, in the benefit of the national economy, and with the purpose of making the payments abroad easier for the country. Accordingly, the law defines that investments of reserve assets shall be subject to safety, security, liquidity, and profitability criteria.

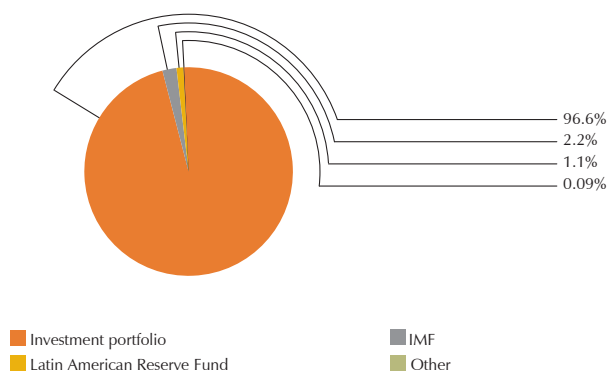
*Banco de la República* acknowledges the importance of having a proper international liquidity level to face capital outflows from the country, which may be caused by factors such as terms-of-trade deterioration or financial panics or crises in neighboring countries. In this context, maintaining an adequate level of reserves does also serve to improve confidence in the country and, therefore, to better address a crisis in the external markets. The level of international reserves is a factor serving to determine the perception of the national borrowers’ payment capacity. Risk rating agencies and external lenders deem that a proper level of reserves allows residents to meet their obligations in foreign currency like, for instance, the payment of imports and the servicing of the external debt whilst the country is experiencing difficulties relating to external financing.

The use given by agents in the international capital markets to indicators for the reserve payment capacity as a measure of the country's liquidity stresses the importance of maintaining a proper level thereof. A country with low international reserve levels is likely to obtain less funds from the rest of the world through direct investment, apart from having more difficulties in accessing external credits or paying higher interest rates on their external debt.

*Banco de la República* administers international reserves within a strict risk-control framework where measures leading to market risk management in order that the investment value is not significantly affected by changes in the international interest rates, and to credit risk management with the purpose of having a very low likelihood of facing payment default events. These risk control measures are aimed at making reserves maintain a high safety and liquidity level, which is in turn associated with lower profitability since the safest investments are also those with lower yields<sup>49</sup>.

Reserve profitability has been affected as well in the past years by the international situation, since central banks in the developed countries have been keeping very low and even negative interest rates.

Graph 53  
Composition of Gross International Reserves  
(to June 30, 2016)



Source: Banco de la República.

As of June 2016, net international reserves totaled USD \$47,025.08 m, this amount being higher by USD \$293.98 m than the balance registered in December 2015<sup>50</sup>. The increase of international reserves so far year 2016 can be explained by the profitability of reserves and the appreciation of currencies other than the United States dollar, which offset the observed decrease due to intervention in the exchange market.

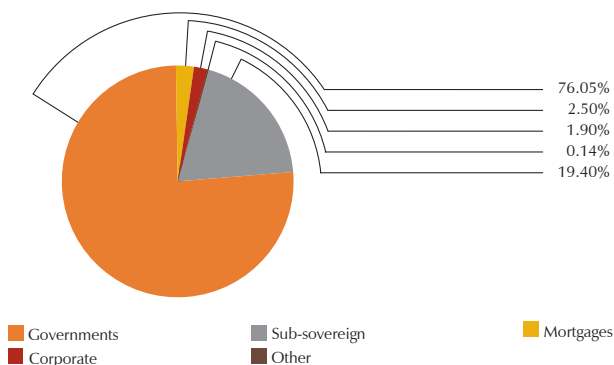
The main component of international reserves is the investment portfolio, which pertains to investments in financial instrument in the international market, and certified physical gold (respectively 96.3% and 0.3% of reserves). Graph 53 shows the international reserve composition.

49 See Annex: "Administration policies of the international reserves' investment portfolio," p. 117.

50 Net international reserves are equal to the total of international reserves, or gross reserves, less *Banco de la República's* short-term external liabilities. The latter are made by demand obligations in foreign currency to non-resident agents. Gross international reserves amounted to US\$ 47,029.56 b, and short-term external liabilities totaled US\$ 4.48 m.

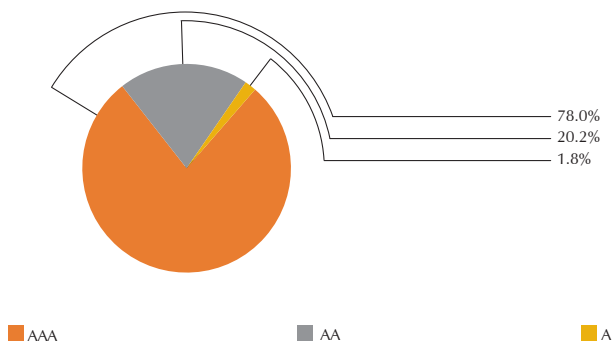


Graph 54  
Composition of the Investment Portfolio by Sectors  
(information at June 30, 2016)



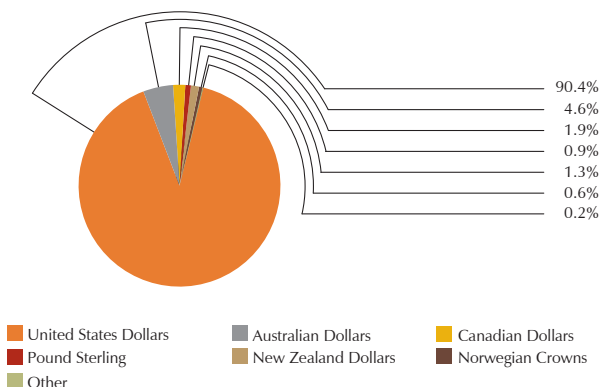
Source: Banco de la República.

Graph 55  
Composition of the Investment Portfolio by Credit Rating  
(information at June 30, 2016)



Source: Banco de la República.

Graph 56  
Currency Composition of the Investment Portfolio  
(information at June 30, 2016)



Source: Banco de la República.

## A. INVESTMENT PORTFOLIO COMPOSITION<sup>51</sup>

Annex offers an explanation concerning the policies serving to guide the composition of the investment portfolio along with some relevant definitions. It is shown in Graph 54 as of June 2016 when about 95% had been invested in papers issued by governments, government-related entities (quasi-governments), and repurchase agreements (repos) with the Federal Reserve.

Graph 55 displays the investment portfolio's credit quality rate. As a benchmark, the Bank uses the lower rating granted by at least two of the three major rating agencies (S&P, Moody's and Fitch Ratings). 78.0% of the portfolio is invested in AAA-rated instruments, and 20.2% in those ranked as AA, which evidences the high quality of assets in which investments are made.

Finally, Graph 56 exhibits the exchange composition of the investment portfolio as of 30 June 2016. The United States dollar holds the highest share in the composition of Colombia's international reserves due to the fact that most of the country's commercial and financial transactions with the rest of the world are carried out in this currency. Investments are permitted as well in the following currencies: Canadian, Australian, New Zealand, Hong Kong, and Singapore dollars, Swedish and Norwegian kroners, UK pound sterling, Swiss franc, EU euro, Japanese yen, Chinese renminbi, and Korean won. All of them are distinguished for having high daily trading volumes and belonging to countries with strong credit ratings

## B. PROFITABILITY OF RESERVES

The decision to have a portfolio with a conservative risk profile entails lower overall profitability than a portfolio with an aggressive risk profile. The basic

51 In this section, graphs are calculated on the amount of the investment portfolio, excluding the gold tranche.

financial theory of portfolio administration shows that if an investor chooses to confront a smaller risk, in this case the returns that can reasonably be expected will be lower.

In the first half of 2016, the profitability of the reserve portfolio in United States dollars was 1.04%<sup>52</sup> (USD \$489 m) due to two factors:

Interest rates in major developed countries remained at historically low levels.

For example, the average interest rate of United States bonds with less than three-year maturity was 0.69% in June 2016. This has been the reason for a low generation of interest.

Bond prices rose so far this year due to the United States Federal Reserve postponement of its decision to continue increasing its reference interest rate. This determination triggered a drop of 0.46% in the two-year bond yield, as well as a price increase because of the inverse relationship existing between rates and prices.

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52 This rate is obtained by dividing profitability observed in United States dollar by the average of the net reserve value on December 31 2015 and June 30 2016. Since 2015, the impact of the exchange rate on the profitability of reserves is excluded.

## IV. BANCO DE LA REPÚBLICA'S FINANCIAL POSITION

*In the first half of 2016, Banco de la República exhibited a positive operational outcome of COP \$1,280 b, which was determined by the performance of monetary incomes, i.e. those relating to its functions as central bank.*

### A. RESULTS AS OF JUNE 2016

In the first half of the year, the Bank recorded an operational outcome of COP \$1,280 b, with total revenues amounting to COP \$2,632 b, and expenditures to COP \$1,353 b. Among the former, it is worth highlighting the yield from international reserves, the performance of the monetary regulation investment portfolio (TES), and the revenues from monetary regulation operations (repos). On the other hand, payments for the remuneration to Government deposits with the Bank stand out, as well as exchange rate adjustments carried out on assets and liabilities in foreign currencies, other than international reserves (Table 12).

Regarding revenues:

- The yield of international reserves amounted to COP \$1,521 b<sup>53</sup>, that can be mainly explained by earnings and valuations generated by investments composing the reserve portfolio totaling COP \$1,414 b, with a semi-annual 1.04% rate of return at the closing of June (Table 13).

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53 Includes investment portfolio generation and valuation, divided from contributions to international agencies, the valuation of investments in gold, and other returns from agreements with the Latin American Integration Association (Aladi).

Table 12  
 Banco de la República's Income Statement, January-June 2016  
 (billions of pesos)

	budget 2016	Observed at June 2016	Variance
<b>I. Total Income (A+B+C)</b>	<b>1,472</b>	<b>2,632</b>	<b>178.8</b>
A. Monetary income	978	2,424	247.8
1. Interests and returns	877	2,349	267.9
Returns on International reserves	720	1,521	211.3
Monetary regulation investment portfolio (TES)	9	577	-
Monetary regulation active operations (Repos)	147	250	169.5
2. Exchange differences	98	72	72.9
3. Other monetary income	3	3	109.5
B. Coins issued	326	111	34.0
C. Corporate income	168	98	58.2
1. Fees: Banking services and fiduciary operations	145	72	49.9
Banking services	68	28	41.0
Fiduciary operations	77	44	57.9
2. Other corporate income	23	25	109.6
<b>II. Total expenditures (A+B+C+D)</b>	<b>1,595</b>	<b>1,353</b>	<b>84.8</b>
A. Monetary expenditures	678	1,008	148.7
1. Interests and returns	513	729	142.3
Remuneration on Finance Ministry accounts	357	592	165.9
Monetary-control interest-bearing deposits	132	131	99.3
Monetary-control passive operations	24	7	27.2
2. International-reserve management expenses	47	16	33.4
3. IMF's flexible credit commitment fee	36	17	46.5
4. Exchange differences	81	246	303.1
5. Other monetary expenditures	1	0	31.9
B. Bills and coins	323	77	23.8
C. Corporate expenditures	528	241	45.7
1. Personnel costs	340	165	48.6
2. Overhead	78	31	39.2
3. Other corporate expenditures	110	45	41.1
D. Pensioners' expenses	67	27	40.5
<b>III. Operating result (I - II)</b>	<b>(123)</b>	<b>1,280</b>	<b>-</b>

Source: Banco de la República.

- Incomes from monetary control investment portfolio (TES) amounted to COP \$577 b, the implementation of which was the result of an increase of the TES portfolio balance, especially from purchases recorded in the first half of 2016<sup>54</sup>.

54 The TES portfolio at market prices increased by shifting from COP\$ 118 b in December 2015 to COP \$ 12,548 b in June 2016. During this period, net purchases were made in the amount of COP\$ 15.033 b, maturities for COP\$ 3,584 b, the valuation of COP\$ 577 b, and the National Government transfer for COP\$ 404 b.

Table 13  
Investment Return on International Reserves  
(billions of pesos)

	Budget 2016	Observed at June 2016	Variance
Yield	720	1,521	211.3
Investment portfolio	714	1,414	197.9
Gold	0	91	-
International organizations	5	16	328.1
Other	1	0	45.8

Source: Banco de la República.

- Revenues from liquidity operations through repos (active monetary regulation operations) totaled COP \$250 b, that can be explained by the larger average daily volume observed from these operations and the higher remuneration rate<sup>55</sup>.
- Net outcome from revenues and expenditures originated by the variations of the Colombian peso exchange rate *vis-à-vis* the United State dollar on assets and liabilities in foreign currency other than international reserves was negative by COP \$174 b, this being the result of the Colombian peso 7.32% appreciation against the US dollar<sup>56</sup>.
- Revenues amounting to COP \$111 B were generated by currency emission as an outcome of money demand.
- Income received from banking services and trust business amounted to COP \$72 b that can be mainly explained by export refund fees and commissions for the payment of imports under the agreement entered into with Aladi and the administration of TES securities.

#### Regarding expenditures:

- The remuneration to Government deposits (including the yield to the monetary control deposits), this being the main component of the Bank's expenditures, amounted to COP \$723 b<sup>57</sup>. On the one hand, the remuneration

*In the first half of the year, the Bank's revenues amounted to COP \$2,632 b.*

55 The average daily volume observed from these operations was COP\$ 7,887.5 b, and that budgeted for 2016 amounted to COP\$ 2,879.8 b; the average annual remuneration rate was 6.56% , and the policy rate envisaged in the budget was 5.25% e. a.

56 The foreign exchange rate by the end of 2015 was COP\$ 3,149.47 per US dollar, and it amounted to COP\$ 2,919.01 at the closing of June 2016.

57 Due to an agreement in force with the Government since 2005, and in order to make primary liquidity management easier, the DGCPN deposits in Banco de la República all its liquidity surpluses, which are remunerated at the intervention rate. However, the amounts deposited depend upon the evolution of the Government cash flow. Mainly through repos, Banco de la República offsets lacking liquidity it may generate in the market, which, in turn, gives origin to revenues that are posted in active monetary regulation operations.

In the same period,  
expenditures totaled  
COP \$1,353 b.

neration to DGCPTN accounts was COP \$592 b<sup>58</sup>, higher than what had been estimated for 2016, from the larger volume of the Nation's General Treasury in the Bank; and, on the other from the remuneration to monetary control deposits totaling COP \$131 b<sup>59</sup>.

- The higher levels of the DGCPTN deposits with *Banco de la República* are counterbalanced by mean of increases in primary market liquidity through other ways like TES purchases and the growth of expansion repo operations. This is how the larger disbursements of the Bank for the remuneration of Government deposits are offset by higher revenues deriving from the yield of its TES portfolio and the transient expansion operations.
- Monetary species emission and distribution costs totaled COP\$77 b, as a result of the putting into circulation of 265.4 million coins and 351.7 million notes. The level of implementation as of June, i.e. 23.8%, can be mainly explained by the fact that the seasonality of working capital costs concentrates in the last quarter of the year, according to the demand for cash.
- Corporate expenditures stood at COP \$241 b and recorded an implementation of 45.7% of the budget, as distributed in the following manner:
  - Personnel expenses accounted for an implementation of COP \$165 b, which means 48.6% of the budget. These expenditures include salaries, social benefits, contributions to social security, medical service, aids and formal training, contributions to compensation funds, to the ICBF (the Colombian Welfare Institute) and the SENA (the National Learning Service), continued training, and allowances, among others.
  - Overheads amounted to COP \$31 b and recorded a 39.2% budget implementation. This group comprises expenses associated with maintenance and repairs of technical infrastructure equipment (air-conditioning and elevator systems), technology and communication, utilities, surveillance, cleaning, general services and of different nature engaged for the *Luis Angel Arango* library, among others.
  - Other corporate expenses amounted to COP \$45 b and displayed a 41.1% implementation. They mainly include taxes, insurances, contributions, affiliations, depreciations, provisions, amortizations, discountable VAT, and other both operational and non-operational expenses.
- Lastly, the retirement pension expense exhibited a result of COP \$27 b and an implementation of de 40.5%, this being the outcome of the financial

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58 In the first half of the year, the daily average of these deposits amounted to COP\$ 18,366 b, and the average annual remuneration rate was 6.6% e. a.; for the first half, the budget took into account average daily deposits of COP\$ 7,000 b and an average annual remuneration rate of 5.25% e. a. Compared to the same period of the previous year, this expense increased 112.9%, explained by the increase in the average balance of these deposits and the increase in the remuneration rate. According to the results in May 2016, se a new projection of this expense was made, and an addition to the Budget was requested, and submitted to the Higher Council for Fiscal Policy (*Consejo Superior de Política Fiscal*, (Confis) for its concept and later approval by the BDBR (currently under way).

59 The average balance of these deposits as of June 2016 was COP\$ 4,935 b, with maturity on 1 July 2016. No further placements regarding this item were estimated in addition.

The Bank's assets increased COP \$8,408 b during the semester, mainly due to the purchase of government bonds (TES) in the secondary market.

cost for retirement pensions, educational aids, and pensioners' medical service

## B. FINANCIAL STRUCTURE

The variations in *Banco de la República's* main asset, liability, and equity items as of 30th December 2016 against balances recorded on 31st December of the previous year are explained below (Table 14)<sup>60</sup>

### 1. Assets

*Banco de la República's* assets showed a balance of COP \$168,561 b at the closing of June 2016<sup>61</sup>. This figure is higher by COP \$8,408 b (5.2%) than the balance observed in December 2015 when assets amounted to COP \$160,153 b. The main variation in the asset accounts can be explained, in their order, by the following:

- Investment portfolio in national currency: Its balance valued at market prices was COP \$12,548 b in June 2016, higher by COP \$12,430 b with respect to the closing of year 2015. This resulted from: 1) Net TES purchases by *Banco de la República* in the amount of COP \$15,033 b; 2) the carry forward of TES securities to *Banco de la República* by the Government in the amount of COP \$404 b to offset the Issuer's losses recorded in 2015 (COP \$395 b) and in order to increase the surplus account from investment in assets for the cultural activity (COP \$9 b), y 3) the valuation at market prices of its portfolio for COP \$577 b. This was in part offset with the maturities of the TES securities portfolio in the hands of the Bank amounting to COP \$3.584 b<sup>62</sup>.
- Contributions in international agencies: Contributions at the end of June 2016 reached a total of COP \$10,068 b, higher by COP \$6,272 b (165.3%) than those recorded in December 2015. This increase was mainly originated by two operations: 1) the raising of the Colombian position (quota) in the IMF for Special Drawing Rights (SDR) 1,270.5 m, which increases the balance in this account<sup>63</sup>; 2) for the sales of SDR 521 m to the United States, which gave rise to a reduction in the contribution in foreign currency to the IMF, counterbalanced with an increase in the contribution

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60 Starting in 2015, *Banco de la República* has been reporting its financial statements under a new accounting framework based on the IFRs.

61 The value of liabilities associated with international reserve operations has been deducted from the balance.

62 See Box 2: "Liquidity supply by *Banco de la República*, 2008-2016" in this *Report*, pp. 90-95.

63 The increase of Colombia's quota in the IMF is initially distributed as follows: 1) 25% in foreign currency, this being posted as part of international reserves, and 2) 75% in Colombian pesos, which is recorded in the contributions to international agencies account.



Table 14  
Balance Sheet - *Banco de la República* Classified by Economic Criteria (Results at December 2014 and December 2015)  
(billions of pesos)

Accounts	December 2015		June 2016		Change	
	Balance	Percentage share	Balance	Percentage share	Absolute	percentual
<b>Assets</b>	<b>160,153</b>	<b>100.0</b>	<b>168,561</b>	<b>100.0</b>	<b>8,408</b>	<b>5.2</b>
Gross international reserves	147,207	91.9	137,280	81.4	(9,928)	(6.7)
Contributions in international organizations	3,795	2.4	10,068	6.0	6,272	165.3
Investments	118	0.1	12,548	7.4	12,430	10,492
Public sector, monetary control	118	0.1	12,548	7.4	12,430	10,492
Loan portfolio: Repo agreements and transitory liquidity support	6,908	4.3	6,334	3.8	(574)	(8.3)
Accounts receivable	47	0.0	67	0.0	19	40.6
Other net assets	2,077	1.3	2,265	1.3	188	9.0
<b>Liabilities and equity</b>	<b>160,153</b>	<b>100.0</b>	<b>168,561</b>	<b>100.0</b>	<b>8,408</b>	<b>5.2</b>
<b>Liabilities</b>	<b>97,077</b>	<b>60.6</b>	<b>113,897</b>	<b>67.6</b>	<b>16,820</b>	<b>17.3</b>
Foreign currency liabilities affecting international reserves	29	0.0	13	0.0	(16)	(55.2)
Monetary base	82,519	51.5	76,402	45.3	(6,117)	(7.4)
Cash	54,084	33.8	48,405	28.7	(5,679)	(10.5)
Reserves	28,435	17.8	27,997	16.6	(438)	(1.5)
Non-reserve interest-bearing deposits	353	0.2	202	0.1	(150)	(42.6)
Other deposits	43	0.0	246	0.1	203	473.9
National government (National Treasury Office) n/c	4,043	2.5	20,900	12.4	16,856	416.9
National government (National Treasury Office) f/c	241	0.2	223	0.1	(18)	(7.5)
Monetary-control interest-bearing deposits	4,935	3.1	4,935	2.9	0	0.0
Obligations to international entities	5,273	3.3	11,477	6.8	6,204	117.6
Accounts payable	226	0.1	312	0.2	86	38.0
Other liabilities	(585)	(0.4)	(812)	(0.5)	(227)	38.8
<b>Total equity</b>	<b>63,076</b>	<b>39.4</b>	<b>54,664</b>	<b>32.4</b>	<b>(8,412)</b>	<b>(13.3)</b>
Capital	13	0.0	13	0.0	0	0.0
Surplus	63,721	39.8	53,558	31.8	(10,163)	(15.9)
Special foreign-exchange account settlement	521	0.3	521	0.3	0	0.0
Foreign exchange adjustment	63,032	39.4	52,861	31.4	(10,172)	(16.1)
Investment in assets for cultural activities and donations	169	0.1	177	0.1	9	5.1
Other integral results	(109)	(0.1)	(33)	(0.0)	76	(69.5)
<b>Results</b>	<b>(395)</b>	<b>(0.2)</b>	<b>1,280</b>	<b>0.8</b>	<b>1,675</b>	<b>(423.9)</b>
Previous profit/loss	0	0.0	0	0.0	0	0.0
Profit / loss for the period	(395)	(0.2)	1,280	0.8	1,675	(423.9)
Cumulative results of the convergence process with IFR	(153)	(0.1)	(153)	(0.1)	0	0.0

Source: *Banco de la República*.

The COP \$16,820 b increase in liabilities was due to higher Government deposits in the Bank.

in Colombian pesos in order to maintain the position value in the same agency. In addition, it includes an adjustment of COP \$761 b as a result of the valuation of the Colombian peso/SDR exchange rate.

- International reserves: As of the closing of June 2016, the balance of net international reserves valued at market prices amounted to a COP \$137,280 b (USD \$47,030 m), lower by COP \$9,928 b (6.7%) as compared to the record observed on 31st December 2015.
- This deduction can be explained by: 1) the negative change adjustment by COP \$10,172 b resulting from exchange rate variations in Colombian peso/United Dollar and United States dollar/Reserve currencies<sup>64</sup>, and 2) the sales by *Banco de la República* of foreign currencies through call options for disaccumulation in the amount of COP \$781 b (USD \$255.6 m). This was partially counterbalanced so far this year 2016 by returns from interest earned and valuation at market prices for COP \$825 b and COP \$696 b, respectively.
- Repo operations used to grant temporary liquidity: They exhibited a balance of COP \$6,334 b at the end of June 2016, which meant a reduction of COP \$574 b (-8.3%) with respect to the closing of 2015.

## 2. Liabilities

As of June 30 2016, the liabilities balance was COP \$113,897 b, higher by COP \$16,820 b (17.3%) than that recorded at the end of year 2015<sup>65</sup>. The main variation sources are described below:

- National Government deposits in pesos constituted through the DGCPTN in *Banco de la República*: The balance was COP \$20,900 b at the closing of June 2016. This amount is higher by COP \$16,856 b (416.9%) to that registered in December 2015.
- Obligations vis-à-vis international agencies: in June 2016, the balance was COP \$11,477 b, higher by COP \$6,204 b (117.6%) than that shown at the closing of 2015. In this case, the variation obeys to the offsetting entry of the increase in the asset account “contributions in international agencies.”
- Monetary base: On 30 June 2016, it exhibited a balance of COP \$76,402 b, lower by COP \$6,117 b (-7.4%) to that recorded at the closing of 2015. By components, cash in circulation had a reduction of COP \$5,679 b, while banking reserve showed a COP \$438 b contraction.

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64 This result is explained by a negative variation of COP\$ 10,709 b resulting from a Colombian peso appreciation with respect to the United States dollar at the end of June 2016 vis-à-vis the closing of 2015. This was counterbalanced by the United Dollar depreciation with respect to reserve currencies, which increased the dollar balance in international reserves meaning an increase in Colombian pesos of COP\$ 537 b.

65 In this balance, the value of liabilities associated with international reserve operations has been discounted.

For 2016, a positive operational outcome of COP \$1,029 b has been estimated.

### 3. Equity

Equity amounted to COP \$54,664 b in June 2016, lower by COP \$8,412 b (-13.3%) with respect to the figure seen in December 2015. This reduction can mainly be explained by 1) the exchange adjustment variation having decreased by COP \$10,172 b with a balancing entry in Colombian pesos, as already explained. This was in part offset by the profit of the period over year 2016 until June, which amounted to COP \$1,280 b, and due to the transfer of TES securities from the Government to *Banco de la República* in the amount of COP \$404 b.

### C. INCOME AND EXPENDITURE PROJECTION

For 2016, a positive operational result of COP \$1,029 b is expected as the proceeds of revenues in the amount of COP \$3,661 b and expenditures for COP \$2,632 b (Table 15). Among the former, the following have been the main outcomes:

- The yields of international reserves have been estimated at COP \$1,764 b, higher by COP \$1,444 b than those observed in the previous year. This result incorporates investment portfolio's yields and valuation amounting to COP \$1,668 b, the valuation of investments in gold<sup>66</sup> for COP \$91 b, and dividends from contributions to agencies and others for COP \$5 b. It has been projected that an annual 1.19% will be the average profitability of the international reserves portfolio.
- Revenues from the performance of the monetary regulation portfolio (TES) have been projected at COP \$797 b, particularly as a result from the increase taking place in the TES portfolio balance from purchases registered in the first half of 2016.
- Estimated income from liquidity operations through repos has been projected at COP \$507 b, higher by 35.2% than that observed in 2015. This increase obeys to a higher interest rate in repo operations that has offset the lower volume projected<sup>67</sup>.
- Net result estimated from the COP \$80 b exchange adjustment can be explained by revenues in the amount of COP \$84 b and expenditures for COP \$164 b, this being the proceeds from a variation of the Colombian peso against the United States dollar on assets and liabilities in foreign currency other than international reserves.

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66 At the closing of 2015, the international price of gold was US\$ 1,062 per troy ounce, and estimated at US\$ 1,322 for the end of 2016 (information at the closing of June).

67 The projection for 2016 takes into account an average daily volume of repo operations amounting to COP\$ 7,485 b against COP\$ 8,263 b observed in 2015. The average interest rate estimated for 2016 is 7.01% e. a. compared to 4.64% in 2015. The budget contemplated average daily repo operations for COP 2,880 b and a policy rate of 5.25% e. a.

Table 15  
Banco de la República's Projected Income Statement for 2016  
(billions of pesos)

	Observed 2015	Projection 2016	Annual change	
			Percentual	Absolute
<b>I. Total Income (A+B+C)</b>	<b>1,698</b>	<b>3,661</b>	<b>115.7</b>	<b>1,964</b>
<b>A. Monetary income</b>	<b>1,201</b>	<b>3,155</b>	<b>162.6</b>	<b>1,953</b>
1. Interests and returns	724	3,068	323.8	2,344
International reserves	320	1,764	451.2	1,444
Monetary-regulation Investment Portfolio (TES)	29	797	-	768
Active Monetary Regulation Operations (repos)	375	507	35.2	132
2. Exchange differences	475	84	(82.3)	(391)
3. Other monetary income	3	3	15.4	0
<b>B. Coins Issued</b>	<b>308</b>	<b>326</b>	<b>5.7</b>	<b>17</b>
<b>C. Corporate income</b>	<b>188</b>	<b>180</b>	<b>(3.9)</b>	<b>(7)</b>
1. Fees: Banking services and fiduciary operations	154	151	(1.5)	(2)
Banking services	73	68	(6.3)	(5)
Fiduciary operations	81	83	2.9	2
2. Other corporate income	34	29	(15.0)	(5)
<b>II. Total Expenditures (A+B+C+D)</b>	<b>2,093</b>	<b>2,632</b>	<b>25.8</b>	<b>539</b>
<b>A. Monetary expenditures</b>	<b>1,362</b>	<b>1,735</b>	<b>27.4</b>	<b>373</b>
1. Interest and returns	1,089	1,466	34.7	377
Remuneration of Finance Ministry accounts	572	1,320	131.0	749
Monetary-control interest-bearing deposits	510	132	(74.1)	(378)
Monetary-contraction operating expenses	7	14	106.1	7
2. International-reserve management expenses	36	43	20.4	7
3. IMF's flexible credit - commitment fee	30	61	103.1	31
4. Exchange differences	206	164	(20.8)	(43)
5. Other monetary expenditures	1	1	0.4	0
<b>B. Costs of issuing and distributing bills and coins</b>	<b>219</b>	<b>303</b>	<b>38.3</b>	<b>84</b>
<b>C. Corporate expenditures</b>	<b>451</b>	<b>523</b>	<b>16.0</b>	<b>72</b>
1. Personnel costs	304	340	11.7	35
2. Overhead	64	76	18.8	12
3. Other corporate expenditures	82	107	29.9	25
<b>D. Pensioners' expenses</b>	<b>61</b>	<b>72</b>	<b>16.7</b>	<b>10</b>
<b>III. Operating result (I - II)</b>	<b>(395)</b>	<b>1,029</b>	<b>-</b>	<b>1,424</b>

Source: Banco de la República.

- It has been estimated that the putting of cash into circulation will generate revenues in the amount of COP \$326 b<sup>68</sup>, higher by 5.7% than what has been observed in year 2015. This growth is related particularly with the entering into circulation of a higher number of currency pieces, specially the one-thousand peso coin.

<sup>68</sup> According to the Bank's Bylaws, this income pertains to the face value of coins put into circulation.

Revenues for COP \$3,661 b and expenditures for COP \$2,632 b have been projected.

- Corporate revenues are estimated at COP \$180 b, with an annual reduction of 3.9%, mostly because exports envisaged in the Aladi convention have generated a lower income in 2016.<sup>69</sup>

Expenditures for 2016 have been estimated at COP \$2,632 b, with an annual increase of COP \$539 b (25.8%) as follows:

- It has been projected that the remuneration to DGCPTN deposits in the Bank will amount to COP \$1,320 b, with an annual increase of 131.0% (COP \$749 b) as the proceeds of a larger balance in these deposits and a higher remuneration rate<sup>70</sup>.
- It has been estimated that the expense relating to the remuneration to monetary control deposits constituted with resources from the placement of the TES securities in order to regulate the economy liquidity will amount to COP \$132 b, with an annual decrease of COP \$378 b with respect to year 2015 (-74.1%)<sup>71</sup>
- The expense for the commitment fee pertaining to the flexible credit line with the International Monetary Fund (IMF) has been projected at COP \$61 b, which increased from SDR 3.9 b up to SDR 8.2 b pursuant to the new agreement.
- Monetary species emission and distribution costs have been calculated at COP \$303 b with an annual 38.3% variation (COP \$84 b) as a result from the projection of the higher demand an entering into circulation of coins and the new family of banknotes.
  - Corporate expenditures have been projected at COP \$523 b with an annual variation of 16.0% (COP \$72 b), of which COP \$340 b pertain to personnel expenses, COP \$76 b to overheads, and COP \$107 b to other corporate expenses. The expected growth can be mostly explained by the increase in both the CPI and the minimum wage directly affecting the Banks's corporate expenses.
  - Personnel expenses have been estimated with an annual growth of 11.7%, according to what has been agreed in the collective convention in force, and due to the increase of the payroll especially because of the opening of the new cultural centers of the Bank in San Andres, Manizales, and Buenaventura.
  - Overheads are estimated at COP \$76 b, with an annual 18.8% increase, while that for 2016 can mostly be explained by expenses associated with the maintenance of electric infrastructure equipment,

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69 This situation is explained in particular by the reduction of trade with Venezuela.

70 Daily average volumes for 2016 have been estimated at COP\$ 19,148 b against COP\$ 12,646 b observed in 2015; the rate projected for 2016 is 7.14% e. a. *vis-à-vis* 4.62% in 2015. The budget had envisaged annual average volumes of COP\$ 6,970 b, and a remuneration rate of 5.25%.

71 The daily average of these deposits in 2015 amounted to COP\$ 10,135 b, and for 2016, a daily average of COP\$ 2,454 b has been estimated as the output of the maturity of monetary regulation TES securities in July 2016.

air conditioning and technology systems, and the treasury area due to the legal advising item, contracts being adjusted according to the minimum wage rise<sup>72</sup>, and the higher expenses generated by the opening of new cultural centers.

- Other corporate expenses such as taxes, insurances, depreciations, provisions and amortizations, discountable VAT, contributions and affiliations have been estimated at COP \$107 b, with an increase of 29.9% against 2015<sup>73</sup>.
- Lastly, it has been estimated that pensioner expenses will amount to COP \$72 b with an increase of 16.7% with respect to 2015, according to the actuarial calculation update for 2016.

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72 Surveillance, security, cleaning and cafeteria contracts, students in trainee and apprentice practices, temporary staff and outsourcing like general services, computer/IT services, photocopying, microfilming, support and customer service at deposits and desks in the *Luis Angel Arango* library, among others.

73 To a larger extent, the increase obeys to technology projects, depreciations, amortizations, contributions, taxes, and the administration of the portfolio of the savings and stabilization fund of the general royalties system –“FAE.”

## PARTICIPATION OF *BANCO DE LA REPÚBLICA* IN THE BANK FOR INTERNATIONAL SETTLEMENTS

Act (“Ley”) 1484 of December 12 2011 authorized the incorporation of *Banco de la República* as a shareholder of the Bank for International Settlements (BIS). According to the authorization so granted, the Bank subscribed 3,000 BIS shares amounting to 65,712,000 special drawing rights - SDR equal to USD \$100,978,710, that remain registered at their SDR acquisition cost under the item “contributions in international agencies and entities.” On 2nd day of June 2016, the Bank received USD \$900,022 from dividends pertaining to the BIS accounting year ended in March 2016 (April 2 2015 through March 2015), this being equal to an annual profitability rate of 1.0%<sup>1</sup>.

The incorporation of *Banco de la República* to the BIS has allowed for its involvement in regular meetings at which

the most recent events, as well as the prospects of global economy and the financial markets are examined. These meetings are in addition a discussion forum for the exchange of views and experiences in matters of particular importance and relevance to the central banking community, which contributes not only to foster further understanding and reciprocal knowledge of the challenges affecting several countries today but also to devise and implement proper policy measures. Likewise, the Bank takes part in diverse consultative groups coordinated by the BIS and designed to encourage international cooperation and research in issues relating to the central banks’ policies and other subjects that have an impact on macro-economic and financial stability<sup>2</sup>.

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1           1           The General BIS Meeting passed the payment of a divided of 215 special drawing rights – SDR per share. Profitability here relates to the ratio between the divided received and the subscription price per share (21,904 SDR).

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2           2           The Bank takes part in the Consultative Council for the Americas (CCA), the Financial Stability Board for the Americas, the Directors of Operation’ Advisory Group (GCDO), the group of financial stability directors, and other working teams relating to international reserve management, among others.



# ANNEX

## MANAGEMENT POLICIES FOR THE INTERNATIONAL RESERVE INVESTMENT PORTFOLIO

According to good practice recommendations, reserve administration should seek to: 1) have enough liquidity in foreign currency; 2) have strict policies in managing the different risks encountered in operations, and 3) create reasonable risk-adjusted returns, subject to liquidity and other risk restrictions<sup>1</sup>. How these criteria are applied in the management of Colombian international reserves is explained below:

### 1. Risk management policies

*Banco de la República* counts on a risk management framework serving to identify and assess those risks operations are exposed to, in order to keep them at low levels.

The following are some of the major policies adopted in risk administration:

**Liquidity Risk:** Investments are made in financial assets having a permanent demand in the secondary market, in order to have the opportunity of converting reserve assets in a fast and low-cost manner. The portfolio is divided as well into tranches to make liquidation faster.

**Market Risk:** Using the different classes of eligible assets and strict investment limits, it is intended to give the portfolio value a low sensitivity to interest rate movements in the market.

**Credit Risk:** investments are made solely in assets with high credit ratings according to major rating agencies, since the likelihood of a breach in their payments is low. The minimum rating for governments and quasi-sovereign entities is A-. With respect to private issuers, the minimum rating is A+ for exposures to individual issuers and BBB- (investment grade) when the investment is made by using funds. Historically speaking, the percentage of issuers with these ratings having experienced breaches in payments in the following year is close to 0%. If an issuer's rating in the portfolio falls below the minimum permitted, the exposure is liquidated in a short term. In addition, maximum exposures are limited by sector and by issuer, in order to constrain the impact of credit events on the portfolio value.

**Exchange Risk:** Article 14 of Act ["Ley"] 31 of 1992 stresses that reserve investments shall be made "in assets denominated in freely convertible currencies or in gold." *Banco de la República*, like most central banks in the world, has currencies other than United States dollar in their exchange composition as to be capable of covering the country's payments abroad, since they are made in many different currencies. Considering that currency prices are highly volatile and often lacking defined trend in the long-term, exchange risk is attenuated through the equity account – "exchange adjustment" referred

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<sup>1</sup> An example of good practices in this sense can be found in the document "Guidelines for the Administration of International Reserves" produced by the International Monetary Fund that can be consulted at <http://www.imf.org/external/np/sec/pr/2013/pr13138.htm>

to in item 4 of article 62 of Decree 2520 of 1993 (*Banco de la República By-laws*), which grows the years when currencies get stronger versus the United States dollar, and decline when they become weaker.

Counterparty Risk: In order to limit exposure to counterparties, operations are settled through delivery against payment mechanisms, the purpose of which is seeking that that exchange of papers for cash or the exchange of payments in a foreign currency operation are made simultaneously in order to eliminate the likelihood of a breach by one of the parties. Additionally, for fixed income negotiations the counterparties are required to be market makers, while the counterparties in foreign currency trading need to have high credit ratings. (The minimum credit rating for foreign currency counterparties must be A-, if they have an ISDA framework agreement<sup>2</sup>. Otherwise, minimum rating shall be A+.)

## 2 Investment portfolio tranches

The investment portfolio consists of three tranches: the short-term, the medium-term, and the gold tranches.

The purpose of the short-term tranche is to cover the reserves' potential liquidity needs in twelve months. At present, this tranche is composed by the working capital, and a passive portfolio. The working capital is the portfolio in which resources from the intervention in the exchange market are entered, and its investments concentrate in very short-term assets denominated in United States dollars. Taking into account that the objective of this tranche is to ensure immediate liquidity for intervention in the exchange market purposes, the working capital is focused in deposits and investments than can be settled in one day at a very low cost. The working capital level can stand between USD \$390 m y USD \$2,000 m<sup>3</sup>.

Passive portfolio is the main component of the short-term tranche. This portfolio is characterized for investing in a higher number of instruments and having an intended term and expected profitability profile above the working capital, so that the portfolio return excluding the foreign exchange component can be positive as expected in twelve months, with a confidence level of 95%. The passive portfolio is invested in multiple currencies in order to replicate the performance of the expenditures of the country's balance of payments and attempts to obtaining a profitability similar to that of the reference or benchmark<sup>4</sup>. As of June 2016, the value of the short-term tranche was USD \$30,669.03 m of which USD \$1,274.44 m pertain to the working capital and USD \$29,394.59 m to the passive portfolio.

The medium-term tranche is implemented with a term and an expected profitability profile above the short-term tranche. The objective of the medium-term tranche is to maximize risk-adjusted profitability in United States dollars, being this the currency in which international reserves are valued, for the portfolio portion deemed less likely to be used in a twelve-month term. In having a medium-term tranche, it is sought to

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2 The objective of the framework contract established by the International Swaps and Derivatives Association (ISDA) consists of determining the terms and conditions governing over-the-counter derivatives negotiated between entities.

3 This range is defined by internal provision. The lower limit allows for having sufficient daily liquidity in the event it becomes necessary to sell reserves, while the upper limit intends that excess liquidity is shifted to the investment trench that has a higher expected profitability.

4 In the next section, the concept and the composition of the reference index are explained.

increase the expected profitability of international reserves in the long run, by maintaining a conservative portfolio. The yield planned from this tranche in United States dollars is expected to be positive, with a likelihood of 95% in a three-year horizon. Currently, the medium-term tranche is composed by active management portfolios intended to generate profitability higher than the reference index<sup>5</sup>. As of June 2016, the value of the medium-term tranche amounted to USD \$14,599.40 m.

The last tranche pertains to the international reserves' investments in certified physical gold that can be easily negotiated in international markets. Gold allows for the diversification of the international investment portfolio, since the behavior of its price differs from that of securities in which both short and medium-term tranches are invested. As of June 2016, the gold market value in reserves amounted to USD \$148.01 m.

Investment portfolio securities are deposited in financial entities known as custodians<sup>6</sup>. Entities rendering the custodian service for international reserve securities are the Federal Reserve of New York, Euroclear, JP Morgan Chase, and State Street. Investments in physical gold are guarded by the Bank of England.

### 3. Reference or benchmark indices

In managing the reserve investment portfolio, *Banco de la República* defines theoretical or reference index portfolios<sup>7</sup>. Different indices are constructed for the short-term and the medium-term tranches, in order that their investment objectives are reflected. Indices serve as a reference framework to measure each portfolio management. How reference indices are constructed is explained below:

To construct the short-term tranche index<sup>8</sup>, in the first place a target foreign exchange composition is established. The exchange composition of this index is intended to replicate the performance of expenditures in the country's balance of payments<sup>9</sup>. The purpose here is to make that currencies other than the United States dollars are appreciated in periods where the value in US dollars of the country's external payments is increased, which means that the value of these currencies may be reduced versus the US dollar in periods where the value in dollars of external payments decreases. As of June 30 2016, the exchange composition of the short-term index was as follows: United States dollars, 86%; Australian dollars, 7%; Canadian dollars, 3%; UK pounds, 1%; New Zealand dollars, 2%; Norwegian

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5 The External management program section explains that one of the seven active portfolios is managed directly by *Banco de la República* and the rest by external agents. Also, the explanation regarding the functioning of this program can be found in the same section.

6 At present, the minimum custodians' credit rating is A-.

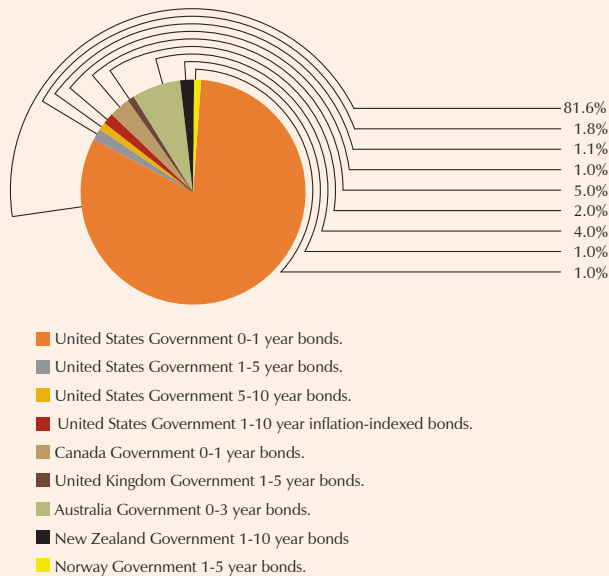
7 In the capital markets, a benchmark index refers to an asset basket with predetermined weightings according to certain rules defining their composition. Generally, an index is intended to replicate in a broad manner the behavior of a financial asset market, and it serves as an indicator of the performance of other investment portfolios in the same market. For example, some of the most well-known reference indices in equity markets are the Colcap in Colombia, or the S&P500 and the Dow Jones in the United States (the Bank only uses fixed income market indices)

8 This reference index does not apply for the working capital, since no reference portfolios exist to measure in a proper manner the instruments permitted in this portfolio.

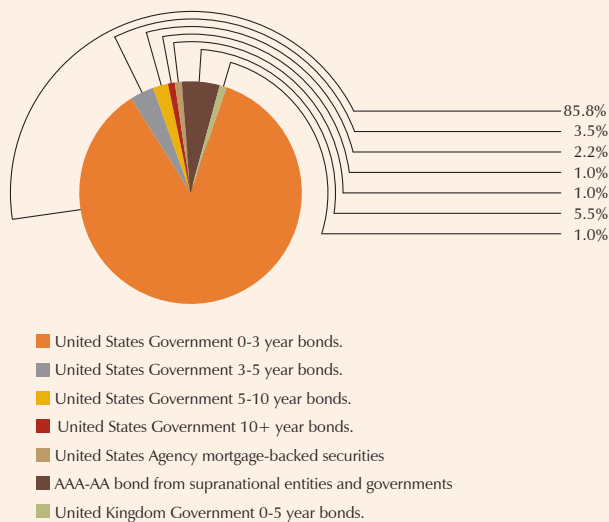
9 See Box "New foreign exchange composition of the international reserve portfolio" in the *Report to the Congress* of March 2012 for a detailed explanation of the reserve foreign exchange composition methodology.

Graph A1.1  
Composition of the Benchmark Index of Investment Tranche  
(information at June 30, 2016)

A. Short-term tranche



B. Medium-term tranche



Source: Banco de la República.

kroner, 1%. Once the exchange composition is defined, the restriction of having positive returns in a twelve-month horizon with 95% confidence is included, excluding the foreign exchange effect. Based on exchange composition and positive returns in twelve months restrictions, the portfolio is intended to maximize risk-adjusted profitability<sup>10</sup>.

In the construction of the medium-term tranche index, a similar procedure is followed but with two fundamental differences: In the first place, no restriction of foreign exchange composition is imposed, since the objective of this tranche is to maximize the risk-adjusted return in United States dollars. In the second place, the restriction of having positive returns with a 95% confidence is defined over a longer (three-year) horizon in order to reflect the least likelihood of using the funds of this tranche in the short run. When constructing the portfolio that maximizes risk-adjusted profitability in US dollars, investments in different currencies other than United States dollars are permitted.

Graph A1.1 shows the reference indices of the short and medium-term tranches<sup>11</sup>. The two portfolios have a low market risk level. The amended duration of the short-term tranche index is 1, and that of the medium-term is 2.1<sup>12</sup>.

#### 4. External management program

Banco de la República directly manages the short-term tranche, a portfolio of the medium-term tranche, and the gold tranche (USD \$32,638.06 m or 71.86% of the investment portfolio). The rest of the medium-term tranche's funds is managed by external portfolio managers.

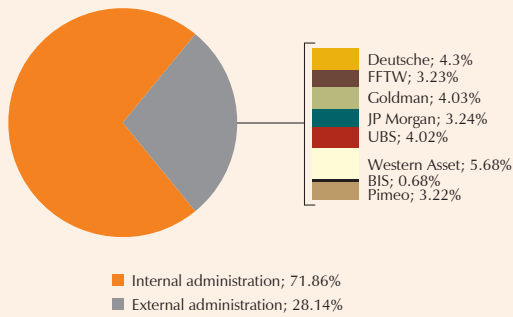
At the end of June 2016, the external administration program amounted to USD \$12,778.39 m (28.14% of the investment portfolio). The purpose of using external firms is to generate returns higher than the reference index and train the Bank's officers in international investment management. The firms chosen to take part in the program have great high abilities in the analysis of financial markets and a sophisticated infrastructure that can be very well used in the definition of investment strategies.

10 The detailed description of the methodology used in the construction of the reference index can be found in the Box titled "Technical explanation of the reference index construction methodology" in the *Report on International Reserve Management* of March 2013.

11 For the different sectors composing the reference index, the indices published by Merrill Lynch are used.

12 Modified duration is defined as the percentage decrease (increase) in the portfolio value as compared with an increase (decrease) of 1% in all the interest rates.

Graph A1.2  
Composition of the Investment Portfolio and Administrators  
(information at June 30, 2016)



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

At present, the private firms taking part in the external management program are the following: Deutsche Bank Asset Management, Fisher Francis Trees & Watts (owned by BNP Paribas), Goldman Sachs Asset Management, JP Morgan Asset Management, UBS Global Asset Management, Pacific Investment Management Company, and Western Asset Management (Graph A1.2). Private firms are chosen through competitive processes and are evaluated on a permanent basis. The resources managed by these entities are kept in Banco de la República's custody accounts and managers' contracts can be cancelled when deemed necessary. According to the results obtained by each manager since the hiring date, either the amount managed is amended or its continuity in the program is revised. Investments in the funds managed by the Bank for

International Settlements (BIS) are as well deemed to be part of the external management program. Only central banks and multilateral entities have access to this funds and their purpose is making investments in appropriate assets suitable for global international reserves, in a cooperative effort among different countries<sup>13</sup>.

13 Currently, investments are made in a fund of inflation-indexed securities issued by the United States Treasury (US\$ 108.12 m), a fund of securities issued by the Government of China (US\$ 100.75 m) and a fund of securities issued by the Government of Korea (US\$ 100.4 m). Graph A1.2.

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