



# INFLATION REPORT

---

June 2013

ISSN - 2145 - 6526



# INFLATION REPORT

---

June 2013\*

\* Submitted by the Technical Staff for the meeting  
of the Board of Directors on June 26, 2013.

*Banco de la República*  
Bogotá, D. C., Colombia

ISSN - 2145 - 6526



# THE INFLATION TARGETING STRATEGY IN COLOMBIA

## OBJECTIVES

Monetary policy in Colombia is based on inflation targeting, which is intended primarily to keep inflation low and to ensure stable growth in output near its long-term trend. Accordingly, the objectives of monetary policy combine the goal of price stability with maximum sustainable growth in output and employment. In this respect, monetary policy complies with the constitution and contributes to the well-being of the Colombian population.

## HORIZON AND IMPLEMENTATION

The Board of Directors of *Banco de la República* (the Central Bank of Colombia, BDBR) sets quantitative inflation targets for the current year and the next. The BDBR's policy initiatives are designed to meet each year's target and to provide for long-term inflation at around 3.0%. The annual change in the consumer price index (CPI) is the inflation measurement used.

## THE DECISION-MAKING PROCESS

Monetary-policy decisions are based on an analysis of the current state of the economy and its prospects for the future, and on an assessment of the forecast for inflation in light of the targets. If the assessment suggests, with enough certainty, that inflation will deviate from its target under current monetary-policy conditions and deviation would not be due to temporary shocks, the BDBR modifies its policy stance. For the most part, this is done by changing the benchmark interest rate (charged by *Banco de la República* on short-term liquidity operations).

## COMMUNICATION AND TRANSPARENCY

Decisions on monetary policy are announced after meetings of the Board of Directors. This is done through a press bulletin posted immediately on the Bank's website ([www.banrep.gov.co](http://www.banrep.gov.co)).

Inflation reports are published quarterly and lend transparency to the Board's decisions. They also contribute to a better understanding of monetary policy and help to enhance its credibility. Specifically, these reports: i) let the public know how the Board of Directors and the Technical Governor of the Bank view recent and anticipated changes in inflation and its short and mid-term determinants; ii) explain the implications of those determinants for monetary-policy management within the scope of inflation targeting; iii) describe the context and analysis justifying monetary-policy decisions made during the quarter; and iv) provide information that helps agents in the economy to form their own expectations about future developments with respect to inflation and output growth.

# CONTENTS

Developments in Inflation and Monetary Policy Decisions	9
I. The External Situation and the Balance of Payments	15
A. The International Situation	15
B. Balance of Payments	23
II. Domestic Growth: The Current Situation and Short-term Outlook	27
A. GDP – First Quarter 2013	27
B. Short-term GDP Forecast	31
III. Recent Developments in Inflation	37
A. Core Inflation	39
B. Food CPI	41
IV. Medium-term Forecasts	43
A. Economic Growth	43
B. Inflation	47
V. Risks to Long-term Macroeconomic Stability	54
A. The Current Account	55
B. The Real Exchange Rate	56
C. Home Prices	56
D. Corporate and Household Borrowing	58
E. Long-term Estimates	59
Attachment: Macroeconomic Forecasts by Local and Foreign Analysts	60

# GRAPHS

Graph 1	Euro Zone Productive Activity Indexes (Purchasing Managers Index: PMI)	16
Graph 2	Real GDP in the United States	17
Graph 3	Real GDP annual variation in China	17
Graph 4	Real Annual GDP Growth in Several Latin American Countries	17
Graph 5	International Oil Prices (Brent and WTI)	18
Graph 6	International Price Indexes for Coal, Nickel and Coffee	18
Graph 7	Colombian Terms of Trade Index	19
Graph 8	Global Stock Indexes	19
Graph 9	Five-year Credit Default Swaps (CDS) for Several Latin American Countries	19
Graph 10	Five-year Credit Default Swaps (CDS) for Several Latin American Countries	20
Graph 11	Total Exports	23
Graph 12	Total Imports FOB	24
Graph 13	Industrial Exports and Others	24
Graph 14	Non-commodity Industrial Exports to the United States, Ecuador, Venezuela and All Other Destinations	24
Graph 15	Imports by Type of Goods (FOB)	25
Graph 16	Gross Domestic Product	27
Graph 17	Monthly Retail Trade Sample	32
Graph 18	Consumer Confidence Index and Quarterly Average	32
Graph 19	Real Interest Rates on Loans to Households	33
Graph 20	Quarterly Coffee Production	34
Graph 21	Non-coffee-processing Industrial Production Index	34
Graph 22	Imaco Leading Indicator for 5 Months of GDP	35
Graph 23	Total Consumer Inflation	41
Graph 24	PPI by Origin	43
Graph 25	Nominal Wages	43
Graph 26	Core Inflation Indicators	44
Graph 27	CPI for Regulated Items and Components Thereof	44
Graph 28	Annual Tradable and Non-tradable CPI Excluding Food and Regulated Items	44
Graph 29	Non-tradable CPI	45
Graph 30	Food CPI	45
Graph 31	Food CPI, by Groups	46
Graph 32	Annual GDP Growth Fan Chart	50
Graph 33	Quarterly Annual GDP Growth Fan Chart	51
Graph 34	Output Gap Fan Chart	51
Graph 35	Annual Inflation Forecasts by Banks and Brokerage Firms	52
Graph 36	Actual Inflation and Inflation Expectations	53
Graph 37	TES-derived Inflation Expectations	53
Graph 38	Headline Inflation Fan Chart	55
Graph 39	Non-food Inflation Fan Chart	55
Graph 40	Current Account Components	59
Graph 41	International Investment Position	60

Graph 42	Composition of the International Investment Position	60
Graph 43	Real Exchange Rate Indexes	60
Graph 44	Annual Change in Real Exchange Rate Indexes	60
Graph 45	Real Exchange Rates and Historic Averages	61
Graph 46	Home Prices Relative to the CPI - Colombia	61
Graph 47	Annual Change in Home Prices Relative to the CPI	61
Graph 48	Home Prices Relative to the CPI – Chile, Peru and Colombia	61
Graph 49	Ratio of Household Borrowing to Available Household Income	62
Graph 50	Home Supply and Sales	62
Graph 51	Total Borrowing	62
Graph 52	Growth in the Non-performing Loan Portfolio	63
Graph 53	Gaps in the Current Account, Real Exchange Rate, Home Prices and Credit	63
Graph 54	Macroeconomic Imbalance Index and GDP Growth	63

## TABLES

Table 1	Growth Forecasts for Colombia's Trading Partners	21
Table 2	Benchmark Price Forecasts for Colombian Commodity Exports	22
Table 3	Balance of Payments Forecast for Colombia	26
Table 4	Real Annual GDP Growth, by Type of Spending	28
Table 5	Real Annual GDP Growth, by Branch of Economic Activity	30
Table 6	Consumer Inflation Indicators	38





# DEVELOPMENTS IN INFLATION AND MONETARY POLICY DECISIONS

External demand during the first half of 2013 was somewhat weaker than expected. In the United States, our largest trading partner, the increase in private spending is being offset partly by fiscal consolidation, which has led to a slight decline in the forecast for that country's growth. The contraction in Europe persists, while a quick recovery of productive activity was observed in Japan. Growth in many of the emerging economies of Asia and Latin America is still strong, although less so than expected.

Weak demand in the developed countries, the slowdown in the Chinese economy and certain supply factors were reflected in lower international prices for the major commodities. This has deteriorated the value of exports and terms of trade for the countries producing these goods.

In the second quarter of 2013, the Federal Reserve announced it might begin to reduce its purchase of financial assets; however, this will hinge on economic recovery, particularly if the job market improves. In the wake of this announcement, the volatility in stock markets increased, rates on long-term bonds rose, the indicators that measure country risk deteriorated, and the US dollar gained strength. These reactions, which were more pronounced in the emerging-market economies, were partially reversed in July.

Global economic activity is expected to continue to recover during the second half of the year, even if more slowly than expected. Consequently, by 2013, average growth for Colombia's trading partners and the level of its terms of trade could be below the averages on record for 2012. The availability of foreign loans and their cost remain favorable, but with interest rates that might be somewhat higher than those witnessed last year.

The performance of Colombian exports reflects the weakness in external demand and lower international commodity prices. Total exports in dollars recovered during April and May, although they continue to post negative annual growth. In the same months, the increased production of oil, ferromanganese and coffee and the rise in the growth rate for industrial exports in dollars suggest more dynamic exports.

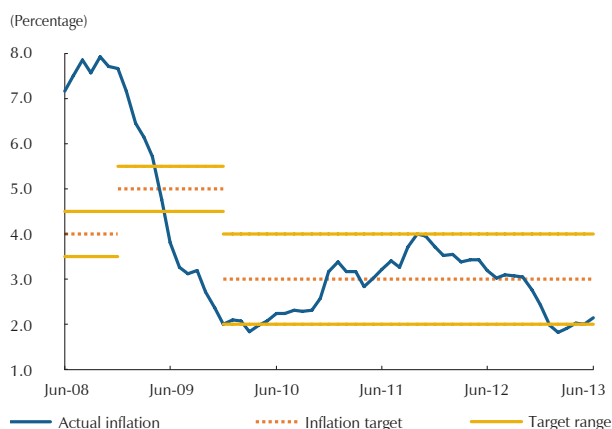
As for domestic demand, added consumer confidence and more of an increase in retail trade growth point to some build-up in private consumption during the second quarter. In terms of investment, the momentum in this expenditure will be less than it was in the first three months of the year, due to a high base of comparison and fewer imports of capital goods, especially transportation equipment. However, the growth in construction investment should be significant. On the supply side, the acceleration in the economy was due mainly to mining, agriculture and commerce. Industry continues to contract, although less sharply.

The performance of the economy has been accompanied by a job market with a downward trend in unemployment. Total lending has slowed, but has tended to stabilize at growth rates above the increase in nominal GDP estimated for this year. Interest rates on loans (excluding credit cards) have declined in line with the benchmark rate reductions.

This being the case, the technical staff at *Banco de la República* estimates 2013 second-quarter growth will be between 2.5% and 4.0%, with 3.4% being the most likely figure. Its forecast for the full year was cut from 4.3% to 4%, within a range of 3.0% to 4.5%. This latest revision is due, in part, to global economic performance and private spending, which have been weaker than anticipated. It is hoped Colombia's economic growth will increase during the year to the extent that aggregate spending reacts to the monetary policy measures that are already in place and to the programs being implemented by the national government.

As for prices, annual inflation during the second quarter was in the lower part of the target range ( $3\% \pm 1$  pp), having been slightly under 2% in the first three months of the year. By June 2013, inflation was 2.16%, which is 25 bp higher than in March (Graph A).

Graph A  
Total Consumer Inflation



Sources: DANE and Banco de la República.

Regulated prices, especially for energy, explain the increase in annual inflation during the second quarter. The annual variations slowed a bit for the other groups; namely, food, tradables and non-tradables excluding food and regulated items. Average core inflation remained relatively stable at 2.5% in June.

Inflation expectations have stayed close to the long-term target for inflation (3%). In July, analysts expected 3% inflation at 12 months, on aver-

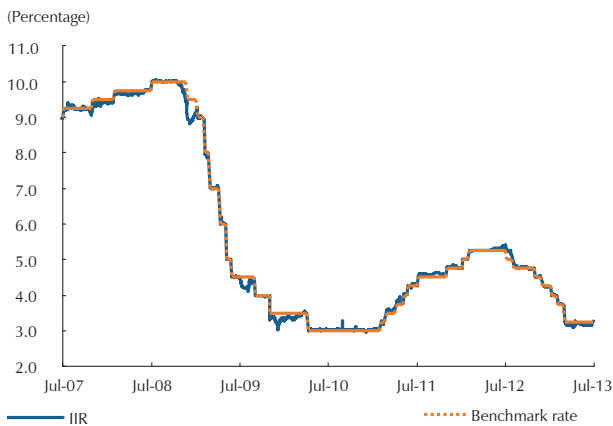
age, while expectations resulting from the yields on TES at 2, 3 and 5 years are within a range of 2.5% to 3 %.

In short, the economic indicators and forecasts suggest a level of output below what can be generated with current installed capacity. It is hoped the monetary and fiscal policy measures implemented so far will help to increase the output growth rate during the year. Inflation is low and inflation expectations are anchored to the long-term target (3%).

In this context, and given the assessment of the risk balance, the Board of Directors has considered it appropriate, since April, to hold the benchmark rate at 3.25% (Graph B). The monetary and fiscal policy decisions adopted in 2013 will help to position output near the economy's productive capacity and inflation to converge towards 3%.

Last May, the Board of Directors decided to continue *Banco de la República's* daily auctions to purchase international reserves, and it plans to accumulate at least US \$ 2.5 billion between June and September of this year. The decision to do so was based on several factors; namely, the recent trend in the exchange rate and the existence of an expansionary monetary stance. As a result, purchases of international reserves should total at least US\$6,070 million by September of this year.

Graph B  
*Banco de la República's* Benchmark Interest Rate and the Interbank Interest Rate (IIR) (2007-2013) <sup>a/</sup>



a/ The figures pertain to data for business days; the last figure is for July 26, 2013. Source: Office of the Financial Superintendent of Colombia and *Banco de la República*.

**José Darío Uribe Escobar**  
 Governor



# INFLATION REPORT

**Prepared by:**

The Programming and Inflation Department  
Economic Studies Office

#### Technical Office

Hernando Vargas

**Deputy Technical Governor**

#### Economic Studies

Jorge Hernán Toro

**Chief Officer**

#### Programming and Inflation Department

Carlos Huertas

**Department Director**

#### Inflation Section (\*)

Adolfo León Cobo

**Section Head**

Juan Sebastián Amador

Óscar Iván Ávila

Édgar Caicedo

Camilo Cárdenas

Joan Granados

Daniel Parra

(\*) This report was prepared with the assistance of Rocío Betancourt (Section Head), Carolina Arteaga, Luis Hernán Calderón, Celina Gaitán, Gloria Sarmiento and Jhon Edwar Torres of the Macroeconomic Programming Section; Julián Pérez and Sergio Olarte, who are Programming and Inflation Department assistants; Eliana González, Statistics Section Head; Andrés González (Director), Diego Rodríguez (Section Head), Christian Bustamante, Ángelo Gutiérrez and Santiago Téllez of the Macroeconomic Models Department; and Enrique López, who is senior researcher in the Research.

# I. THE EXTERNAL SITUATION AND THE BALANCE OF PAYMENTS

**The global economy continued to expand at a modest pace.** Although emerging markets were again the main source of momentum, growth would be less than was anticipated in the March edition of this report.

**In this context, the growth forecasts for Colombia's trading partners** were revised downwards compared to the estimate three months ago.

**The volatility of global financial markets, especially in the** emerging economies, increased in May and June following announcements by the Federal Reserve of the United States about the possibility of gradually tapering of its monetary stimulus program.

**The drop in international prices for the commodities Colombia exports** would be affecting the country's terms of trade.

## A. THE INTERNATIONAL SITUATION

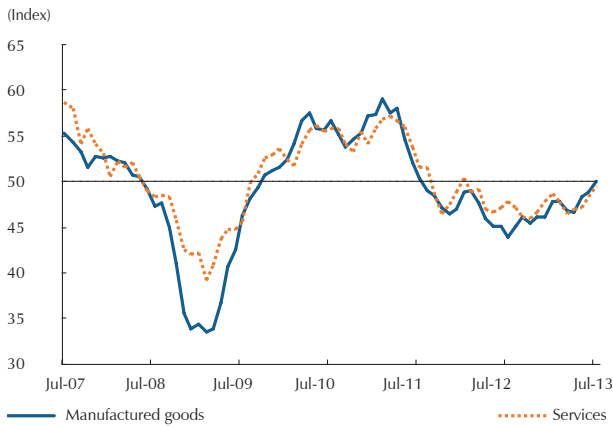
### 1. Productive Activity

The global economy continued to expand at a moderate pace during the first half of 2013, affected by poor performance in industry and global trade. Although the emerging countries were again the driving force of the global economy, their growth would be less than was anticipated in the March edition of the *Inflation Report*. The slowdown in growth is explained by less momentum in the external sector, coupled with more moderate domestic demand. As for the developed economies, the euro zone economy continued to contract, but at a slower pace than in previous quarters, while productive activity in the United States continued to expand, thanks to more momentum in the private sector. Meanwhile, the economy in Japan has begun to respond positively to the stimulus measures that have been adopted.

Specifically, the second-quarter figures for the euro zone indicate its rate of decline would have slowed as a result of better performance by the German



Graph 1  
Euro Zone Productive Activity Indexes  
(Purchasing Managers Index: PMI)



Source: Bloomberg.

economy and less of a decline in the countries on the periphery. The figures for productive activity related to industry, services and retail sales show less of a contraction than in previous quarters (Graph 1). Business and consumer confidence also exhibited a positive trend. Consequently, given all these factors, it is possible to anticipate that the economic setback during the past three months would be less than in the first quarter (when the annualized quarterly [a.q.] economic growth rate was -0.88%).

Even so, the results in Europe are less than what analysts expected, which is why the growth forecasts for this year and the next were revised downwards in the last few months. In addition, credit constraints, mainly for the peripheral economies, persisted in recent months due to low expectations of a quick economic recovery and steady deterioration in the job market. These events continue to stand in the way of growth in the supply and demand for credit.

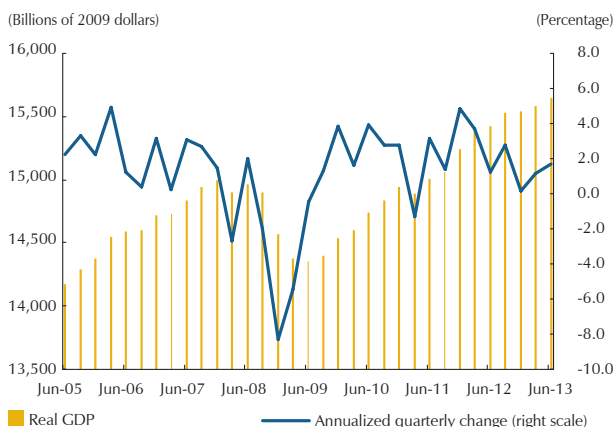
On the other hand, it is important to note that Greece struggled in recent months to privatize several government-owned companies. This would be making it difficult for the country's government to obtain funding and could imply to new fiscal adjustments. There is also the case of Cyprus, where financial and economic conditions continued to deteriorate, although the effect on the region is less. Talks on the issue of financial integration continued and new announcements were made in June about how banking crises would be managed in the future, including how the recapitalization of commercial banks would be handled.

The economic outlook in the US looks less daunting. The indicators of productive activity for the second quarter show that the economy continued to expand, although still at a modest pace. Retail sales, industry and services showed signs of moderate growth during this period. A slowdown was observed in some indicators, due to the impact of the fiscal adjustment.

The US housing market continued to recover in both price and quantity. However, the levels are still a long ways from those observed in the first half of the last decade. On the other hand, the unemployment rate continued to decline slowly, partly because of positive job creation, but also due to a drop in the participation rate, which might indicate some disappointment in the labor force when job hunting, given the limited likelihood of finding what is considered appropriate employment.

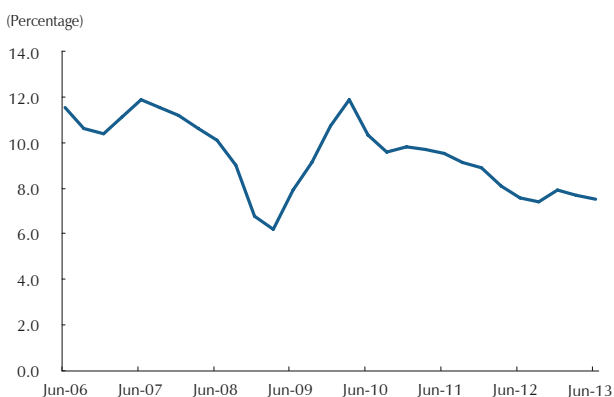
*The United States economy continued to grow at a modest pace during the second quarter.*

Graph 2  
Real GDP in the United States



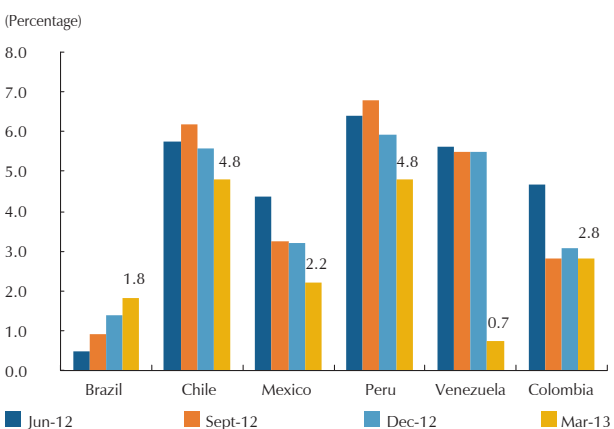
Source: Bureau of Economic Analysis.

Graph 3  
Real GDP annual variation in China



Source: Datastream.

Graph 4  
Real Annual GDP Growth in Several Latin American Countries



Source: Datastream.

Taking into account the figures for the second quarter, and according to the latest methodological review of the national accounts, gross domestic product (GDP) in the United States grew at an annualized quarter rate of 1.7%. (Graph 2). This represents an acceleration compared to the first three months of the year, when production was up by 1.15% a.q. The higher growth rate is due to more investment in fixed assets, primarily residential, as well as a positive contribution from exports and less of a drop in government spending. Household spending continued to expand at a good pace, although it did decelerate.<sup>1</sup>

Meanwhile, a rebound in exports was observed in Japan, helped by a weaker yen and a considerable recovery in consumer spending, in investment by large corporations, and in household and business expectations.

As for the emerging-market economies, the most relevant news was the larger-than-expected slowdown in production, with China being the most significant case. Annual growth in that country during the second quarter came to 7.5% (Graph 3), which is a lower rate than the market expected and below that of the first three months of the year (7.7%). This performance comes in response to a less momentum in the external sector and in several components of domestic demand. The slowdown in Chinese economic growth affected the performance of other emerging countries in the region and took momentum away from the recovery in global trade and industry.

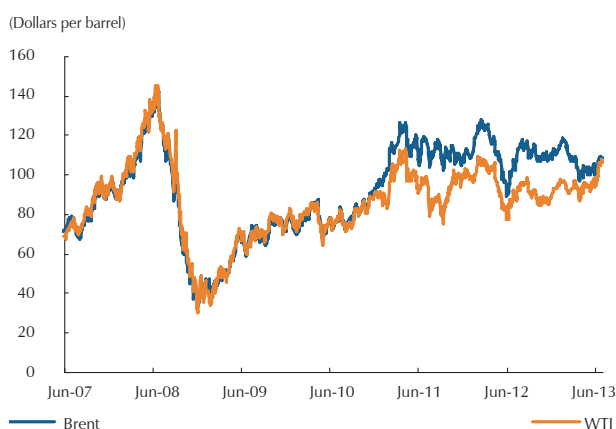
In several Latin American countries, except for Brazil, first-quarter growth was affected (Graph 4) by

<sup>1</sup> This information pertains to the latest methodological review of national accounts in the United States, which includes a change in the basis for GDP, as well as new sources of data. With this review, the data for previous years were modified upward; specifically, the economy grew 2.8% in 2012 instead of 2.2%, as originally estimated. These figures were published at the time this report was being written, so they could not be considered when calculating the forecasts outlined herein.

less of a contribution from external demand and fewer calendar days. As for Brazil, although growth accelerated slightly, its recovery is still less than what the Brazilian government and analysts expected.

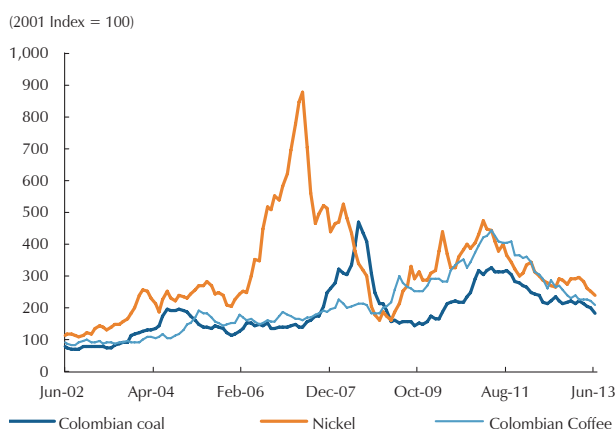
The indicators of real activity in the region during the second quarter suggest some acceleration in growth, but at rates that would be lower than those observed in 2011-2012. The region's exports and industrial activity did not perform favorably. However, in countries like Chile and Peru, the momentum in both domestic demand and public spending (to a lesser degree) would offset these weaknesses and allow for acceptable expansion, although slightly lower than in previous years. Other economies in the region, such as Ecuador and Venezuela, saw a decline in their momentum, partly due to lower international oil prices this year compared to 2012, and less of a boost from government spending in a post-election year.

Graph 5  
International Oil Prices (Brent and WTI)



Source: Datastream.

Graph 6  
International Price Indexes for Coal, Nickel and Coffee



Source: Bloomberg and The World Bank.

## 2. Commodity Prices, Inflation and Monetary Policy

Weak global demand, coupled with certain favorable supply conditions, kept major international commodity prices lower than those witnessed in 2012. In the case of oil, despite the increase in geopolitical tensions, the Brent benchmark price remained below average in 2012, although slightly higher than was estimated in the baseline scenario of March *Inflation Report*. However, oil price levels are still favorable for exporting countries. On the other hand, the price differential for the Brent and West Texas Intermediate (WTI) benchmarks declined considerably in July (Graph 5), due to improved transport conditions from the interior of the United States to the coast.

The prices of other commodities exported by Colombia continued to fall in recent months and would be below the estimate in the previous *Inflation Report* (Graph 6). This would explain the recent behavior of the country's terms of trade (Graph 7); their drop was offset partly by lower international prices for some imported goods, such as food. These prices are at lower levels today than in 2012.

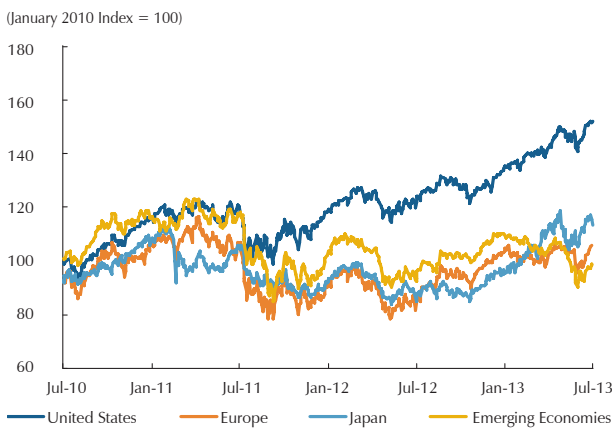
Inflation in the major developed economies remains low, which facilitates a loose monetary

Graph 7  
Colombian Terms of Trade Index  
(Commerce methodology)



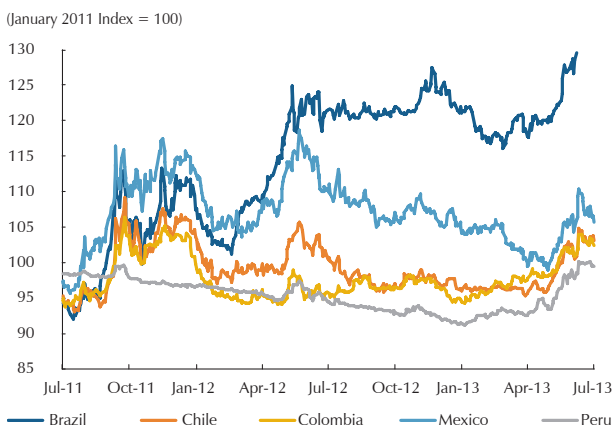
Source: DIAN and DANE; Calculations by Banco de la República.

Graph 8  
Global Stock Indexes



Source: Bloomberg.

Graph 9  
Five-year Credit Default Swaps (CDS) for Several Latin American Countries



Source: Bloomberg.

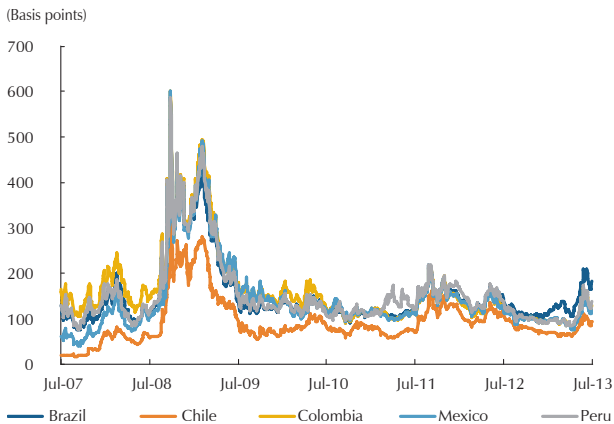
stance. In contrast, recent months have seen an accelerated increase in price levels in Brazil, India and Indonesia, countries whose central banks raised their intervention rates in the last few months. As for the other emerging economies in Latin America and Asia, inflation is at levels consistent with the targets set by their central banks.

Finally, it is important to highlight some of the announcements and decisions by the central banks in the US, the euro zone and China, which exerted significant influence on the performance of financial markets and the creation of expectations. First, the Federal Reserve of the United States (Fed) announced that it might begin to gradually taper its monetary stimulus program, depending on whether or not the economy evolves favorably in the coming quarters. However, if productive activity does not live up to expectations, the program might be extended or even increased. The European Central Bank (ECB) cut its benchmark rate in May and reiterated its commitment to keep it low for quite some time. For its part, the Bank of China announced its explicit intention to control the rapid growth in lending and eliminated the minimum interest rates for loans made by commercial banks.

### 3. Financial Markets

After the Fed's announcements, the volatility in global financial markets increased during May and June, following a period of relative calm (Graph 8). The possibility of the onset of monetary stimulus tapering in the US negatively affected the behavior of financial markets, mainly in the emerging economies, where stock indexes declined, currencies depreciated against the US dollar, and risk premiums rose (Graphs 9 and 10). Depreciations of some significance were observed in Latin America, in particular. In the case of the Colombian peso, the depreciation witnessed since early this year accentuated after the Fed's announcements, and was similar in recent months to

Graph 10  
Five-year Credit Default Swaps (CDS) for Several Latin American Countries



Source: Bloomberg.

the depreciation experienced in several countries in the region. In July, the depreciation of these currencies in general was partially corrected.

The Fed's announcements coincided with the temporary restrictions on liquidity imposed by the Central Bank of China to control the rapid growth credit. For a few days, this translated into a considerable increase in the interbank interest rate and a drop in the country's stock markets.

In the case of the United States, although long-term rates on mortgage bonds and Treasuries rose quickly, their values remained at relatively low levels.

Other developed economies also saw some rise in

interest rates on government bonds, especially for longer maturities, with more of an effect on the countries in the euro zone with the largest debts.

When analysts realized the Fed would taper its stimulus program only if conditions in the US economy evolve favorably, the financial markets began to correct their initial overreaction. As a result, the international interest rates that had increased in previous months, following the Fed's announcement, have declined somewhat in recent weeks. This was also the case with the volatility and risk indicators.

#### 4. Forecasts by *Banco de la República's* Technical Staff

Overall, global economic activity has evolved less favorably than anticipated in the baseline forecast presented in the March edition of this report. However, the downside risks contemplated then have not materialized. So, in this edition, we expect Colombia's major trading partners to see their GDP continue to expand at a modest pace, but less so than in 2012. This time, the most important changes in the growth forecasts are prompted by the slowdown in the emerging economies (Table 1).

In the euro zone, the measures adopted by the European authorities since the second half of 2012 continue to stave off the possibility of an acute financial crisis in the region and a sharp decline in GDP in the short and medium term. Most likely, the economic downturn will come to an end in the second half of the year; although the figure for growth in 2013 would be -0.6%, which is slightly lower than the forecast in the previous report.

In the United States, the impact of fiscal adjustment and less of a contribution from the external sector could translate into 1.7% growth, which is

*Global economic activity has evolved less favorably than was anticipated in the March edition of this report.*

Table 1  
Growth Forecasts for Colombia's Trading Partners

Growth forecasts for the country's trading partners	2012	Forecasts for 2013			Forecasts for 2014		
		Scenario			Scenario		
		Expected minimum	Baseline	Expected maximum	Expected minimum	Baseline	Expected maximum
<b>Main partners</b>							
United States	2.2	1.2	1.7	2.2	1.5	2.5	3.5
Euro zone	(0.6)	(1.0)	(0.6)	(0.2)	(0.7)	0.7	1.5
Venezuela	5.6	(1.0)	0.0	1.0	(1.0)	1.0	3.0
Ecuador	5.0	3.0	4.0	5.0	3.0	4.0	5.0
China	7.8	7.2	7.6	8.0	7.0	7.6	8.2
<b>Other partners</b>							
Brazil	0.9	1.8	2.6	3.4	2.6	3.6	4.6
Peru	6.3	5.2	5.8	6.4	4.5	5.5	6.5
México	3.9	2.5	3.2	3.9	3.0	4.0	5.0
Chile	5.5	4.0	4.5	5.0	3.5	4.5	5.5
Total trading partners (non-traditional trade-weighted)	3.5	1.8	2.4	3.0	2.2	2.9	3.8
Developed countries <sup>a/</sup>	1.2		1.2			2.1	
Emerging and developing countries <sup>a/</sup>	4.9		5.0			5.4	
Total worldwide <sup>a/</sup>	3.1		3.1			3.8	

a/ IMF forecasts at June 2013  
Source: Calculations by Banco de la República.

less than the estimate in the previous report. Further growth is forecast for 2014, thanks to more dynamic spending, which would be bolstered by the clean-up of private balance sheets done in past years and by the recovery in consumer and investor confidence.

The 2013 forecast for the emerging economies was reduced, primarily because of the situation in China and a weaker recovery in Brazil. The growth forecasts for other Latin American economies also were revised downward, considering a minor boost from external demand and slightly lower terms of trade.

*GDP growth for Colombia's major trading partners would continue to expand at a modest pace and below the rate in 2012.*

In the central forecast scenario, the growth of Colombia's major trading partners would be 2.4% in 2013. This represents a slowdown from 2012, when they expanded 3.5%. In 2014, the recovery in some of the advanced economies and a more favorable external environment in emerging markets would lead to an increase of 2.9% in GDP for Colombia's trading partners.

*The risks to the international situation still have a downward bias and would be associated with a more pronounced slowdown in the emerging economies.*

In this context, the risk balance remains on the downside and would be associated with a sharper slowdown in the emerging economies, especially China. By the same token, an extension of the recession in Europe, accompanied by further deterioration in external demand and in global financial conditions cannot be ruled out. Finally, the gradual tapering of monetary stimulus in the United States might have more of a negative effect on the emerging economies by reducing capital flows to those countries and raising their funding costs. The low scenario already forecasts the growth of Colombia's major trading partners at 1.8% in 2013 and 2.2% in 2014.

Regarding international prices, except for oil, the 2013 forecasts were reduced compared to the previous estimate, because performance in the first half of the year was generally less than expected (Table 2). The weakness in global demand and the favorable supply conditions for this year would explain the reduction in international prices compared to 2012. The drop in prices for exported goods would affect the country's terms of trade, which would be at a lower level than in 2012, although still favorable. Prices similar to those at present are expected during 2014.

Finally, it is important to point out that the International Monetary Fund (IMF) recently lowered its growth forecasts for 2013 and 2014. In updating its global outlook report, the IMF emphasized that although there is less likelihood of a disorderly adjustment in the euro zone, the risks to global growth still persist. In contrast to previous quarters, it also says the slowdown in emerging economies poses a new threat to global growth. Another medium-term risk is the effectiveness of Japan's policy to revive its economy and place government debt on a sustainable course.

Table 2  
Reference Price Forecasts for Colombian Commodity Exports

Major products	2012	Forecasts for 2013			Forecasts for 2014		
		Scenario			Scenario		
		Minimum Forecast	Baseline Forecast	Maximum Forecast	Minimum Forecast	Baseline Forecast	Maximum Forecast
Colombian coffee (ex dock; dollars per pound)	2.0	1.40	1.55	1.80	1.40	1.70	2.20
Brent crude (dollars per barrel)	112	100	105	110	90	100	110
Coal (dollars per ton)	92.8	82	88	94	75	85	95
Nickel – London exchange (dollars per ton)	17,591	14,000	15,000	16,000	14,000	16,600	19,600
Gold <sup>a/</sup> (dollars per troy ounce)	1,670	1,500	1,400	1,300	1,400	1,250	1,100

a/ This is considered a haven value, because the price of gold increases when there is more uncertainty (a pessimistic scenario).  
Source: Bloomberg; Calculations by Banco de la República.



The country's balance of payments in the first quarter of 2013 showed a current account deficit equal to 3.4% of GDP.

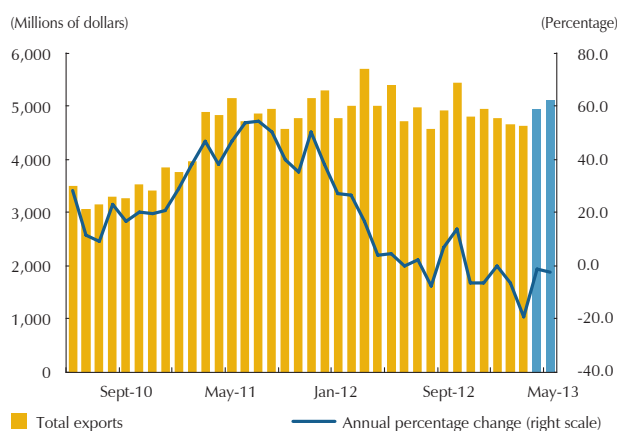
## B. THE BALANCE OF PAYMENTS

Colombia's balance of payments in the first quarter of 2013 showed a current account deficit equal to 3.4% of GDP (US \$ 3,038 m), up from the same period last year (2.0% of GDP or US \$ 1,680 m). Less of a trade surplus was largely responsible for this increase in the deficit, having fallen by US \$ 1,571 m (-69.7% per annually) compared to the increase in the deficit during the first quarter of 2012. This was due to local supply shocks that affected the production and sale of major export products (coal and oil). Added to this was the increase in the deficit in the service balance of payments and a reduction in net income from transfers.

In terms of financing the current account, the first quarter deficit was supported by added resources from external borrowing, which implied a surplus of US\$ 5,410 m (6.1% of GDP) in the capital and financial account. This is US \$ 3,205 m more than the surplus the observed a year ago (US \$ 2,205 m; that is, 2.6% of GDP). Foreign direct investment (FDI) is still the main source of this funding, having grown 2.5% annually to US \$ 3,706 m in the first quarter of 2013. Of this amount, 44, 7% went to the oil and mining sector. On the other hand, net investment by Colombians abroad showed US \$ 314 m in outflows during the first quarter of 2013, up by US \$ 166 m with respect to the amount on record for the same period last year. The composition of assets abroad was associated largely with the energy-

mining and financial sectors. In addition, the figures for the balance of payments show a variation of US \$ 1,865 m in the balance of gross international reserves during the period in question.

Graph 11  
Total Exports  
(Monthly)



Source: DANE; Calculations by Banco de la República.

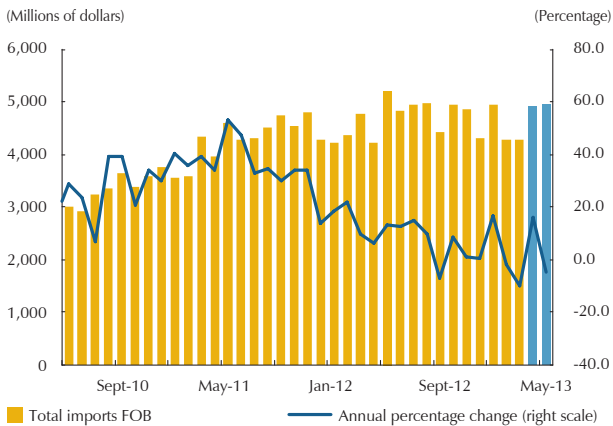
The figures at hand for the second quarter of 2013 pertain to foreign trade in goods. They point to a further reduction in the trade surplus, but to a lesser extent than during the first quarter. In fact, between April and May, total exports in dollars declined 1.9% with respect to the same period last year (Graph 11), while imports FOB (free on board)<sup>2</sup> rose 4.6% in annual terms (Graph 12).

The momentum in exports during April-May largely reflects the drop in mining exports, which

2 Contrary to the balance-of-payments measurement, which takes into account imports FOB (free on board), the GDP calculation based on the national accounts considers imports CIF (cost, insurance and freight), which include the value of freight and insurance. The average total dollar value of the latter came to US \$ 5,174 m during April and May 2013. This amounts to an annual increase of 3.7%.

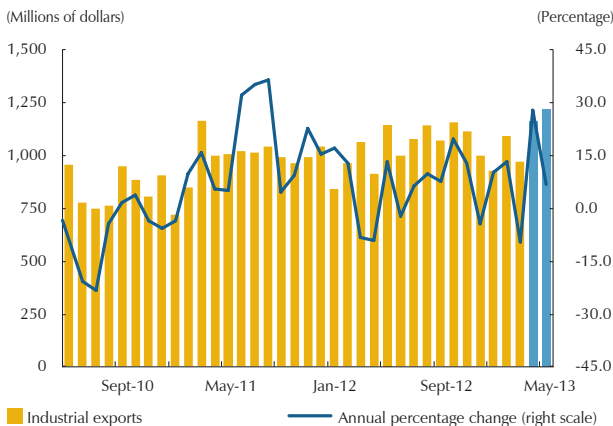


**Graph 12**  
Total Imports FOB  
(Monthly)



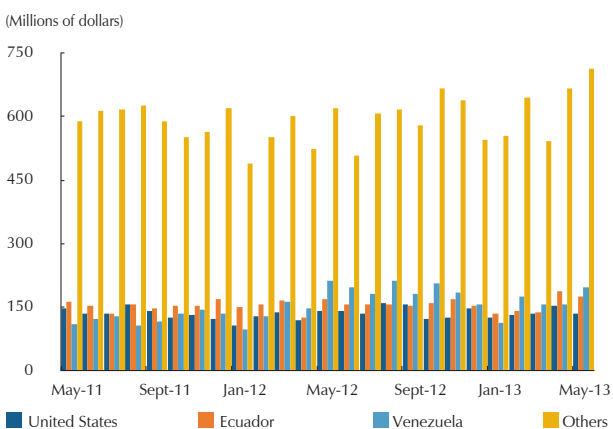
Source: DANE; Calculations by Banco de la República.

**Graph 13**  
Industrial Exports and Others<sup>a/</sup>  
(Monthly)



a / No oil or by-products thereof, coal, ferronickel, gold, coffee, bananas or flowers. Includes other mining and agricultural goods.  
Source: DANE; Calculations by Banco de la República.

**Graph 14**  
Non-commodity Industrial Exports to the United States,  
Ecuador, Venezuela and All Other Destinations<sup>a/</sup>



a / Does not consider coffee, oil by-products, nickel or gold.  
Source: DANE

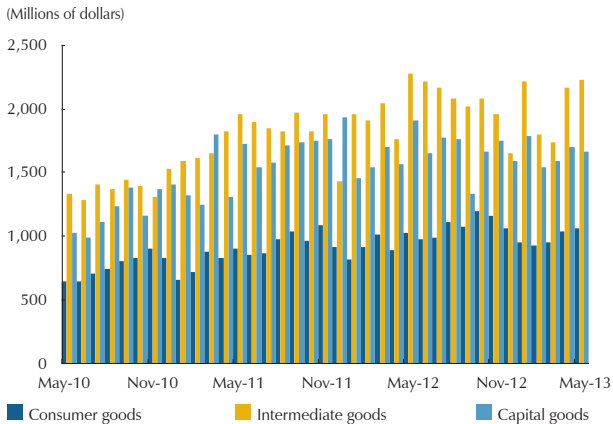
were down 8.8% in annual terms, on average, over the same period last year. This performance is attributed to the decline in international prices for mining goods compared to those observed in the same period a year ago, which has a particular effect on the outcome for coal and ferronickel. In fact, the average annual value of these exports in dollars fell by 22.3% and 17.7%, respectively, during April-May. In addition, agricultural exports (coffee, bananas and flowers) were down 0.9%, largely because of the sharp reduction in the price of coffee on international markets. However, in terms of volume, there were sizeable increases in coffee and oil, as noted in Chapter II of this report.

Industrial exports<sup>3</sup> (which accounted for 23.3% of total exports during the period in question) rose 16.1% between April and May, on average, compared to the same two months in 2012 (Graph 13). Average annual increases in exports to Ecuador (23%), the United States (10.9%) and other destinations (21%) were primarily what fueled these sales. The latter were bolstered especially by automobile and chemical exports. However, sales to Venezuela fell 1.7% during the same period (Graph 14).

Imports FOB, in US dollars, performed better in April-May, showing 4.6% average annual growth. Purchases of consumer goods were especially important, having increased 9.2%, particularly because of the growth in imports of non-durable consumer goods (15% in annual terms for the period in question). Similarly, purchases of intermediate goods were up by 8.9% annually, thanks to a significant increase in imports of raw materials and intermediate goods for agriculture (34% annual average). In contrast, imports of capital goods fell by an annual rate of 2.9% in April-May, partly

3 These exports do not include petroleum or derivatives thereof, nor coal, ferronickel, gold, coffee, bananas or flowers. Industrial exports account for 95% of this group, since they include other mining and agricultural goods.

Graph 15  
Imports by Type of Goods(FOB)



Source: DANE.

due to reduced purchases of transportation equipment during that period (Graph 15).

In addition to the data on commerce, worker remittance income so far this year through May continues to grow at a moderate annual rate of 3.4% over the same period last year. The exchange balance<sup>4</sup> for the course of 2013 to June continues to exhibit growth in private capital inflows compared to a year ago, mainly due to larger net flows of financial or portfolio investment, since FDI flows were down by 7% annually for the first half of the year.

According to these figures and the forecast intervals developed for the major external and internal variables (presented throughout this report), the balance-of-payments forecast points to more of a current account deficit in 2013, compared to the previous year. It will be somewhere between 3.3% and 3.7% of GDP. This would be consistent with -6.7% to 1.7% annual growth in total exports, in US dollars, in a context of weak external demand, reduced prices for major exports and domestic supply problems for some exportable items. Meanwhile, imports continue to grow at a moderate rate between 0% and 6%, associated with the anticipated performance of domestic demand.

Outlays of factor income are expected to be less than in 2012 as a result of a lower estimated value for mining exports, which are the main source of remittance of profits and dividends. On the other hand, a slight recovery in net income from transfers is expected, in keeping with that observed in the early months of the year and expectations about the performance of the advanced economies, which are where most Colombian worker remittances originate.

As for the capital and financial account, FDI would continue to be the main source of external financing, although at slightly lower levels than those witnessed in 2012. This would be consistent with less momentum in the mining sector, in an environment of lower prices and delays in carrying out certain investment projects in the sector, as well as a slowdown in the pace of investment from other sectors that fueled the growth in these flows in 2012. Capital outflows for Colombian investment abroad (CIA) are estimated as being higher than those registered a year ago, according to the

<sup>4</sup> Although the capital flows recorded in the exchange balance do not pertain exactly to what is entered in the balance of payments, since the former refer to the entry and outflow of foreign exchange, they do offer some idea of the trend.

announcements made, especially for the financial institutions sector. This implies fewer net resources from FDI. Also, the forecast for 2013 anticipates more external financing for the public sector than in 2012, due to added foreign borrowing by the central government (Table 3). It is important to point out that the balance-of-payments forecasts reflects a variation in gross international reserves consistent with the announcements of intervention by *Banco de la República*<sup>5</sup> and the financial returns associated with that intervention.

For 2014, the current account deficit could be between 3.2% and 3.6% of GDP. It would be funded primarily by FDI inflows and external resources of the public sector.

Table 3  
Balance of Payments Forecast for Colombia  
(Baseline or most likely scenario)

	(Millions of dollars)				(Percentage of GDP) <sup>d/</sup>			
	2010	2011 (pr.)	2012 (pr.)	2013 (fcst)	2010	2011 (pr.)	2012 (pr.)	2013 (fcst)
I. Current account	(8,821)	(9,643)	(11,907)	(13,043)	(3.1)	(2.9)	(3.2)	(3.5)
A. Non-factor goods and services <sup>a/</sup>	(1,272)	1,459	(563)	(3,665)	(0.4)	0.4	(0.2)	(1.0)
B. Factor income	(12,024)	(16,039)	(15,927)	(14,114)	(4.2)	(4.8)	(4.3)	(3.7)
C. Transfers	4,475	4,938	4,583	4,735	1.6	1.5	1.2	1.3
II: Capital and financial account	11,770	13,048	17,035	19,894	4.1	3.9	4.6	5.3
A. Private sector: net direct investment and other capital flows <sup>b/</sup>	6,919	10,250	14,115	14,227	2.4	3.0	3.8	3.8
B. Public sector	4,789	2,839	2,975	5,722	1.7	0.8	0.8	1.5
III: Errors and omissions	187	340	295	-305	0.1	0.1	0.1	(0.1)
IV: Change in gross international reserves <sup>c/</sup>	3,136	3,744	5,423	6,546	1.1	1.1	1.5	1.7

(pr.) preliminary  
(fcst.): forecast

a/ Includes the balance of nonfactor goods and services and special commerce operations.

b/ Includes net flows of foreign direct investment, portfolio investment and net external borrowing.

c/ The change in gross international reserves takes into account contributions to the Latin American Reserve Fund (FLAR).

d/ The figure for real GDP growth in 2013 is an estimate developed by the Division of Economic Studies.

Source: *Banco de la República*.

5 This takes into account the purchase of at least US\$2.5 billion in foreign exchange between June and September 2013.

## II. DOMESTIC GROWTH: THE CURRENT SITUATION AND SHORT-TERM OUTLOOK

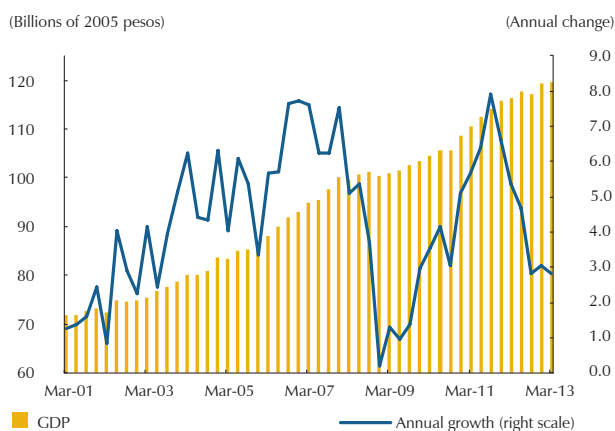
**In the first quarter of 2013, the Colombian economy grew 2.8% annually,** which is at the midpoint of the target range presented in the previous edition of the *Inflation Report*.

**During the first quarter, various negative supply shocks were observed** in mining exports, which influenced the outcome for GDP, as did the effect of fewer working days.

**In the second quarter of 2013, the economy is expected** to expand at a higher rate than what has been observed since mid-2012.

### A. GDP – FIRST QUARTER OF 2013

Graph 16  
Gross Domestic Product  
(Seasonally adjusted)



Source: DANE; Calculations by Banco de la República.

According to information released by the National Department of Statistics (DANE), the Colombian economy grew at an annual rate of 2.8% during the first three months of the year (Graph 16). This figure was at the midpoint of the growth range forecast in the previous edition of this report and is similar to the increase observed since the third quarter of last year. On a quarterly basis, the variation was 0.3% compared to final period in 2012. It is important to note that the effect of fewer business days during this period influenced the results of the series published by DANE (see Box No. 1, p. 37). Preliminary calculations by the technical staff suggest that GDP would have grown by about 3.4% annually, had it not been for this fact.

Domestically, the performance of the Colombian economy during the first quarter was marked by the presence of supply shocks that aggravated the effect of fewer business days. Different work stoppages between February and March in many segments of the economy and some difficulties with law and order affected the figures for economic growth. Consequently, domestic demand rose 3.6% in annual terms; this is less than the increase of 4.1% witnessed in the fourth quarter of 2012 and below the average for the last decade. A breakdown by component shows a slowdown in total consumption, while the growth in aggregate investment was slightly higher than in the previous period (Table 4).

The slowdown in household consumption coincided with lower consumer confidence levels compared to the average for 2012, plus less growth in household debt and less momentum in employment. The drop in consump-

Table 4  
Real Annual GDP Growth by Type of Spending

	2011 Full year	2012				2012 Full year	2013 Q1	Contribution to annual growth (Q1 2013) (Percentage points)
		Q1	Q2	Q3	Q4			
<b>Total consumption</b>	<b>5.4</b>	<b>5.4</b>	<b>4.3</b>	<b>4.6</b>	<b>4.9</b>	<b>4.8</b>	<b>3.5</b>	<b>2.8</b>
Household consumption	5.9	5.7	4.3	4.4	4.6	4.7	3.2	2.1
Non-durable goods	3.6	5.4	2.5	3.3	3.2	3.6	2.7	0.6
Semi-durable goods	12.3	13.6	7.7	7.7	7.4	9.0	2.3	0.1
Durable goods	19.8	(5.7)	1.8	4.0	20.6	4.7	(0.8)	(0.0)
Services	5.5	5.9	4.6	4.6	4.0	4.8	3.4	1.2
Final Government Consumption	3.6	4.1	4.6	5.2	6.5	5.1	4.6	0.7
<b>Gross capital formation</b>	<b>18.3</b>	<b>8.0</b>	<b>11.6</b>	<b>1.0</b>	<b>3.5</b>	<b>5.9</b>	<b>3.7</b>	<b>1.0</b>
Gross fixed capital formation	18.7	7.9	11.8	1.3	3.8	6.1	7.2	1.9
Agriculture, forestry, hunting and fishing	7.6	4.4	2.3	0.9	0.9	2.1	(2.8)	(0.0)
Machinery and equipment	20.9	12.6	8.9	5.6	4.9	7.9	0.5	0.0
Transport equipment	57.9	17.9	15.3	(10.6)	(12.7)	0.9	(11.0)	(0.4)
Construction and buildings	3.7	3.0	17.7	(11.1)	13.8	5.6	17.5	1.1
Civil works	22.8	(5.5)	6.2	5.2	(0.5)	1.5	17.4	1.2
Services	7.2	6.6	14.2	(6.0)	9.4	5.9	2.7	0.0
<b>Domestic demand</b>	<b>8.2</b>	<b>5.6</b>	<b>6.4</b>	<b>3.5</b>	<b>4.1</b>	<b>4.9</b>	<b>3.6</b>	<b>3.9</b>
<b>Total exports</b>	<b>12.9</b>	<b>9.1</b>	<b>4.0</b>	<b>7.2</b>	<b>1.4</b>	<b>5.4</b>	<b>(1.2)</b>	<b>(0.2)</b>
<b>Total imports</b>	<b>21.2</b>	<b>13.2</b>	<b>11.2</b>	<b>9.4</b>	<b>2.9</b>	<b>9.1</b>	<b>(0.2)</b>	<b>0.1</b>
<b>GDP</b>	<b>6.6</b>	<b>5.4</b>	<b>4.7</b>	<b>2.8</b>	<b>3.1</b>	<b>4.0</b>	<b>2.8</b>	<b>2.8</b>

Source: DANE; Calculations by Banco de la República.

*Government consumption in the second quarter grew less than in late 2012.*

tion of durable goods during this period is closely related to sales performance in the automotive sector. Meanwhile, government final consumption also grew at lower rates than those observed towards the end of last year; however, they were still above the average for the economy (Table 4).

The other components of household consumption that suffered the most were semi-durables and durable goods. Services, which account for more than half of the budget of Colombian families, and non-durable goods, which represent about 35% of this expenditure, showed more stability.

As for investment, the important pace of growth in the construction of buildings and civil works (as explained later, in detail) contrasts with the poor performance of items related mainly to transport equipment and machinery, and equipment. Investment in transport equipment has dropped sharply since the second half of last year, following a huge increase of around 60% annually in previous years. The investment in this segment between 2010 and early 2012 was likely enough to meet the need to expand the inventory of capital goods of this type for the coming quarters. Investment in machinery and equipment also posted mediocre performance during the first three months of the year, expanding only 0.5% in annual terms, which is less than the figure on record for 2012 (7.9%).

With respect to foreign trade, both exports and imports grew less than during the fourth quarter of last year. In the first case, they fell 1.2%, largely due to the impact of the different supply shocks that occurred between February and March, especially the effect on coal production. In the case of imports, there was a slight decline associated with the behavior of imports of capital goods; this is closely related, in turn, to the slowdown in investment mentioned earlier. Imports of consumer goods also posted lower growth rates during the first quarter, similar to the behavior of household consumption.

The highest growth rates on the supply side were in construction and social, community and personal services (Table 5). Other sectors that outperformed the economy as a whole were financial services and the supply of electricity, gas and water, but their growth did slow. Mining rose again slightly, as of the third quarter, while industrial activity again showed an annual contraction.

The sector that contributed the most to Colombia's economic growth during the first quarter of 2013 was construction, with an increase of 16.9%, following 4.9% growth in the final quarter of 2012. Both the items comprising construction; namely, civil works and buildings, accelerated during the first three months of the year. The annual growth in the first case was 17.5%;

Table 5  
Real Annual GDP Growth, by Branch of Economic Activity

Sector	2011 Full year	2012				2012 Full year	2013 Q1	Contribution to annual growth (Q1 2013) (Percentage points)
		Q1	Q2	Q3	Q4			
Agriculture, forestry, hunting and fishing	2.4	2.6	3.0	2.7	1.9	2.6	2.4	0.1
Mining and quarrying	14.4	14.2	8.4	0.8	1.1	5.9	1.4	0.1
Manufacturing industry	5.0	1.1	0.0	(0.7)	(2.5)	(0.5)	(4.1)	(0.5)
Electricity, gas and water	2.9	4.1	3.6	3.2	3.2	3.5	3.4	0.1
Construction	10.0	(1.5)	10.7	(1.1)	4.9	3.3	16.9	1.0
Buildings	3.3	3.1	16.5	(10.2)	11.7	5.0	16.0	0.5
Civil works	17.4	(5.6)	6.1	6.0	(0.7)	1.5	17.5	0.5
Commerce, repairs, restaurants and hotels	6.0	5.3	4.9	3.3	2.9	4.1	2.8	0.3
Transport, storage and communication	6.2	6.6	3.7	3.1	3.1	4.1	2.0	0.1
Financial, real estate and company services	7.0	7.1	5.3	4.4	4.9	5.4	3.4	0.7
Social, community and personal services	2.9	3.8	4.0	5.8	6.0	4.9	4.5	0.7
Subtotal – aggregate value	6.3	5.1	4.6	2.8	3.0	3.9	2.8	2.7
Taxes minus subsidies	10.9	8.0	5.6	2.7	3.3	4.9	2.8	0.3
<b>GDP</b>	<b>6.6</b>	<b>5.4</b>	<b>4.7</b>	<b>2.8</b>	<b>3.1</b>	<b>4.0</b>	<b>2.8</b>	<b>2.8</b>

Source: DANE; Calculations by Banco de la República.

in the second, it was 16%. The increase in the number of building permits awarded and added execution in the stages of the construction process with more value added explain the improved performance of building construction. In this regard, it is important to point out that some of the effects of the government's policies to stimulate the sector (a 100,000 unit housing program and the Program to Boost Productivity and Employment [PIPE]) began to be evident in the first quarter; however, their most significant impact is expected to be concentrated during the second half of this year and in 2014.

Social, community and personal services increased 4.5% in annual terms during the first three months of the year, maintaining the momentum witnessed last year (4.9% for all of 2012). This expansion was due to growth in areas related to social assistance and health (5.9%) and recreation, culture and sports (5.6%). Good performance in terms of the value added from

*There was an important build up in the added value of the coffee industry.*

government administration and defense services were important highlights, although there was a slowdown in this case.

Other sectors that also experienced growth, but modest and below that of the economy as a whole, were finance, commerce, agriculture and mining. In the case of agriculture, there was a significant build-up in coffee production (18.8%). However, the output of other agricultural goods and live animals and products thereof expanded very little: 1.0% and 0.5%, in that order.

Mining performance was mixed. Oil production, on the one hand, remained above one million barrels per day (mdb) during the first three months of the year (1,007,000 mdb, on average); the result was 7.8% annual growth (compared to 3.7% in the fourth quarter of 2012). Similarly, non-metallic minerals were up by 7.9%, after contracting 2.8% in the immediately preceding period. However, the added value of coal dropped by around 21% between January and March, due to a halt in production at the two major coal companies as a result of labor strikes and environmental problems. Metal ore continued to decline (-3.9%). So, in all, the oil production, mining and quarrying group, as a whole, grew by a meager 1.4%. Despite being higher than the growth observed during the fourth quarter of 2012 (1.1%), this figure is still well below the average for the last four years (10.5%).

In contrast, the added value of the manufacturing sector dropped 4.1% in annual terms, outpacing the -2.5% decline at the end of 2012. This was due to a combination of several factors, particularly: i) fewer calendar and business days compared to the same period last year; ii) weaker domestic and external demand, and iii) increased competition from imported goods. If the effect of fewer calendar and business days is discounted, the decline in the sector would have been 2.1% (see Box 1, p. 37).

## B. SHORT-TERM GDP FORECAST

The information at hand for the second quarter of 2013 suggests Colombia's productive apparatus would have registered a slightly higher growth rate than during the first three months of the year. This soft acceleration would be due, in part, to the fact that April had more business days compared to the same month last year, as anticipated in earlier versions of this report. However, lower lending rates might also have been a contributing factor, thanks to the expansionary monetary policy adopted by *Banco de la República* since last year and the fact that several supply shocks in the first quarter were overcome, especially the shock to coal production.

*Growth of the Colombian economy would have accelerated during the second quarter*

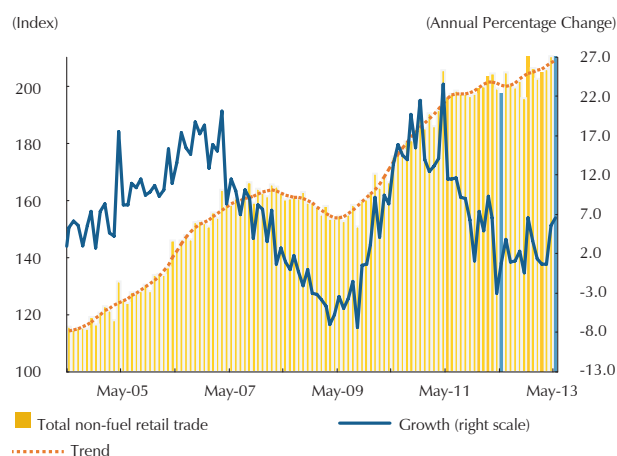


For this quarter, domestic demand is expected to grow at less of an annual rate than in the first three months of the year, largely due to a slower increase in investment, particularly for transport equipment and civil works, coupled with less government consumption. The investment forecast takes into account a high base of comparison during the same period last year. In contrast, private consumption should experience more momentum, as would exports, after recovering from the supply shocks that plagued the mining sector earlier this year. Imports are expected to expand at a modest pace.

The changes in the variables related to household consumption suggest this sector would have performed better between April and June than during period from January to March. The retail trade figures published by DANE are a case in point. Sales by commercial establishments increased 6.5% in May compared to the same period last year. This exceeds the rate in April

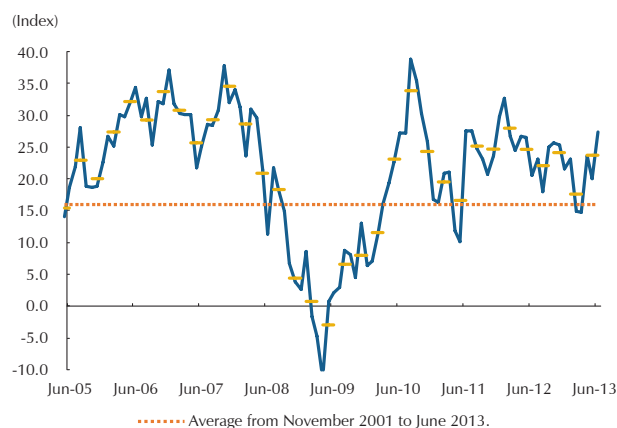
(5.7%) and the average for the first quarter (0.9%) (Graph 17). When discounting the effect of motor vehicle sales, which increased 5.3%, these sales rose 6.5% (an equally favorable rate).

Graph 17  
Monthly Retail Trade Sample  
(Total non-fuel retail trade, seasonally adjusted)



Source: DANE; Calculations by Banco de la República.

Graph 18  
Consumer Confidence Index and Quarterly Average



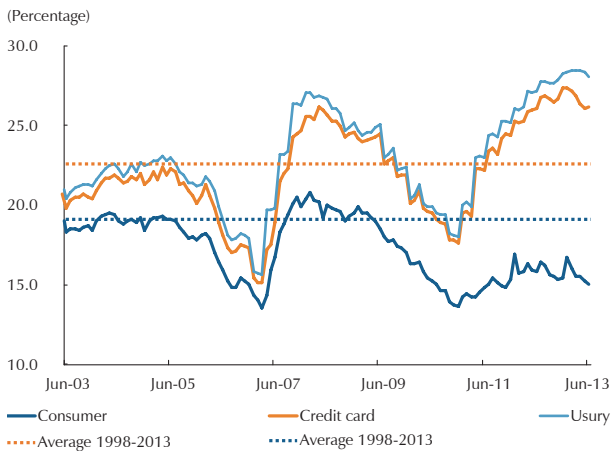
Source: Fedesarrollo.

The consumer confidence index (CCI) published by FEDESARROLLO is another indicator that sheds light on the momentum in household consumption during the second quarter. The average CCI for the April- June quarter ostensibly exceeded the average on record for the first three months of the year and the average for 2012 as a whole (Graph 18). It is important to point out the favorable momentum in household perception of economic conditions in the short-term, which reflects less uncertainty about the domestic environment and more intention on the part of Colombian families to purchase consumer goods.

The indicators of household income and financing do not indicate a slowdown in the momentum in private consumption. Although terms of trade are lower than they were a year ago, they still can be considered relatively high. Moreover, the rate of inflation has been low throughout the year. So, the purchasing power of household income in Colombia has not deteriorated in real terms.

The performance of the job market, with an unemployment rate that has continued to decline, according to the latest information, also supports the

Graph 19  
Real Interest Rates on Loans to Households  
(Non-food CPI deflated)



Source: Office of the Financial Superintendent of Colombia.

improvement in conditions for private consumption (see the highlighted section on page 36). Although lending to households continued to slow, it is converging towards rates that are still favorable for growth in consumption during the second quarter and into the foreseeable future. Consumer loans rose 13.7% annually in the second quarter. Although this is less than the rate on record for first quarter (15.2%), it is still significant. This trend is confirmed in real terms. Real interest rates have been lower in recent months, which mean families continue to have incentives to finance consumption with funds from the financial system (Graph 19).

The increase in gross fixed capital formation slowed during the second quarter. According to the figures for imports of capital goods and the data derived from *Banco de la República's* monthly survey of economic expectations, the performance of investment for purposes other than the construction of buildings and civil works would have been weak between April and June. As for imports of capital goods, the recent decline in transportation equipment (-22.6% in June) is an important aspect. Imports of machinery and equipment also posted unfavorable growth rates, although less so. The trend is confirmed when the series are analyzed in constant 2008 pesos.

This scenario also assumes less annual growth in civil works and government consumption. In the first case, expansion would be less, given the effect of a high base of comparison during the same period last year. Even so, the levels of investment of this type would exceed those reported for the first quarter of the year. As for government consumption, the momentum in growth rates would be consistent with the slowdown between January and March. However, government consumption would perform at rates above the average for the economy.

On the supply side, the balance of the available indicators of activity is mixed. The figures for industry continue to show deterioration, while others related to the mining sector, trade and agricultural speak of good performance during the second quarter of 2013.

*The recovery in mining during the second quarter of 2013 would be significant.*

In the mining sector, oil continued to exhibit significant momentum and coal posted a major recovery following the sharp drop in production during the first three months of the year. Although oil production in June was only 974 mdb, the average so far this year is 1,003 mdb. It would have increased 5.9% in the months from April to June. This performance is explained by improvements

in transport conditions and the stabilization of production at different fields, plus fewer problems with law and order, which affected production last year.

Coal, for its part, has shown a strong recovery after dropping sharply in the first three months of the year, as noted in the first section of this chapter. After overcoming the problems described earlier, exports rose 9.5% in annual terms between April and May (as opposed to -39.1% in the first quarter of 2013). However, despite better performance, the announcement of several possible mining strikes in the second half of the year could darken the outlook for the sector in the third quarter.

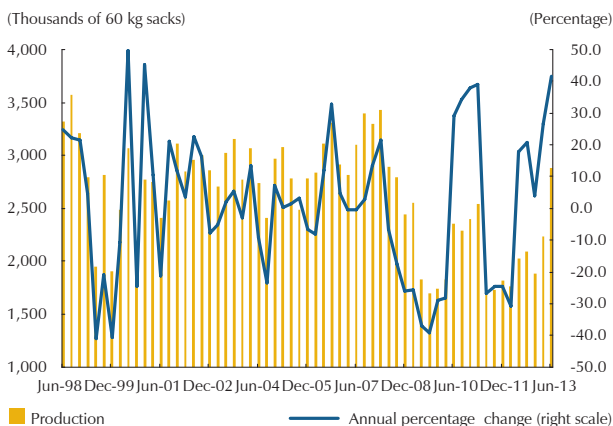
The coffee sector reported an increase of 41.6% in production during the second quarter of 2013, according to figures released by the National Federation of Colombian Coffee Growers.

This momentum ratifies the export figures published by the Federation and by DANE up to May 2013. The renewal of approximately 460,000 hectares of farmland in the last five years has led to an increase in the average productivity of coffee farms, according to the Federation. In addition, the government's plan to aid coffee growers has been extended for the rest of the year (around \$ 800 billion). This should continue to favor the sector's performance throughout 2013 (Graph 20).

Commerce is expected to see favorable activity based on good performance in retail sales, as outlined earlier in this report. The findings of the DANE commerce survey on employment indicate the same, with an annual increase of 4.4% in the personnel employed by May 2013, thanks to an increase in the recruitment of permanent staff (8.5%).

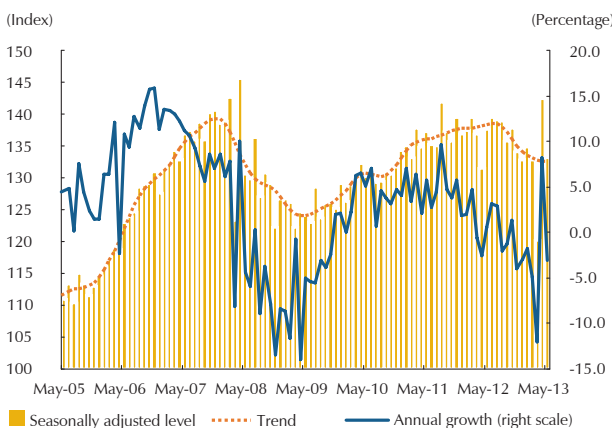
In contrast, industry continues to show signs of weakening. According to figures from the DANE industrial production index, the sector shrank 3.1% in May 2013 (Graph 21). Likewise, the Fedesarrollo survey with information up to the same month reported a slight decline in the indicators for orders and production expectations at three months. As a result, the trend component continued to decline, but seems to be reaching a tipping point. Given the information at June, industrial demand for energy, which is closely related to the activity in this sector, was down 1.2%, following the limited amount

Graph 20  
Quarterly Coffee Production  
(Seasonally Adjusted Level and Annual Growth)



Source: National Federation of Colombian Coffee Growers; calculations by Banco de la República.

Graph 21  
Non-coffee-processing Industrial Production Index  
(Seasonally adjusted series, trend component and annual growth)



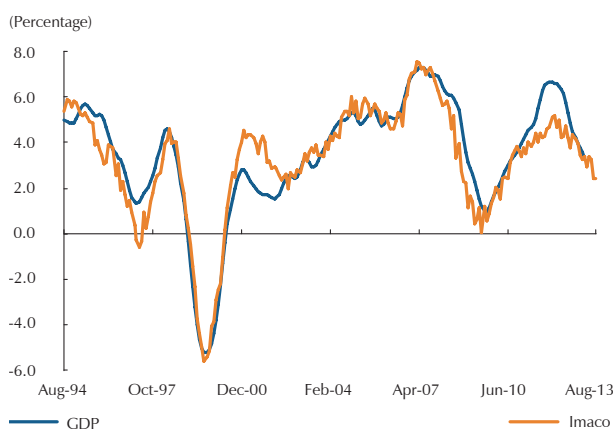
Sources: DANE; Calculations by Banco de la República.

of growth (0.6%) in May. All this suggests the contraction in industry would continue at least until the end of the first half of the year.

As for construction, the few indicators that are available point to more favorable performance during the second quarter, at least in the case of building construction. Building permits continued to recover, increasing 28.9% annually during April-May, on average. Cement production grew at an annual rate of 2.6%, after contracting 6.4%, on average, during the first quarter. As mentioned earlier, this sector is expected to see an important amount of activity, bolstered by government stimulus programs and better performance in building permits. The forecast for civil works, as noted, anticipates positive growth, but less than in the first three months of the year.

All these factors suggest growth in Colombia's GDP during the first quarter of 2013 would be somewhere between 2.5% and 4.0%, with a most likely scenario being near the midpoint of that range. Construction, the financial sector and social, community and personal services would be the most dynamic branches. The latter would be supported by increased spending in the public sector. The forecast range for the second quarter includes a great deal of uncertainty about how investment in civil works and government consumption will actually play out.

Graph 22  
Imaco Leading Indicator for 5 Months of GDP<sup>a/</sup>



a/ 12-month accumulated annual growth  
Source: Calculations by Banco de la República.

The leading indicator of economic activity in Colombia (IMACO) (Graph 30), which is calculated using a variety of sector variables with information through April, points to approximately 3.0% growth in the first half of the year (Graph 22). It is important to point out that this methodology does not take into account the statistical problems associated with the impact of fewer business days, nor does it contain indicators for sectors such as construction and mining, which could help to explain Colombia's economic growth. So, all of this could mean IMACO might be underestimating the increase in GDP in Colombia.

## THE JOB MARKET DURING THE SECOND QUARTER

The job market trends have been consistent with what was described in the previous edition of the *Inflation Report*. In other words, the unemployment rate (UR) has been at its lowest level since 2001, but has not decline as much during the course of this year as in the same period in 2012. This is why the seasonally adjusted series show stability in the unemployment rate in recent months. However, in May, the national UR dropped sharply (Graph A). Annual reductions in the UR were evident in all geographic domains during the moving quarter ended in May: the UR was 9.9% nationwide as opposed to 6% in the rural area, 11% in the municipal seats, and 10.9% in the thirteen major metropolitan areas (Graph B).

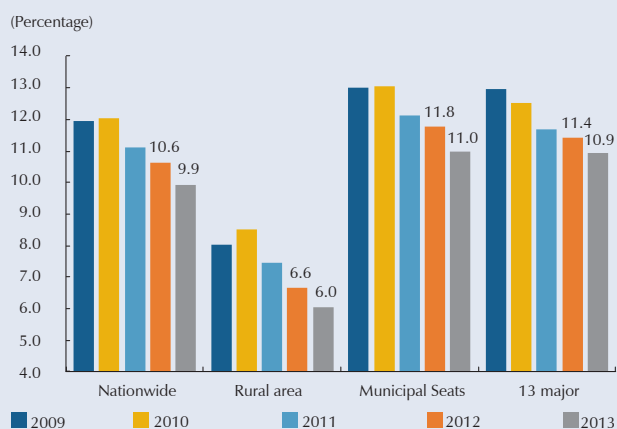
The fact that unemployment declined less is due to less of an increase in the number of employed, which has slowed

**Graph A**  
Unemployment Rate (UR)  
(Seasonally adjusted moving quarter)



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

**Graph B**  
Unemployment Rate  
(March-April-May moving quarter)



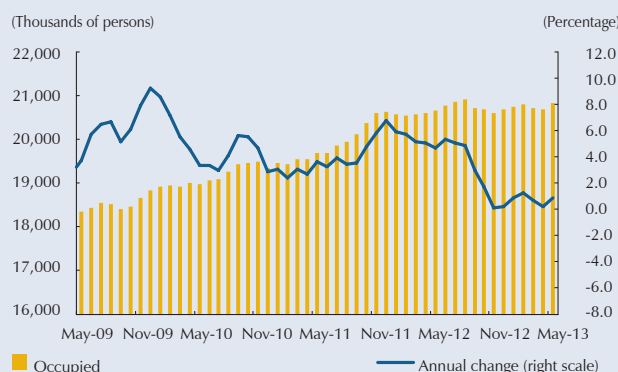
Source: DANE (GEIH).

considerably in annual terms. During the March-May moving quarter, the number of employed increased by 0.9% in the nationwide total and 1.5% in the thirteen major metropolitan areas (Graph C, panels 1 and 2). The more pronounced declines in the UR in the rural area are due to the fact that, although the number of employed drops annually (-2.1% in March - May), participation in the labor force does so even more.

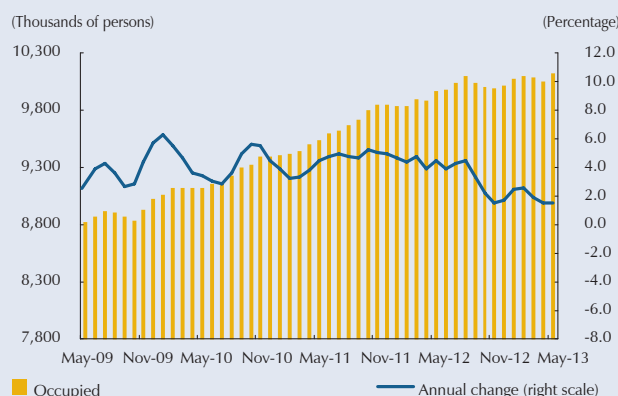
The slowdown in annual terms has been concentrated in non-salaried employment, since salaried employment continues to grow in annual terms. Salaried employment in the moving quarter ended in May was 3.6% annually in the thirteen major metropolitan areas, while its counterpart declined 0.7% in annual terms.

**Graph C**  
Employed

### 1. Nationwide Total (Seasonally adjusted moving quarter)



### 2. Thirteen Major Metropolitan Areas (Seasonally adjusted moving quarter)



Source: DANE (GEIH).

## BOX 1 THE CALENDAR EFFECT ON ECONOMIC ACTIVITY IN COLOMBIA

Daniel Parra\*  
Jackeline Piraján

Lately, there has been interest in how the performance of economic variables is affected by changes in the number of business days from one year to another, during the same month. There were two specific events in the first quarter of 2013: i) February had one less business day compared to February 2012 (which was a leap year) and ii) March 2013 had three fewer business days because of Easter week and a holiday (last year, Easter week was in April).

From a theoretical standpoint, these phenomena are called “calendar effects” and can be divided into two groups: i) those related business days (holidays) and ii) those associated with special holidays (Easter, Christmas and New Year’s Day).

### Effects on Monthly Series: The Case of the Industrial Production Index

Taking as an example the index of industrial production without coffee threshing (IPI), published by the National Bureau of Statistics (DANE), an initial exercise was performed using a linear regression between annual IPI growth and the variables that count the number of holidays, leap years and the Easter holiday in order to verify the statistical significance of their influence on the behavior of that economic series (Table B1.1). The results suggest the momentum in the IPI is influenced by those variables, except for the one that quantified the leap years, which proved not to be significant.

Considering the foregoing, the series was seasonally adjusted in IPI levels by including, in the calculation, the variables that count the holidays and Easter. This was done with the Tramo/Seats method,<sup>1</sup> which will be described

**Table B1.1**  
Change in the Industrial Production Index

	<i>Change in CPI = C(1) + C(2) × Holidays + C(3) × Easter week</i>			
	Coefficient	Standard error	t-statistic	p-value
C(1)	0.0391	0.0065	6.0229	0.0000
C(2)	-0.0086	0.0041	-2.1068	0.0358
C(3)	-0.0285	0.0066	-4.2936	0.0000

Source: calculations by the authors.

later. It shows those variables also are significant with this process and, therefore, can explain to some extent the variability of industrial production during the period analyzed (1980 -2013).<sup>2</sup> Moreover, if we compare the results of this estimate to the latest records published by DANE on the annual change in the IPI, we see the decline in industry would have been less if the calendar effects are excluded from the analysis.

Specifically, DANE reported that the annual change in the IPI was -4.9% and -12% for February and March. Later, in April, it surprisingly was 8.2%. This considerable variability makes it difficult to analyze the trend in the sector during those months, since, in addition to seasonality, they are highly influenced by business days. However, if the calendar effects (fewer business days and Easter) are controlled, the fluctuations in the series would have been lower. According to the estimates that have been developed, growth would have been -4.8%, -4.3% and -0.3% for the three months in question (Graph B1.1).

Given the above, and recognizing the fact that calendar effects could influence economic activity, we will attempt to quantify their impact on the Colombian economy as a whole during the first quarter of 2013. Although there is no standard procedure for handling these events, a widely used method will be discussed briefly in this section.

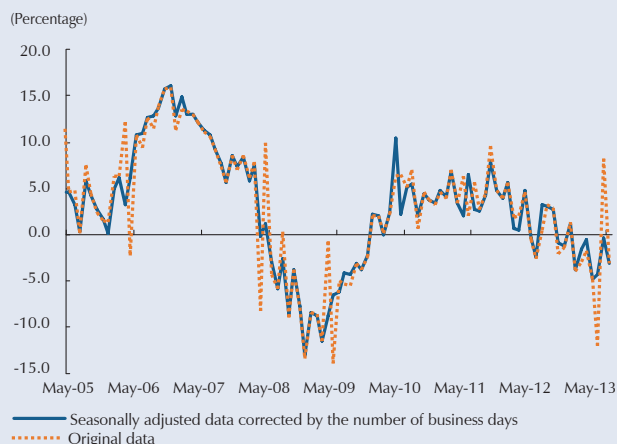
\* Mr. Parra is a specialized professional with the Programming and Inflation Department of the Division of Economic Studies. Ms. Piraján is a student intern with that department. The authors wish to thank Sergio Olarte and Adolfo Cobo for their comments. The views expressed herein are those of the authors and imply no commitment on the part of *Banco de la República* or its Board of Directors.

1 Tramo stands for time series regression with Arima noise, missing values and outliers. Seats is the acronym for signal extraction in Arima time series.

2 The estimates were made with 401 IPI observations for a sample that extends from January 1980 to May 2013. The idea was have a large number of events associated with each calendar effect; e.g., Easter occurred on 33 occasions. In addition to the regression variables that model the calendar effects, the estimate indicated the presence of two outliers: in April 1983 and December 1998.



**Graph B1.1**  
Change in the Industrial Production Index



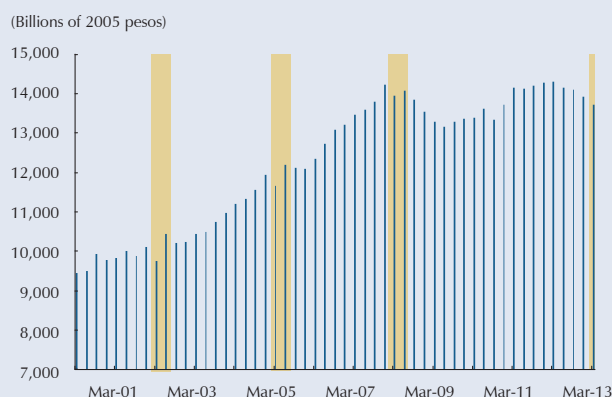
Source: DANE; calculations by the authors.

### Effects on Quarterly Series: The Case of GDP by Branch of Activity

Again, taking industry as an example, but now in terms of the quarterly national accounts published by DANE, we see Easter has a negative impact on the level of production when it falls in March instead of April, as was the case in 2013. This happens even with the series seasonally adjusted by DANE (Graph B1.2). In this way, the second exercise is intended to quantify the calendar effects on the different branches of gross domestic product (GDP).

The series published by DANE for all branches of the non-seasonally adjusted GDP were used to apply the Tramo-Seats method. This was done: i) to estimate the significance of calendar effects on economic growth in

**Graph B1.2**  
Industrial Manufacturing GDP  
(Seasonally adjusted series)



Observation: The shared areas represent the years when Easter week was in March, after having been in April the year before.  
Source: DANE.

all the sectors, and ii) to discount the statistical effect of the reduced number of business days on each of them, if necessary.<sup>3</sup> Some important results were observed: i) holidays generally are not significant in any branch, and ii) Easter is important for sectors such as agriculture, industry, electricity, water and gas, transportation and the financial sector (Table B1.2)

Commerce was not affected by the Easter holiday. This is explained by the fact that the coefficient associated with Easter reported an opposite sign for some of the sub-branches comprising this sector (commerce, hotel and restaurant services, and repair services). Specifically, the sign of the variable that models it indicates a negative effect for commerce associated with retail trade and vehicle sales, among others, while the sign is positive for hotel and restaurant services. This is intuitive, since families devote more time at Easter to tourism than to making purchases.

Finally, the total impact of the calendar effects, mainly Easter, on economic growth in Colombia during the first quarter of 2013 was quantified as follows: i) the branches in which the calendar effect variables are significant were modeled with Tramo-Seats; ii) when the calendar effects are not significant, the series seasonally adjusted by DANE and published on its website are used; and iii) the contributions to overall GDP growth per sector are added, assuming the statistical discrepancy in the original series and that proposed in this exercise are the same. Accordingly, the Colombian economy would have grown 3.4% instead of 2.8%, as officially reported by DANE (Table B1.3). Industry is the branch where the statistical significance and impact of Easter week on the annual variation are higher.

### The Tramo/Seats Method

Gómez and Maravall (1996, 2001) developed an econometric software package called TSW.<sup>4</sup> It is used to apply the Tramo/Seats method. Besides the usual components (cycle, trend, seasonality and irregular) in an analysis of time series decomposition, it incorporates the presence

3 The statistical significance of the holiday variable (minus business days) and Easter was verified for this purpose. The TSW program has an automatic routine that checks if it is necessary to transform the series with logarithms and if there are outliers.

4 The program was developed by the authors and can be downloaded free of charge from the website of the Central Bank of Spain. The link is [http://www.bde.es/bde/es/secciones/Services/Professional/Programas\\_estadi/Programas\\_estad\\_d9fa7f3710fd821.htm](http://www.bde.es/bde/es/secciones/Services/Professional/Programas_estadi/Programas_estad_d9fa7f3710fd821.htm)

Table B1.2  
Main Results with the TRAMO-SEATS Method

Branches of Activity	Logarithmic Transformation	Atypical Data	Dummies for Calendar Effects				Criterio selección	
			Holidays		Easter Holiday		AIC	BIC
			Coefficient	t-value	Coefficient	t-value		
Agriculture	No	No	-10.563	-0.67	-80.342	-2.37	629.5262	10.1818
Mining	No	No	-70.863	-2.91	11.655	0.21	657.8951	11.0189
Industry	Yes	No	2.12E-03	1.12	-2.35E-02	-5.34	-241.453	-7.8436
Electricity, Gas, Water and Sewage	Yes	Yes	-1.41E-03	-1.86	-7.57E-03	-4.09	-327.3535	-9.6319
Construction	Yes	No	3.17E-03	0.33	3.17E-03	0.37	-108.6623	-4.9989
Trade	Yes	No	5.55E-04	0.4	-2.53E-03	-0.81	-266.9858	-8.3182
Transport	No	No	-3.5652	-0.29	-60.354	-2.23	603.0297	9.8037
Finance	Yes	No	-8.40E-04	-1.31	-5.70E-03	-3.85	-321.1783	-9.3678
Social, Community and Personal Services	Yes	Yes	-1.67E-03	-1.18	-5.37E-03	-1.66	-285.2067	-8.6249
Taxes	Yes	No	-1.99E-04	-0.09	-9.55E-03	-1.93	-224.622	-7.4468

Note: shaded figures denote a significant variable.  
Source: Calculations by the authors.

Table B1.3  
GDP Growth in the First Quarter of 2013  
(Percentage)

Branch of Activity	Annual Change		Contribution to growth:	
	DANE official data	Authors' calculations	DANE official data	Authors' calculations
Agriculture	2.4	3.4	0.2	0.2
Mining	1.4	1.4	0.1	0.1
Industry	(4.1)	(2.1)	(0.5)	(0.3)
Electricity, gas and water	3.4	4.3	0.1	0.2
Construction	16.9	16.9	1.0	1.0
Commerce	2.8	2.8	0.3	0.3
Transportation	2.0	2.6	0.2	0.2
Financial	3.4	4.2	0.7	0.8
Social, community and personal services	4.5	4.5	0.7	0.7
Taxes	2.8	2.8	0.3	0.3
Total GDP	2.8	3.4	2.8	3.4

Source: DANE; calculations by the authors.

of outliers and calendar effects, among other abnormalities that can influence the behavior of an economic variable at a point in time (that somehow could be modeled).

These events are modeled as follows. First, the Tramo method proposed Gómez and Maravall (1992, 1993 and 1994) is used to make prior adjustments to the series, such as correcting outliers and modeling calendar effects.

Then, once the series is previously modeled and somewhat corrected, it is seasonally adjusted through filters that decompose it into trend, seasonality and statistical noise, which is known as Seats.<sup>5</sup>

<sup>5</sup> A procedure based on the work of Burman (1980) and Hillmer and Tiao (1982).



The TSW program (developed at the Bank of Spain) was used for this procedure. It begins by testing the significance of parameters associated with the calendar effects, and a model type is estimated as follows.

$$Y(t) = \sum_{i=1}^{n_0} \alpha_i D_i(B) d_i(t) + \sum_{i=1}^{n_0} \beta_i cal_i \quad (1)$$

Where  $Y(t)$  is the original series (to which the procedure is applied),  $B$  is the lag operator,  $d_i(t)$  is a dummy variable that indicates the position of the outlier, and  $D_i(B)$  is a polynomial that reflects the type of outlier.<sup>6</sup> One sees the calendar effects with the  $cal$  variable, such as business days or Easter Week, and  $\beta_i$  is the associated coefficient. Finally, the term  $x(t)$  follows an Arima model<sup>7</sup> as indicated below, which complies with the traditional assumptions.<sup>8</sup>

$$\varphi(B)x(t) = \theta(B)a(t) \quad \varphi(B) = \phi(B)\delta(B) \quad (2)$$

Where

$$\phi(B) = (1 + \phi_1 B + \dots + \phi_p B^p)(1 + \Phi_1 B^S + \dots + \Phi_p L^{S \times p})$$

$$\delta(B) = (1 - B)^d (1 - B)^D$$

$$\theta(B) = (1 + \theta_1 B + \dots + \theta_q B^q)(1 + \Theta_1 B^S + \dots + \Theta_q L^{S \times q}) \quad (3)$$

Where  $a(t)$  has zero mean and is white noise with variance  $Var(a)$ , and  $\phi(B)$ ,  $\theta(B)$  and  $\delta(B)$  are finite polynomials in  $B$ . The latter contains unit roots.  $S$  denotes the number of observations per year, and  $d$  and  $D$  are the possible choices of differentiation orders in the regular and seasonal part, respectively. The TSW program tests if the series should be transformed by logarithms or kept at levels. It also evaluates the presence of possible outliers and calendar effects. The latter, together with the Arima model for  $x(t)$ , are identified automatically and estimated with the maximum likelihood method.

When used for seasonal adjustment: i) the influence of the regressors that measure the calendar and outlier effect on  $y(t)$  is eliminated to obtain an estimate of the stochastic component  $x(t)$ ; ii) it is assumed the stochastic component is equal to the estimate achieved through Arima modeling, and iii) this is divided into an uncorrelated stochastic

seasonal component ( $s(t)$ ) and a seasonally adjusted stochastic series ( $n(t)$ ), in such a way that:

$$x(t) = s(t) + n(t)$$

The roots of  $\phi(B)$  and  $\delta(B)$  are assigned to the seasonal component or the seasonally adjusted series. See Gómez and Maravall (2001), Villareal (2005) and Melo and Parra (2013) for a more detailed explanation of the Tramo-Seats procedure and several other methods for seasonal adjustment that take calendar effects into account.

## References

- Burman, J. P. (1980). "Seasonal Adjustment by Signal Extraction", *Journal of the Royal Statistical Society Series A*, vol. 143.
- Gómez, V.; Maravall, A. (1994). "Estimation, Prediction, and Interpolation for Nonstationary Series with the Kalman Filter", *Journal of the American Statistical Association*, vol. 89, no. 426.
- Gómez, V.; Maravall, A. (1993). "Time Series Regression with Arima Noise and Missing Observations: Program Tramo," EUI Working Paper ECO, no. 92/81, European University Institute, summary published in the *Bulletin of the International Statistical Institute*, 49th Session, Book 1, Florence.
- Gómez, V.; Maravall, A. (2001). "Automatic Modeling Methods for Univariate Series," in D. Peña, G. C. Tiao and R. S. Tsay (eds.), *A Course in Time Series Analysis*, Chap. 7, New York: J. Wiley and Sons.
- Gómez, V.; Maravall, A. (2001). "Seasonal Adjustment and Signal Extraction in Economic Time Series," in D. Peña, G. C. Tiao and R. S. Tsay (eds.), *A Course in Time Series Analysis*, Chap. 8, pp. 202-247, New York: J. Wiley and Sons.
- Gómez, V.; Maravall, A. (1996). "Programs Tramo and Seats, Instruction for User (Beta version: September 1996)", Working papers, No. 9628, Banco de España.
- Hillmer, S. C.; Tiao, G. C. (1982). "An Arima-Model Based Approach to Seasonal Adjustment," *Journal of the American Statistical Association*, vol. 77.
- Melo, L.; Parra, D. (2013). "Efectos calendario sobre la producción industrial en Colombia," a document published by *Banco de la República*.
- Villareal, F. (2005). "Elementos teóricos del ajuste estacional de series económicas utilizando X-12-Arima y Tramo-Seats". In-house document, ECLAC, Division of Statistics and Economic Projections, Statistical and prospective studies series, Santiago de Chile, December.

6 For an additive outlier (AO),  $Di(B)=1$ ; for a temporary change (TC),  $Di(B)=1/(1-0,7B)$ , and for a change in level (LS),  $Di(B)=1/(1-B)$ .

7 Arima: autoregressive integrated moving average

8 Stationarity of the series (polynomials whose roots are stable) and white noise model errors, among others.

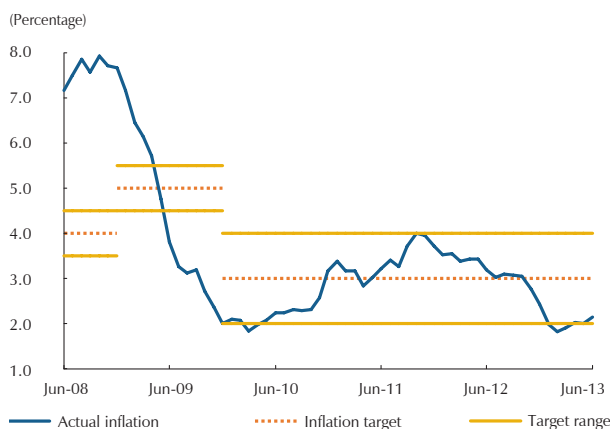
### III. RECENT DEVELOPMENTS IN INFLATION

**Consumer inflation increased slightly during the second quarter, although** it did stay below the target of 3.0%. The average of the core inflation indicators showed no significant changes.

**The upward pressure on peso depreciation would have been offset** by other factors such as weaker domestic demand, few adjustments in production costs, stable or declining international commodity prices, and low inflation expectations.

**Inflationary pressures between April and June were concentrated in** the regulated component of the CPI, with energy being the item that generated the most volatility.

Graph 23  
Total Consumer Inflation



Sources: DANE and Banco de la República.

Annual consumer inflation rose during the second quarter of this year, after continuing on a downward trend since October 2011 (4.0%) and reaching its lowest level in decades in February (1.83%). The June figure came to 2.16%. This is 25 basis points above the figure in March and within the target range for long-term inflation (2% to 4%) defined by the Board of Directors (Graph 23 and Table 6).

The annual inflation at the end of the second quarter was slightly higher than anticipated in the previous edition of this report. The forecast errors were mainly in the regulated CPI, where most of the upward pressure was observed. The results for the food group also surpassed the forecasts to some extent, especially for perishables.

Table 6  
Consumer Inflation Indicators  
(At June 2013)

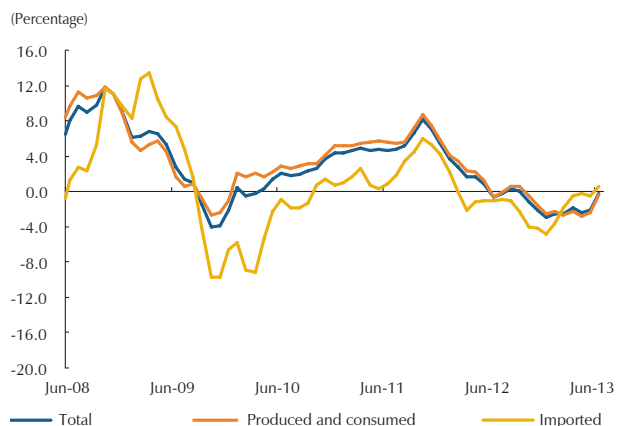
Description	Dec-11	Mar-12	Jun-12	Sept-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
<b>Total</b>	<b>3.73</b>	<b>3.40</b>	<b>3.20</b>	<b>3.08</b>	<b>2.44</b>	<b>2.00</b>	<b>1.83</b>	<b>1.91</b>	<b>2.02</b>	<b>2.00</b>	<b>2.16</b>
<b>Excluding food</b>	<b>3.13</b>	<b>2.95</b>	<b>2.80</b>	<b>2.87</b>	<b>2.40</b>	<b>2.11</b>	<b>2.08</b>	<b>2.11</b>	<b>2.20</b>	<b>2.28</b>	<b>2.48</b>
Tradables	0.80	0.68	1.01	1.09	0.77	0.73	0.71	1.13	0.98	1.06	1.10
Non-tradables	3.64	3.71	3.62	4.02	3.92	3.94	3.84	3.85	3.83	3.74	3.78
Regulated items	5.81	4.94	3.92	3.31	1.91	0.67	0.71	0.19	0.86	1.25	1.98
<b>Food</b>	<b>5.27</b>	<b>4.56</b>	<b>4.22</b>	<b>3.63</b>	<b>2.52</b>	<b>1.69</b>	<b>1.19</b>	<b>1.41</b>	<b>1.57</b>	<b>1.29</b>	<b>1.34</b>
Perishables	7.73	5.18	(2.04)	(2.35)	(3.90)	(5.00)	(5.58)	(1.86)	0.41	2.57	2.44
Processed	4.50	3.69	5.12	4.33	2.83	2.19	1.60	1.25	0.91	(0.14)	(0.11)
Meals outside the home	5.59	5.87	5.52	5.21	4.90	3.88	3.60	3.21	3.29	3.33	3.51
<b>Core inflation indicators</b>											
Excluding food	3.13	2.95	2.80	2.87	2.40	2.11	2.08	2.11	2.20	2.28	2.48
Core 20	3.92	3.76	3.56	3.71	3.23	2.95	2.78	2.78	2.79	2.72	2.83
CPI excluding perishable foods, fuel and public utilities	3.18	2.99	3.23	3.33	3.02	2.76	2.60	2.51	2.34	2.16	2.14
Inflation excluding food and regulated items	2.38	2.38	2.48	2.74	2.55	2.54	2.48	2.67	2.60	2.59	2.63
<b>Average of all the indicators</b>	<b>3.15</b>	<b>3.02</b>	<b>3.02</b>	<b>3.16</b>	<b>2.80</b>	<b>2.59</b>	<b>2.49</b>	<b>2.52</b>	<b>2.48</b>	<b>2.44</b>	<b>2.52</b>

Source: DANE; calculations by Banco de la República.

Even so, there was little inflationary pressure during this quarter, largely because of weaker economic growth as of mid-2012, which extended into the first quarter of this year and influenced household consumption. The build-up anticipated for the second quarter would continue to be moderate, as explained in Chapter II of this report. Consequently, the estimates for the output gap place it in slightly negative territory during the first half of 2013, which means there should no upward pressure on prices stemming from demand.

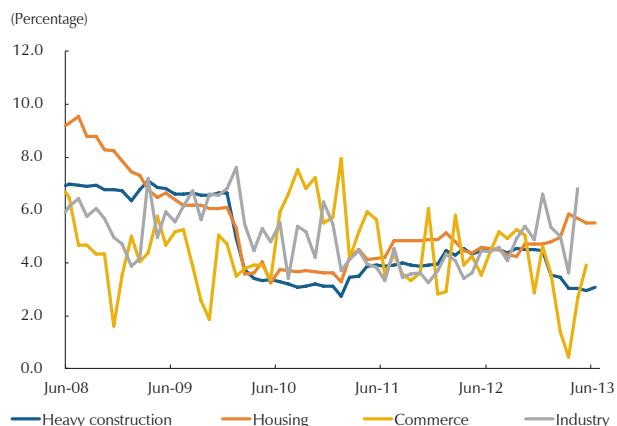
In addition, non-wage costs continued to decline in annual terms, although more moderately towards June. This is concluded by looking at the behavior of the total IPP; its annual variation stayed in negative territory throughout the first half of the year, ending June at -0.2% (compared to -1.9% in March) (Graph 24). While there was some pass through of peso depreciation to the imported PPI (0.60%), it would have been offset largely by the decline in international commodity prices.

Graph 24  
PPI by Origin  
(Annual change)



Source: DANE.

Graph 25  
Nominal Wages  
(Annual percentage change)



Source: DANE; calculations by Banco de la República.

Wage cost pressures also remained scarce during the period from March to June. Wages continued to be adjusted at relatively moderate rates, especially in the case of commerce and heavy construction. The wage adjustments in industry and home construction increased and were above the target range (between 5.0% and 5.5%) (Graph 25). However, given the payroll tax reduction stipulated in the tax reform approved in late 2012, which took effect during the second quarter of this year, these increases should not translate into higher labor costs for companies.

In addition to the foregoing, inflation expectations throughout this quarter stayed below the specific inflation target of 3.0%, as noted in Chapter IV of this report.

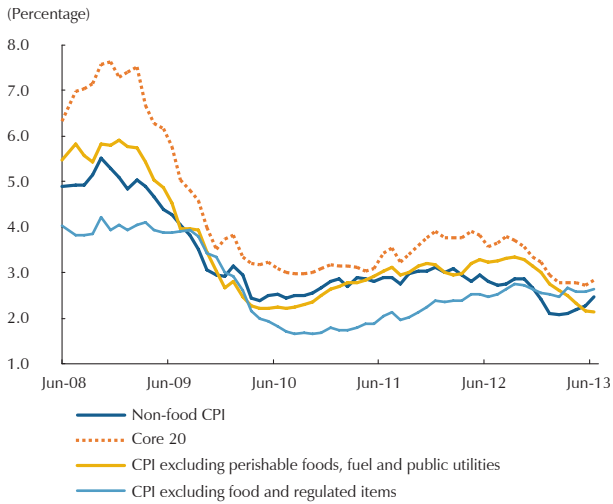
The performance of the exchange rate is among the factors that might have brought upward pressure to bear on inflation. Peso depreciation with respect to the dollar in the last two months, along with several protectionist measures for specific products in the footwear industry, the apparel sector and agriculture, would have begun to produce price hikes during this period. However, these pressures were not widespread and were contained by the limited momentum in domestic demand, by expectations that are under control, and by stable or declining international prices, among other factors.

## A. CORE INFLATION

Core inflation changed little in the second quarter. The average of the four indicators that are monitored regularly by *Banco de la República* was 2.5% in June, which is the same as it was three months ago. This average had declined between October 2012 (when it reached 3.1%) and March of this year (Graph 26).

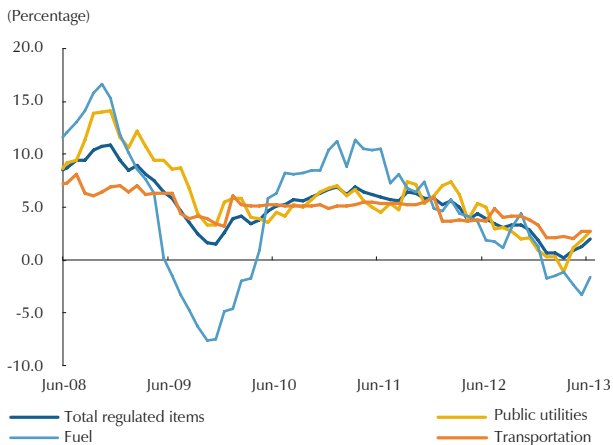
The individual analysis shows all the indicators are below the inflation target. Core 20 (2.8%) was the highest and the non-food CPI excluding stables, fuel and public utilities (2.1%) was the lowest. This last indicator was the only one that declined significantly during the second quarter (by 37 bp).

Graph 26  
Core Inflation Indicators



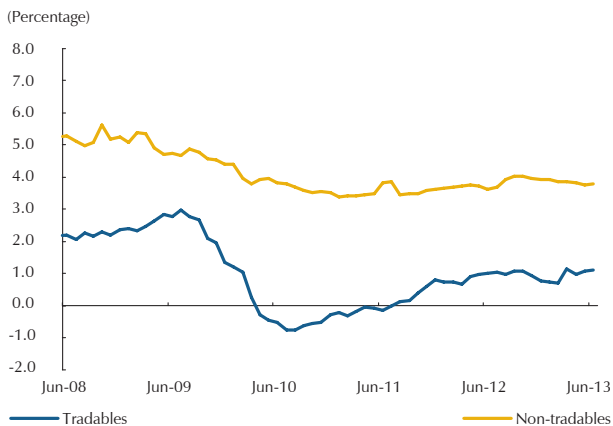
The non-food CPI (2.5%) was the indicator that increase the most during the same period (by 37 bp), while the CPI excluding food and regulated items (2.6%) remained relatively stable (Graph 26).

Graph 27  
CPI for Regulated Items and Components Thereof (Annual change)



The rise in food inflation between March and June is associated with the regulated component of the basket (Table 6), which exhibited an upward trend during the second quarter, having increased from 0.2% in March to 2.0% in June (Graph 27). Most of the upward pressure on regulated items was concentrated in public utilities and, to a lesser extent, in transportation. On the contrary, the annual change in the CPI for fuel (-1.6%) fell slightly between March and June, staying in negative territory. This is a result of lower international oil prices compared to the same period last year, which offset the effects of peso depreciation.

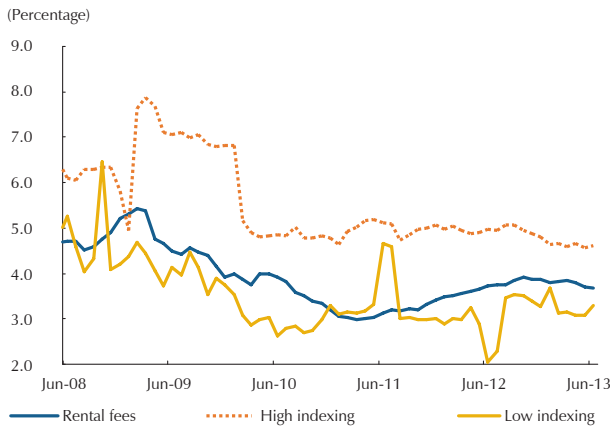
Graph 28  
Annual Tradable and Non-tradable CPI Excluding Food and Regulated Items (Annual change)



In the case of public utilities, the increase is explained by energy, which rose 2.6% during June. Cali and Bogota were the cities with the largest price hikes in the second quarter: 16.1% and 9.5% respectively. These increases, which could be temporary for consumers, would be due partly to earlier price hikes on the energy exchange, associated with reduced hydro-electric generating capacity (due to low levels in the reservoirs). The prices for all other utilities (water and gas) also rose during these months, although slightly.

The annual variation in the non-tradable CPI excluding food and regulated items (3.8%) showed no significant changes, reflecting few demand-pulled pressures (Graph 28). A high point with respect to non-tradables was the reduction in the annual variation in rental fees (to 3.7%) during the second quarter. This indicator had remained stable at around 3.9% between October 2012 and March 2013. The slight decrease rental fees during the second quarter was less pronounced than anticipated in previous reports, considering this category is highly indexed and inflation ended last year at 2.4%. Meanwhile, the group of items with

Graph 29  
Non-tradable CPI (Annual change)  
(Percentage)



Source: DANE; calculations by Banco de la República.

high indexing remained stable during the second quarter at 4.6%, while the group with low indexing tended to rise slightly, from 3.2% in March to 3.3 % in June, with entertainment services (especially soccer tickets) being the item that contributed the most to the rise in inflation during the quarter (Chart 29). However, some of these increases would be temporary.

The tradable component of the CPI excluding food and regulated prices stayed at the same level observed in March (1.1%), having yet to fully incorporate the peso depreciation registered during May and June. This is normal, because of the lag in pass-through of the exchange rate to consumer

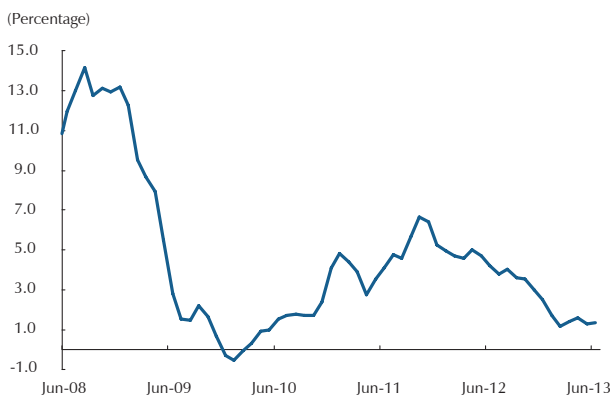
prices in Colombia, which is usually a quarter or even more. So, its impact could be felt during the second half of the year.

Additional pressure on the tradable component came from the implementation of a joint tariff for apparel and footwear. This measure, in principle, is effective for one year and has been in force since last March.<sup>6</sup>

However, the impact of depreciation and tariffs would be offset by international prices for fuel and other raw materials that did not increase with respect to those on record for the same period last year, and by demand and particularly consumption that grew at rates below their historical average. And finally, because entry into force of the FTA with the United States lowered tariffs for intermediate and end goods, thereby reducing production and distribution costs for tradable and non-

tradable goods.

Graph 30  
Food CPI  
(Annual change)



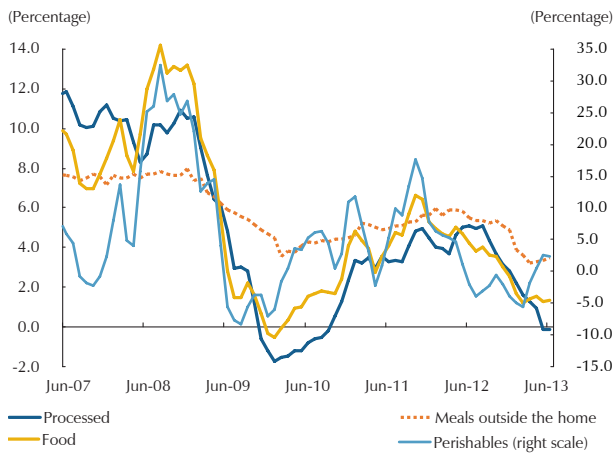
Source: DANE; calculations by Banco de la República.

## B. FOOD INFLATION

The downward trend in the annual variation in food prices since October 2011 (6.6%) came to an end during the second quarter of 2013. In June, this indicator closed at 1.3%, which is similar to the figure on recorded for March (Graph 30). Even so, the adjustments in food prices have been less than those anticipated by the market and in the previous *Inflation Report*.

6 See Ministry of Commerce, Industry and Tourism Decree 0074 dated January 23, 2013.

Graph 31  
Food CPI, by Groups  
(Annual change)



Source: Calculations by Banco de la República.

All kinds of behavior were observed during the quarter with respect to the main components of the food basket. As for perishables, the annual variation in the CPI increased significantly as of March, after reaching a new record low in February (with -5.6%). The price hikes include an important number of products and come after they reached relatively low levels towards the end of last year and in early 2013. So, this recent behavior may be due to the normal production cycle (Graph 31, Table 6). Importantly, production costs for perishable foods have declined or remained stable in the last few months, thanks to lower price hikes for fuel and the tariff reductions generated by the FTA with the United States.

As for processed foods, the annual variation exhibited stability in May and June (-0.1%), following sharp declines since the middle of last year (Graph 31). The downward trend would have been associated with lower international prices for a number of imported agricultural products. Moreover, processed foods have faced less inflationary pressure so far during 2013 as a result of the new tax reform, which involves a reduction in the VAT on machinery and agricultural input, sugar, chocolate and pasta, among others items. This is a one-time shock and its impact will be felt on the annual change in prices during the remainder of 2013.

Finally, the annual variation in meals outside the home increased slightly during the second quarter (3.4%), after declining in the previous three quarters. Its behavior so far this year reflects the reduction in indirect taxes, weaker private consumption compared to last year, moderate adjustments in labor costs, and few increases in food prices.



## IV. MID-TERM FORECASTS

**The forecasts for economic growth in 2013 were lowered** slightly. Growth this year will be similar to what it was in 2012 and akin to its historical average.

**Investment should play an important role in the dynamics** of the economy during 2013, thanks to more-than-expected growth in the construction of housing and public works. Household consumption will behave much the same as it did last year.

**The reduction in interest rates between mid-last year and** early 2013 is expected to affect productive activity mostly during the next two quarters.

**Inflationary pressures during the rest of the year and in 2014** are contained, and inflation very likely will be within the target range during these two years.

### A. ECONOMIC GROWTH

The central forecast for GDP growth in 2013 was adjusted downward slightly in this report. The major changes in the anticipated expansion in economic activity were in investment other than that for the construction of buildings and civil works (and, to a lesser extent, in public consumption). This is because the results for the first quarter were less than expected. However, a certain degree of economic recovery is still anticipated in the second quarter and particularly for the remainder of the year.

*The economic situation within the country is expected to improve during the second half of 2013.*

The international context plays an important role in determining projected GDP growth. The forecasts for the year include a scenario where external demand is recovering gradually, but at a slower pace than predicted earlier. International commodity prices (especially for mining commodities)



*The government's home building programs will boost the economy throughout the year.*

would be, on average, lower than in 2011 and 2012, given the recent slowdown in major emerging economies such as China and Brazil. Moreover, as mentioned in Chapter I, financing conditions abroad are closely related to the decisions on fiscal and monetary policy in the United States. Lastly, although no significant decline in confidence or risk levels is expected for Colombia and other Latin American countries, capital flows in the form of FDI would not match the levels observed in the last two years, as reflected in the balance-of-payments forecasts outlined earlier.

Domestically, the more expansionary monetary policies implemented as of mid-2012 and up to the first quarter of 2013, are expected to have a positive effect on productive activity during the second half of this year, considering the time it normally takes for monetary policy to influence real activity, which is estimated at two to four quarters. In addition, a boost is expected from the “priority-interest” home construction programs and the subsidized interest rates for home purchase announced by the national government earlier this year. This suggests the momentum in the construction of buildings and civil works will be crucial for the Colombian economy to grow in 2013 at rates close to its historical average.

In the first case, if the government's low-income home construction program is carried out as planned, the increase in GDP with respect to buildings would be at double-digit rates. However, there have been constraints in the process to grant environmental licenses, to purchase land and to adapt construction sites in order to install facilities for public utilities and sewage systems. As for the construction of non-residential buildings, there is no expectation of poor performance in the future, particularly due to the change in the trend in the number of licenses.

In the case of civil works, expectations of better budget performance by local governments signal good prospects for this item during the remainder of the year. More resources from royalties are expected as well. They were backed up last year, while the new general system for royalties (SGR) was put into effect. By law, royalties must be used to finance public infrastructure at municipal and regional levels. Importantly, the procedures for environmental licensing are expected to be expedited in the future, along with the process to contract and carry out infrastructure projects.<sup>7</sup>

In contrast, the expectation in this report is that private investment other than investment in construction will not perform as well in 2013. Investment in the manufacturing sector will be affected by poor expectations among industrialists as to how the sector will perform during the rest of

*Investments in the construction of buildings and civil works will play an important role in GDP growth.*

---

7 Thanks to proposed legislation on infrastructure submitted to Congress by national government.

*Lower international commodity prices have prompted a bit of a cutback in investment plans for the mining sector.*

the year. Growth in investment in machinery and equipment has slowed gradually since the middle of last year, consistent with the reductions in the growth of industrial activity. The limited demand for manufactured goods and foreign exchange conditions are the main problems reported by industrialists when identifying the reasons hindering their intention to invest in capital goods.

Expectations of capital investment in the mining sector also differ compared to those outlined in earlier reports. Lower international prices for mining products have prompted mining companies, especially those that extract coal and gold, to cutback somewhat on their medium and long-term plans for investment. The various supply shocks witnessed during the first half of the year also might have influenced the business climate in this sector.

Growth in household consumption during 2013 is expected to be slightly less than the average for the last decade (4.0%). This is akin to the medium-term projections outlined in the previous edition of the *Inflation Report*. Despite the lower forecasts for terms of trade, bank lending is expected to continue to expand at important annual rates and the job market shows no signs of deterioration.

Foreign trade is expected to slow, although more so for imports than exports. Import growth rates would decelerate in a context of moderate momentum in domestic demand. The pace of export growth will depend on the conditions for producing mining commodities. Although enactment of the FTAs with several countries ensures an increase in the size of potential markets, the effect on productive activity is expected to be more evident in the future.

In terms of GDP in the different branches of economic activity, the fastest growing sectors in 2013 are expected to be mining and construction, with higher expansion rates than that of the economy as a whole. In contrast, industry would be the poorest performing sector, and there is still a great deal of uncertainty about its performance.

Other sectors such as finance, social, personal and community services and the provision of electricity, gas and water would grow at positive rates close to the average for the Colombian economy in 2013. The remainder of the year is expected to see a significant recovery in agriculture, largely because of coffee. Its production rose almost 35% in the first half of the year, according to estimates by the National Federation of Coffee Growers.

Mining is expected to recover, following difficulties with law and order and the transportation problems that plagued oil and coal production in 2012;

*Oil production could expand by 8.0% during 2013 as a whole.*

however, growth during the full year will not match the high rates reported in previous years (above 10%). Figures for oil production up to June show over one million barrels per day, on average, confirming the favorable expectations for the sector. At the current level of production, this sub-branch could grow by about 8% during the year as a whole.

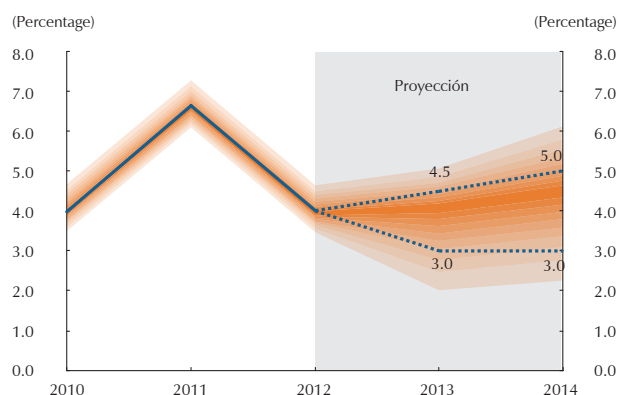
In the case of coal, which is Colombia's second major export, the production target for 2013 is 94 million tons, following the 89.2 million observed in 2012. This activity would accelerate compared to the figure on record for the previous year, but would not regain the double digit growth rates witnessed in past years. These forecasts include the supply shocks experienced at the beginning of 2013. However, there is considerable uncertainty about the outcome for this branch of the economy during the second half of the year, due to the announcement of possible strikes, which would affect production.

In contrast, the trend in industry by May continued to show signs of deteriorating activity (-2.9% so far this year). Coupled with lower expectations among industrialists, this limits the outlook on how this branch will perform during the year as a whole. However, by the second half of 2013, the gradual recovery in external demand predicted in Chapter I, and the acceleration in domestic demand contemplated in the growth forecasts described earlier, could favor better performance in the sector. The government's programs to stimulate industry also are expected to help reverse the downward trend. If all this materializes, growth as of the second half of the year will be positive, although moderate, which would imply a slight recovery in industry compared to the situation in 2012.

This being the case, the forecast in the most likely scenario was around 4.0% for 2013, within a range of 3.0% to 4.5% (it was 3.0% to 5.0% three months ago). The range is still wide, as shown in the fan chart (Graph 32). This is due not only to the substantial degree of uncertainty associated with the external environment, but also to investment in civil works, which has been highly volatile in the past, with sharp revisions of the actual figures. The floor and ceiling of the forecast range are consistent with the low and high scenarios for the international context, as discussed in Chapter I.

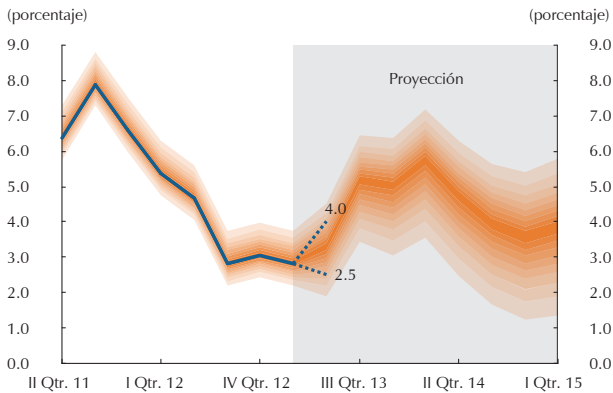
The growth fan charts (Graphs 32 and 33) suggest the downside risks are more important, which means GDP growth in 2013 likely will be below the central forecast. The main downside risks are

Graph 32  
Annual GDP Growth Fan Chart



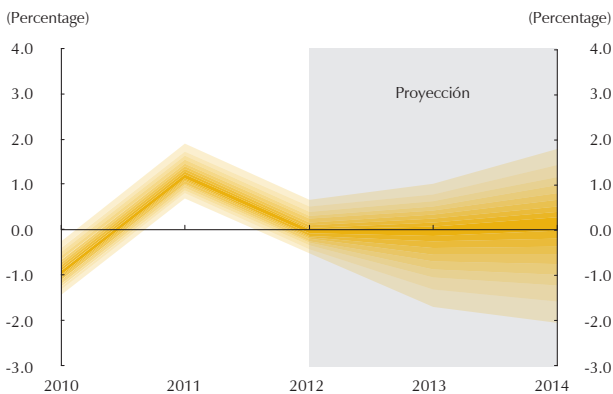
Source: DANE; calculations by Banco de la República.

Graph 33  
Quarterly Annual GDP Growth Fan Chart



Source: DANE; calculations by Banco de la República.

Graph 34  
Output Gap Fan Chart



Source: DANE; calculations by Banco de la República.

associated with lower performance on the part of domestic demand (particularly less investment in the construction of civil works and buildings, and less government consumption than expected) and further deterioration in the international context. The external risk could materialize through less external demand, fewer transfers and FDI, loss of confidence, and higher risk premiums. The upside risks are associated with cost reductions related to lower prices for regulated items and imported raw materials, thanks to the FTAs.

The estimates of the output gap for 2013 indicate that it will be close to zero. According to Graph 34, the gap this year will be within a range of 1.7% to 1%, which implies a smaller gap than the one estimated for 2012. For 2014, it is expected to be between - 1.8% and 2%, which is slightly lower than was forecast in the last edition of this report. According to the economic growth outlook described in this report, the latest estimates of the gap suggest a positive trend towards 2014.

The job market gap continues to close. Unemployment in 2013 would be near, but below, its non-accelerating inflation rate (*Nairu*). Since the values estimated for the indicator are close to zero, little inflationary pressure is expected for 2013 and 2014.

## B. INFLATION

### 1. Forecasts

The annual inflation forecasts for the remainder of the year changed little in this report compared to those presented three months ago. Towards 2014, the forecast declined a bit and now remains below the midpoint of the target range, but would end that year and start 2015 on a slightly upward trend.

In general, the forecast for the next six quarters still indicates there will be few upward pressures on inflation in Colombia. As mentioned, domestic economic performance in the first half of 2013 would be below its potential, implying a negative output gap for the remainder of the year. By early 2014, this gap would be near to zero, thanks to recovery in the pace of growth ex-

*The possibility of demand-pulled price pressures remains limited.*

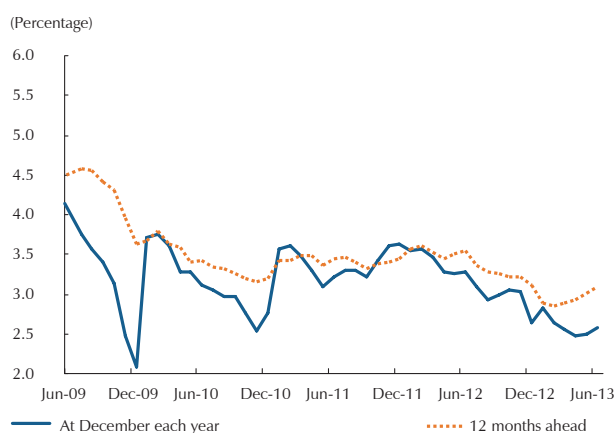
pected for the second half of this year, but it would be somewhat less than was estimated March quarterly report.

So, if these forecasts are borne out, the possibility of demand-pulled pressure on prices will continue to be limited. This will help to keep price adjustments for non-tradable goods and services in line with the long-term target for inflation set by the Board of Directors (between 2% and 4%).

External pressures would remain scarce, as suggested by the inflation forecasts for the advanced economies and most of the emerging countries with which Colombia trades (see Chapter I in this report). On the other hand, the increase in global demand will continue to be weak during the remainder of the year and in 2014, despite the more encouraging performance anticipated in the medium term. In this environment, international prices for the fuel and raw materials Colombian imports will remain stable or continue to decline, thereby preventing significant increases in domestic production and transportation costs, among others.

Domestic costs, especially for labor, should not be a source of upward pressure, at least for the remainder of the year. With wage hikes averaging around 4.5%, there is little chance of price increases that would make it difficult to keep inflation on target. This is assuming productivity gains on the order of 1%, which are likely. Furthermore, the latest tax reform, effective as of May 2013, lowers payroll taxes. This means companies can assume higher wage increases without necessarily having them reflected in actual increases in hiring costs. On the other hand, the decline in the unemployment rate has been gradual and has yet to lead to a stressful situation in the labor market, where demand might exceed the supply.

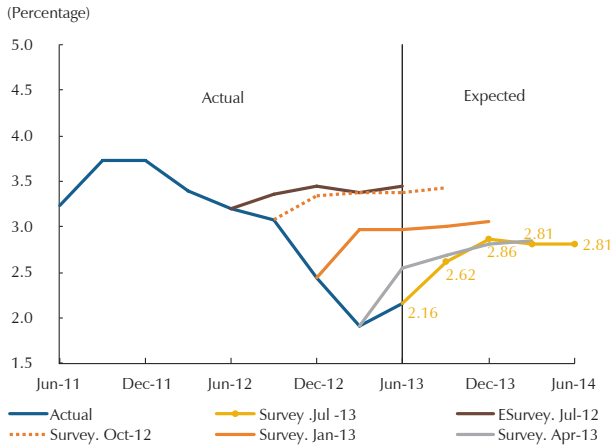
Graph 35  
Annual Inflation Forecasts by Banks and Brokerage Firms



Source: DANE and Banco de la República.

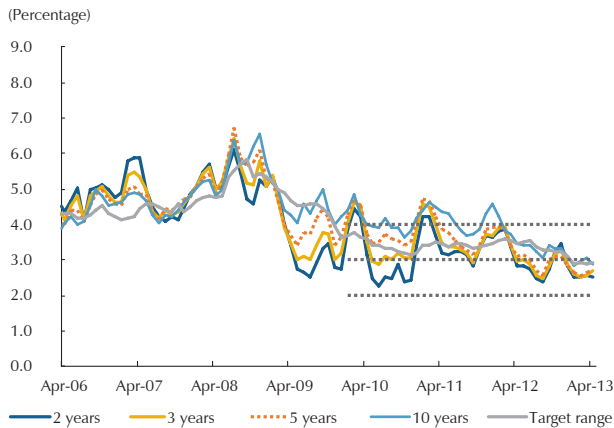
Expectations are another factor that continues to play a stabilizing role in inflation with respect to the coming quarters. The monthly survey of financial market analysts conducted by *Banco de la República* in early July showed 2.6% average inflation expected by the end of this year and 3.1% by the middle of 2014; both figures are similar to those obtained three months ago (2.6% and 2.9%, respectively) (Graph 35). *Banco de la República's* quarterly sentiment survey of employers and unions, among others, showed inflation is expected to be 2.9% by the end of this year and 2.8% in June 2014, which is also quite similar to the expectations in the previous report (Graph 36).

**Graph 36**  
Actual Inflation and Inflation Expectations  
(At three, six, nine and twelve months)  
(Annual inflation)



Sources: DANE and Banco de la República.

**Graph 37**  
TES-derived Inflation Expectations  
(At two, three, five and ten years)  
(Monthly average)<sup>a/</sup>



a/ Nelson and Siegel method  
Sources: Banco de la República.

A similar conclusion can be drawn from an analysis of inflation expectations based on the TES yield curve. In the last six months, inflation anticipated at horizons between two and ten years remained fairly stable, ranging between 2.5% and 3.0%, approximately. Since mid-2005, when this information began to be collected, these measures had never remained so low for a considerable period of time (Graph 37).

These factors would offset the upward pressure anticipated from the exchange rate. The peso has depreciated 8% so far this year (between late December and June), placing annual depreciation at 6.6% in June. Weakening of the Colombian peso against the dollar was particularly important in the second quarter. In principle, these circumstances should have affected annual inflation during this period, particularly the annual CPI for tradables. However, the pass-through to domestic prices did not materialize, possibly because of the moderate growth in domestic demand and few adjustments in production and distribution costs, as noted in Chapter III. Still, the effects should be clearer during the remainder of the year, if the peso stays at the levels observed recently against the dollar, since the bulk of depreciation tends to pass through to inflation with a lag of one or two quarters.

The current forecasts for inflation consider the price shocks observed in recent quarters, which should disappear as of the second half of the year.

The most important of these was the reduction in indirect taxes on a number of products in the consumer basket, especially food, which lowered total inflation by 20 to 30 bp. There was also the impact that lower import tariffs for raw materials have had on costs since last year, thanks to entry into force of the FTA with the United States.

The next four quarters could see several other temporary shocks that were not included in the forecasts, as there is still considerable uncertainty about their size and when they might happen. This is the case with the discounts that eventually would apply to garbage collection rates, given the approval of a new regulatory framework for the sector, as announced in June by the Ministry of Housing. This framework, which has yet to be issued, will low-



er rates for nearly 80% of the population in Colombia, covering more than 350 municipalities.<sup>8</sup> The bill to eliminate fixed charges for all public utilities as of 2014, except for telecommunications, might be passed as well.<sup>9</sup>

Moderate revisions were made in the inflation forecasts, considering all of the above. In the case of the regulated CPI, the variation projected for the remainder of the year was increased to reflect the added hike in electricity rates compared to the initial estimate. It is important to point out that the volatility in this sector has increased significantly in recent quarters, so much so that the accuracy of the forecasts has declined. As for gasoline prices, very few increases are anticipated during the remainder of the year, provided the international price of oil stays at around \$ 105 a barrel (for Brent crude) and the exchange rate remains at the current levels. Something similar is expected for gasoline prices. No increases in excess of the target for inflation are forecast for these two items in 2014, to the extent that no hikes in international fuel prices are anticipated.

The forecasts for the tradable CPI (excluding food and regulated items) and the food CPI were revised downward slightly. However, in both cases, gradual increases are expected during the remainder of the year and in 2014. These hikes, in the case of tradables, are partly the result of accumulated depreciation in recent months. As for food, the increases are due to the cycle of prices, which are now at low levels. The forecasts for this sub-basket assume normal weather conditions during the remainder of the year, as experts have predicted. Both baskets are expected to converge slowly towards 3%, due to limited demand-pulled pressures and stable or declining international prices for raw materials and imported foods.

Finally, the annual variation in non-tradables excluding food and regulated items should descend gradually towards 3% during the next year and a half. This also is the result of demand that would grow at satisfactory rates, without leading to an increase in the output gap, and inflation expectations anchored to the target.

So, this being the case, non-food inflation will increase slightly over the next three quarters, but not beyond the quantitative target. Something similar is expected to occur with total inflation.

*Non-food inflation will increase slightly in the coming quarters, but will not surpass the target of 3.0%*

---

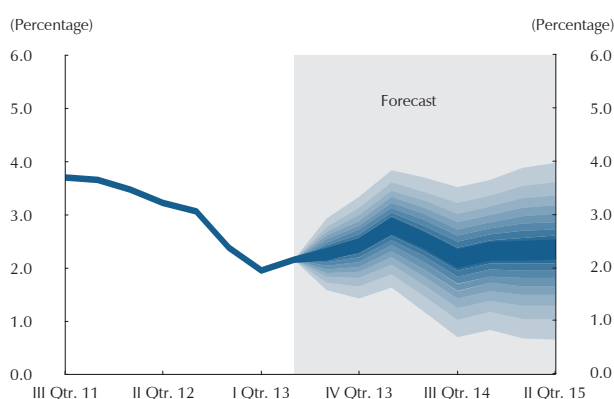
8 See: <http://www.minvivienda.gov.co/Prensa/Noticias2013/Paginas/Con-nuevo-marco-tarifario-para-aseo,-Gobierno-busca-mejores-beneficios-para-los-usuarios.aspx>

9 The bill was approved on May 29, 2013 by the Sixth Commission of the Colombian Senate, in the first round of debate.

## 2. Risk Balance

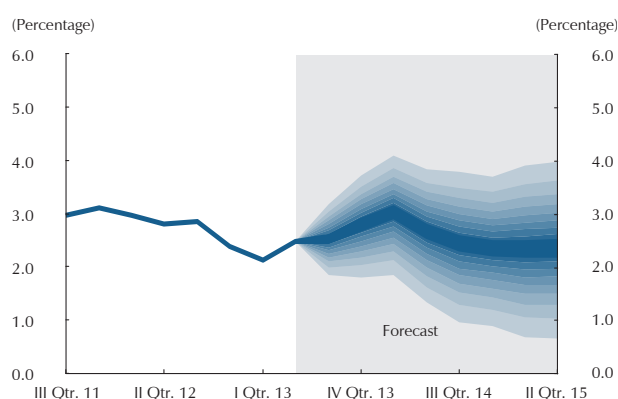
The balance of risks estimated for overall consumer inflation and non-food inflation is shown in the fan charts in Graphs 38 and 39. This report reflects the high degree of uncertainty that persists with respect to how the international situation will evolve, with its possible effects on the exchange rate, with the development of prices for regulated goods, and with the increase in civil works. These circumstances have made it possible to maintain the extent of the fan chart at a horizon of eight quarters with respect to the previous report. As to the bias in the fan charts, it remains on the downside, given the nature of the risks still facing the central forecast for inflation, especially with regard to the international context.

Graph 38  
Headline Inflation Fan Chart



Source: Banco de la República.

Graph 39  
Non-food Inflation Fan Chart



Source: Banco de la República.

The following are the main downside risks considered in this report.

*Less global growth than is anticipated in the central forecast:* The global economic panorama shows less performance than was anticipated in previous reports. The improvement in private spending observed in the United States has been offset by the effects of fiscal adjustment, which is why US economic growth during the first half of the year remained modest. In this environment, there is a risk that possible elimination of the Fed's liquidity stimulus might end up being premature. On the other hand, growth in China during the first half of 2013 slowed more than expected, partly due to liquidity constraints and contractions in its foreign trade. The euro area, in turn, has seen its confidence indicators improve somewhat, but continued to contract amid structural problems; namely, difficulties with financial integration and excessive public and private debt, which are a long ways from being corrected. Accordingly, in this report, the risk that global demand will grow less than expected remains high.



*Inflation continues to face downside risks due to possible deterioration of the international environment.*

Lower performance by the advanced economies and China would translate into less export growth and most likely a drop in terms of trade for the Latin American countries, Colombia in particular. The impact on these countries might be accentuated if raw material supply conditions continue to improve. In this environment, domestic demand would be affected through less income and reduced confidence, and production and transportation costs could decline, generating downward pressure on inflation that is not contemplated in the general forecast. These downward effects would take precedence over any upward pressure that might come from further depreciation of the peso, as happened between 2008 and 2009.

*Growth in Colombia that is less than anticipated in the central forecast, due to internal factors:* Downside risks loom over manufacturing and investment in civil works and buildings. In the first case, this is due to the recent performance of manufacturing, which shows a contraction that does not seem to subside. The central forecast anticipates the contraction in manufacturing will come to an end during the second half of the year; however, this might not have happened due to the less growth anticipated for Colombia's trading partners and increased competition facing the domestic market because of foreign production. As for construction, the structural problems confronting the sector, which are related to environmental licensing, land procurement and limited capacity for implementation, could continue, thereby delaying work and leading to less growth than is presumed in this report. It should be noted that the central forecast for construction assumes an important degree of project implementation involving the construction of 100,000 homes that are of priority interest, as part of a program being developed by the central government. Weaker internal momentum would lead to a more negative output gap and less demand-pulled pressure on prices.

*Several temporary shocks to domestic prices:* Situations such as entry into force of the FTA with Europe, scheduled for August, and the reform proposed by the government to change the price control policy on medicines can generate downward pressures on a number of CPI items that were not been considered in the central forecast. Although these shocks are temporary and their effect on annual inflation does not extend beyond one year, they can have longer term repercussions if they influence expectations and affect the definition of price contracts.

The main upside risks are the following:

*Increases in international risk and depreciation in the exchange rate that exceed expectations:* There might be sharper upward pressure on the exchange rate than has been observed so far, if tapering of the Fed's monetary stimulus program creates important increases in the risk premiums of

emerging economies, including that of Colombia. The expectation in this report is that tapering will have no significant additional exchange repercussions for the region's currencies, as presumably it would be announced well in advance and would obey an improvement in the fundamentals and momentum of the US economy. This, in principle, would benefit Colombia and the rest of Latin America. Nevertheless, a more pronounced reaction by the currencies in the region and the Colombian peso cannot be ruled out, especially if recent valuations of their assets were excessive and did not consider the real fundamentals of these economies. In this case, further peso depreciation would bring upward pressure to bear on the cost of raw materials and imported foods, on the domestic price of gasoline and, in general, on prices for tradable goods, more so than anticipated.

*Major food price hikes:* Although the recent decline in international raw material prices can have a downward effect on the food CPI, and even though domestic agricultural supply conditions remain favorable, there is still an upside risk to food prices for the rest of the year and in 2014, due to the agricultural cycle. Therefore, what was mentioned in the previous report about the possibility of an increase in domestic prices for perishable foods, in response to potential reductions in agricultural supply, would still be the case. This is based on a possible perception of poor business profitability by producers, given the low levels these prices would have reached in recent quarters. The impact of these changes in food prices could have major and more lasting repercussions, if inflation expectations are affected.

Moreover, no growth in the slaughter of cattle so far this year has driven up the price of meat, and the cattle retention phase, accompanied by price increases, might become more pronounced during the remainder of year. In addition, several measures adopted by the Ministry of Agriculture during the first half of 2013 could exert upward pressure on certain foods in the second half, which was not contemplated in this report. Specifically, the Ministry of Agriculture implemented policies in favor of the dairy sector, increasing producer prices by 1.2%, and established measure to safeguard against imports. It also decreed minimum purchase prices for a number of crops such as coffee, cocoa and rice.

Although an assessment of the various risks in the fan chart shows a downward bias, overall inflation is still quite likely to stay within the 2% to 4% range in 2013 and 2014. On the other hand, the risk balance indicates a higher probability that inflation will remain below the long-term target (3%). The forecast presented in this report assumes an active monetary policy, with interest rates that are adjusted to ensure compliance with the long-term target for inflation.

*A possible increase in perishable food prices beyond what is anticipated in the central forecast poses an upside risk to inflation.*

## V. RISKS TO LONG-TERM MACROECONOMIC STABILITY

**In the first quarter of 2013, the current account deficit widened** and housing prices accelerated. The forecasts for 2013 as a whole suggest the levels of both these variables would continue to move away from their historical averages and their long-term estimates.

**In June 2013, the real exchange rate depreciated and credit growth** stabilized at a level close to 14%. In doing so, these variables corrected part of the imbalances estimated for 2012.

Inflation targeting in Colombia, besides being a monetary policy to keep the rate of inflation low and stable, also aims for sustainable growth in output. Therefore, in an environment such as the current one, where estimates suggest the output gap is negative, and with inflation forecasts and expectations near the midpoint of the target range, an expansionary monetary policy helps to steer GDP towards its long-term trend level, without bringing significant pressure to bear on prices.

*Identifying possible imbalances becomes relevant when developing macro-prudential policies, not only to prevent imbalances from emerging but to ensure that early correction does not jeopardize the stability of output and employment.*

However, as illustrated by the latest international financial crises, countries that had kept inflation under control with moderate growth also can accumulate serious macroeconomic imbalances for long periods, such as high current account deficits, excessive real appreciation, overvalued asset prices or excesses in credit. Correcting these imbalances caused significant declines in output, high unemployment and generally high losses in terms of social welfare. Therefore, in the context of broader inflation targeting, an analysis of future economic performance should involve a broader horizon, so as to identify the main risks that could threaten sustainable growth in the long term.

The current account deficit was 3.4% of GDP in the first quarter of 2013, up 1.4 percentage points compared to the current account deficit in early 2012 and 0.2 percentage points with respect to the current account deficit at the close of that year.

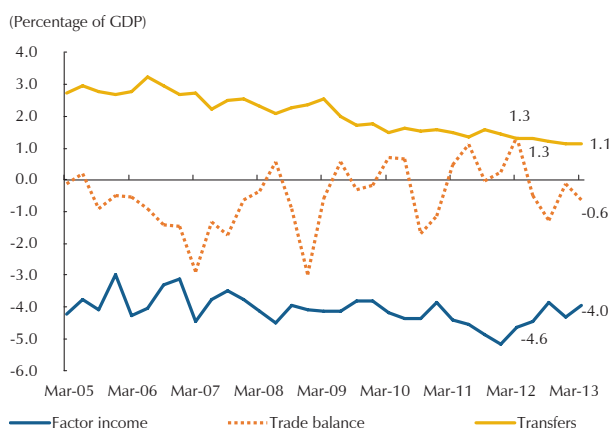
Therefore, identifying potential imbalances becomes relevant when formulating macro-prudential policies, not only to prevent imbalances from being generated, but also to make sure early correction does not jeopardize the stability of output and employment. Therefore, evolution of the current account, the real exchange rate, the price of housing and credit is analyzed in this chapter. Estimates of long-term levels for each of these variables are presented as well, and an index of macroeconomic imbalances (IDM) is constructed. It attempts to synthesize estimates of the mismatches in a single indicator.

## A. THE CURRENT ACCOUNT

The current account deficit in the first quarter of 2013 was 3.4% of GDP, up by 1.4 percentage points compared to the same deficit in early 2012 and by 0.2 percentage points with respect to the close of that year. This growing deficit originated with the trade balance, specifically the decline in exports<sup>10</sup> and, to a lesser extent, the downward trend in transfers. In the first case, momentary supply factors, such as temporary suspension of a company's the export license, strikes and several attacks on pipelines, explained the decline in coal and oil production and exports. The latter was partially offset by the reduction in outlays for factor income, which went from 4.6% of GDP between January and March 2012 to 4% of GDP during the same period this year (Graph 40).

According to the balance-of-payments forecasts outlined in Chapter I of this report, the current account deficit would increase to 3.5% of GDP during 2013 as a whole, up from 3.2% in 2012. This would round out seven years of current account deficits above the historical average. However, despite the accumulation of this flow, net foreign assets as a percentage of GDP have not deteriorated, thanks to high average growth of output in dollars<sup>11</sup> (Graph 41). In terms of composition, FDI is still the main liability in the international investment position, although short-term flows, portfolio investment and other investments have gained share in recent years (Graph 42). Output in dollars is expected to be less dynamic this year and the next, due to the slowdown in the economy, lower inflation and expectations of depreciation.

Graph 40  
Current Account Components

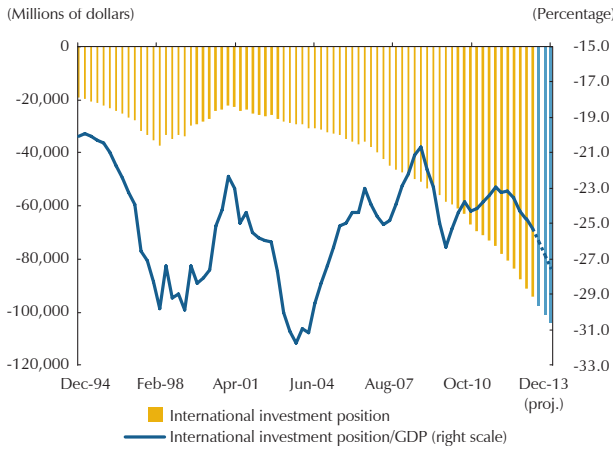


Source: Banco de la República.

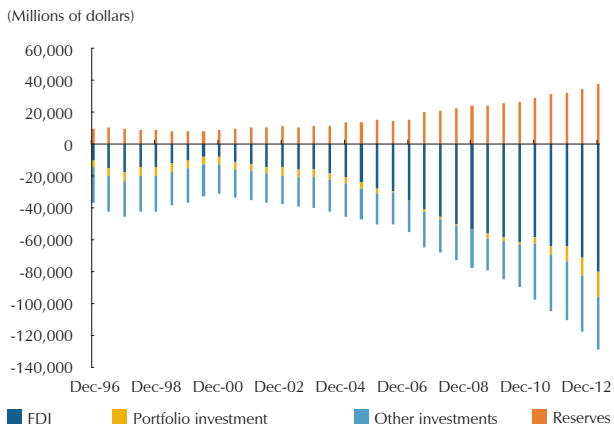
<sup>10</sup> Exports were equivalent to 16.2% of GDP, which is 1.8 pp less than in the first quarter of 2012.

<sup>11</sup> GDP in dollars increased 15%, on average, between 2007 and 2012.

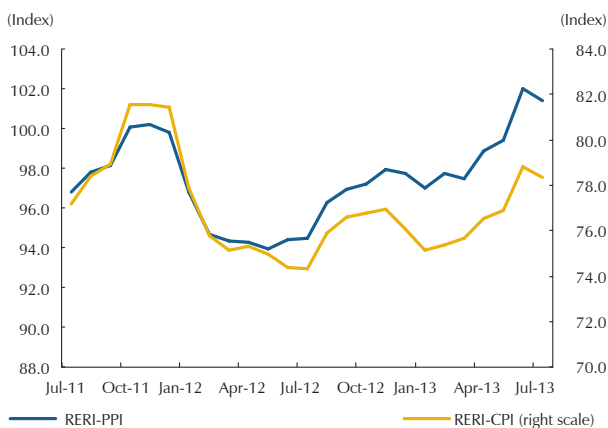
**Graph 41**  
International Investment Position



**Graph 42**  
Composition of the International Investment Position



**Graph 43**  
Real Exchange Rate Indexes



## B. THE REAL EXCHANGE RATE

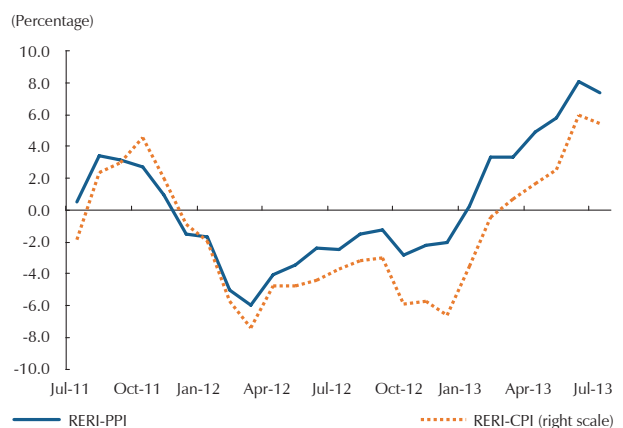
The real exchange rate (RER) has tended to depreciate so far this year. Between January and July 2013, the RER index calculated with the PPI and the CPI showed 4.7% and 1.7% average depreciation, in that order, compared to the same period in 2012 (Graphs 43 and 44). This is the result of lower domestic inflation versus that of Colombia's trading partners and 0.6% nominal peso depreciation against the basket of currencies of these countries. The same period saw real depreciation against all the country's trading partners; the only exceptions were Venezuela and Japan, countries that posted high nominal devaluations against the US dollar.

Versus our the main competitors for coffee, bananas, flowers and textiles in the US market, the real exchange rate indicator (RERI) declined 4.1% on average so far this year through July, compared to the same period in 2012. Despite recent depreciation, the real exchange rate indicators measured by the CPI are still at historically low levels (Graph 45).

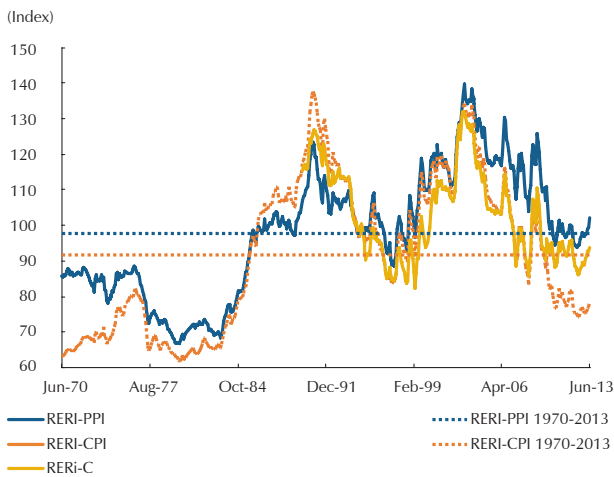
## C. HOME PRICES

During the course of 2013, up to March, home prices accelerated compared to those observed

**Graph 44**  
Annual Change in Real Exchange Rate Indexes

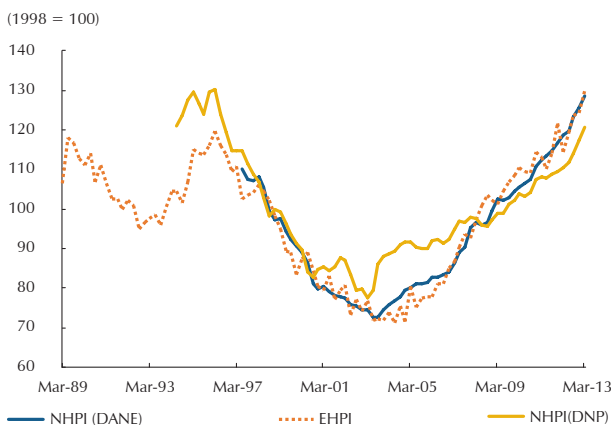


**Graph 45**  
Real Exchange Rates and Historic Averages  
(1994 = 100)



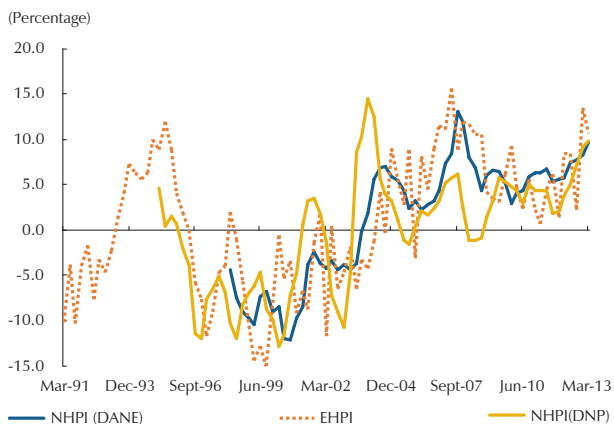
Source: Banco de la República.

**Graph 46**  
Home Prices Relative to the CPI - Colombia



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

**Graph 47**  
Annual Change in Home Prices Relative to the CPI

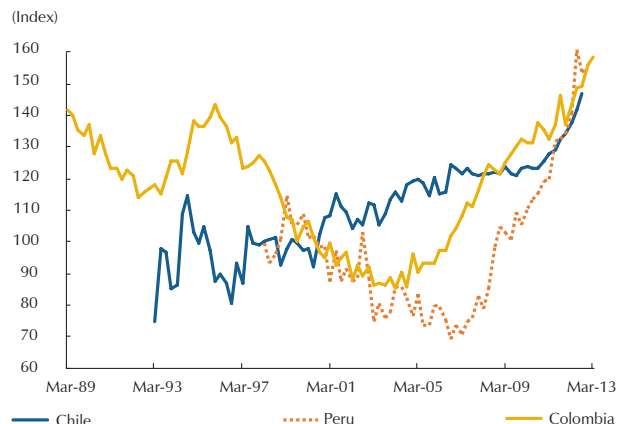


Source: DANE, DNP, and Banco de la República.

in the first quarter of 2012 and reached annual variations of nearly 10% relative to the CPI, placing the price indexes for new and used homes at historically high levels (Graphs 46 and 47). This performance has been witnessed in other emerging economies such as Chile and Peru, countries that also have seen prices for these assets increase sharply (Graph 48).

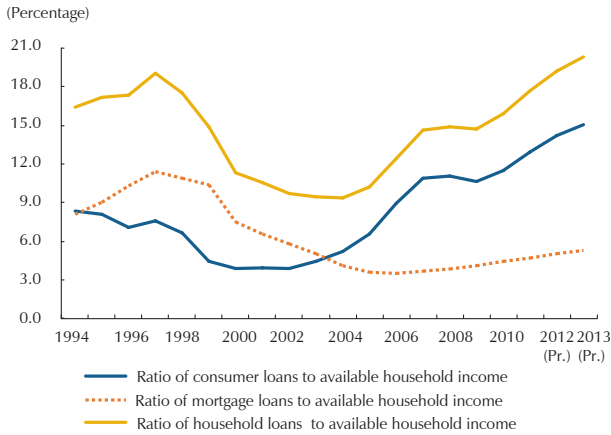
On the demand side, the rise in home prices was accompanied by a consistent increase in real disposable household income for over ten years and a loan-to-value level that is low compared to the historical figures. However, this indicator has exhibited an upward trend in the last five years and may be underestimating the level of household debt, given the rise in home prices. Moreover, in 2012, household debt relative to disposable income was at a level similar to the maximum on record since 1994. This higher level of indebtedness is explained largely by the acceleration in consumer loans. Demand-side pressures on home prices feasibly could continue in 2013 and the debt-to-disposable household income ratio could increase, once again (Graph 49), due to lending,

**Graph 48**  
Home Prices Relative to the CPI – Chile, Peru and Colombia



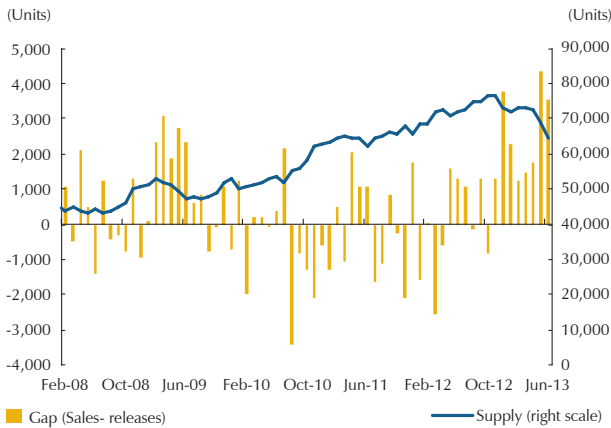
Sources: Banco Central de la Reserva del Perú, Real Estate Report and Banco de la República.

Graph 49  
Ratio of Household Borrowing to Available Household Income



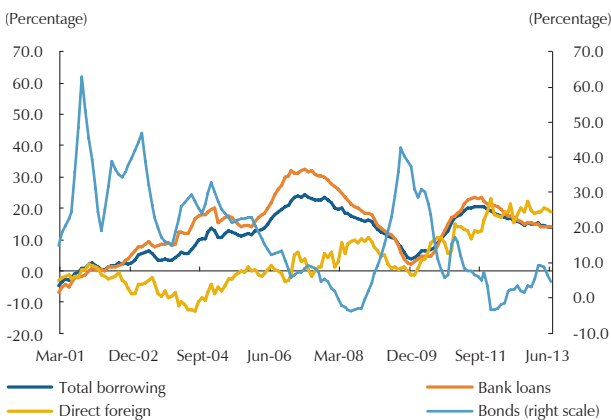
Pr. Preliminary  
Sources: DANE and the Office of the Financial Superintendent of Colombia; calculations by Banco de la República.

Graph 50  
Home Supply and Sales



Source: Camacol.

Graph 51  
Total Borrowing  
(Annual percentage change)



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

government incentives to purchase a home<sup>12</sup> and low real interest rates.

On the supply side, in addition to the sharp rise in the price of land in Bogotá during the last seven years, national data from the Colombian Chamber of Construction (Camacol) indicate there is upward pressure on prices as well. The latest figures show the number of available new housing units has been declining and the gap between sales and product launches is wide (Graph 50).

#### D. CORPORATE AND HOUSEHOLD BORROWING

Overall loan growth has stabilized since March at rates close to 14%, near the average variation calculated since 2000 (14.9%). The momentum in borrowing was explained largely by bank loans, particularly commercial lending, which saw growth close to the increase in credit overall. The consumer loan portfolio slowed from an average annual variation of 21.7% in 2012 to 15.3% during the course of 2013 up to June. This figure is more than 5 percentage points below the average for the decade (Graph 51).<sup>13</sup>

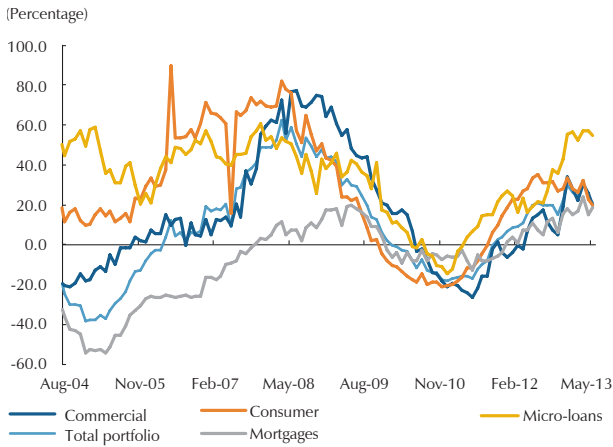
As for loan portfolio quality and risk with respect to all types of lending, the indicator for both arrears and risk is below the averages calculated since 2000 and 2002, respectively. However, in all types of lending, the annual deterioration in risk indicators has been greater than the increase in the portfolio (Graph 52).

12 Decree 701/2013 established a 2.5% subsidy, for the first seven years, on the rate charged for loans to purchase new homes valued at 135 to 335 times the minimum monthly wage (SMMLV). This applies to new loans disbursed on or after May 6 and until the number of subsidies is used up, provided the maximum annual rate is 9.5% for loans denominated in pesos or 6.5% for those denominated in UVRs (real value units).

13 The results in real terms are quite similar.

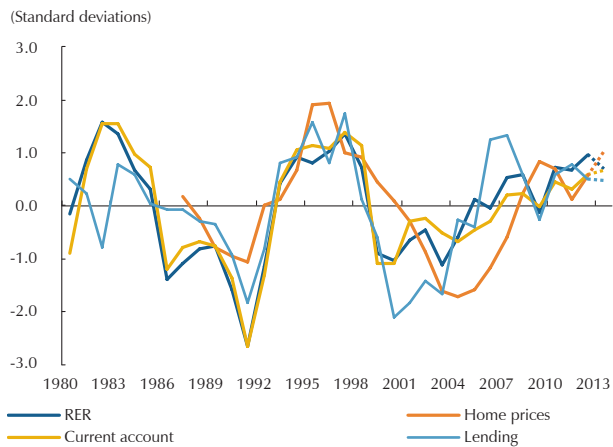


**Graph 52**  
Growth in the Non-performing Loan Portfolio  
(Annual change)



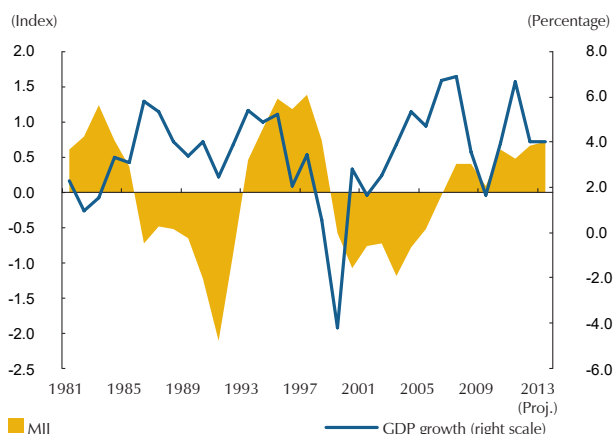
Source: Office of the Financial Superintendent of Colombia; calculations by Banco de la República.

**Graph 53**  
Gaps in the Current Account, Real Exchange Rate, Home Prices and Credit



Source: Banco de la República.

**Graph 54**  
Macroeconomic Imbalance Index and GDP Growth



Proj: Projected  
Source: DANE; calculations by Banco de la República.

## E. LONG-TERM ESTIMATES

Identifying possible imbalances in the described variables requires long-term estimates, which serve as references for assessing the values that are observed.<sup>14</sup> The results for 2013 indicate the gaps (difference between the amount on record and the long-term level)<sup>15</sup> for both the external and internal variables would still show imbalances (Graph 53). As for external variables, the current account deficit in the first quarter of 2013 and the one forecast for the entire year suggest a widening gap versus the long-term level (around 2%). Although the amount of depreciation observed so far this year and the outlook for the second half indicate the misalignment would be reduced, the real exchange rate would remain in positive territory.

As for internal variables, given the growing trend in housing prices, this gap is expected to widen in 2013 compared the one on record for 2012. The slowdown in lending so far this year indicates the gap would be corrected and would be somewhat lower in 2013 than in 2012.

When these gaps are combined, the macroeconomic imbalance index (MII) in 2013 would show a higher value than the one calculated for 2012, thus completing seven years with positive values for the index. Although the MII level since 2008 is, on average, below that of the years prior to the crisis in 1999, this prolonged accumulation of imbalances would indicate the economy would be in a weaker position to face any negative shock (Graph 54).

14 See Arteaga, Huertas, and Olarte (2012) for a detailed explanation of the various long-term measurements.

15 Unlike the other variables, the gap in the real exchange rate is defined as the difference between the long-term level and actual one. Accordingly, positive levels imply the presence of imbalances. This applies to all the gaps.



# ATTACHMENT

## MACROECONOMIC FORECASTS BY LOCAL AND FOREIGN ANALYSTS

The latest forecasts by local and foreign analysts with respect to the major economic variables for 2013 and 2014 are presented in this section. At the time they were consulted, the analysts had data up to July 2013. These estimates were obtained through an electronic survey and do not pertain to those developed by *Banco de la República* or its Board of Directors.

### 1. Forecasts for 2013

The local analysts forecast 4.0% annual economic growth, on average, as opposed to 4.1% estimated in the last edition of this report. The foreign ana-

Table A1  
Forecasts for 2013

	Real GDP Growth (Percentage)	CPI Inflation (Percentage)	Nominal exchange rate end of:	Nominal DTF (Percentage)	Fiscal deficit (porcentaje del PIB)	Unemployment Rate in the Thirteen Main Cities (Percentage)
<b>Local Analysts</b>						
Alianza Valores	3.20	3.00	2,000	3.75	n. d.	n. d.
Anif <sup>a/</sup>	3.80	2.60	n. d.	3.60	2.50	9.70
Banco de Bogotá	3.90	2.70	1,880	3.68	(0.50)	9.91
Bancolombia	4.20	2.60	1,897	3.81	(2.70)	9.28
BBVA Colombia <sup>a/</sup>	4.10	2.68	1,885	3.78	(2.60)	10.32
Corficolombiana	4.50	2.85	1,850	4.00	(0.80)	9.50
Corpbanca <sup>b/, c/</sup>	3.90	2.44	1,878	4.40	(2.40)	10.60
Corredores Asociados	4.00	2.87	1,950	3.75	(2.40)	9.80
Correval	4.50	2.60	1,850	4.20	1.20	10.50
Davivienda <sup>a/</sup>	3.80	2.55	1,900	3.74	2.60	9.30
Fedesarrollo <sup>a/</sup>	3.80	2.60	1,907	3.70	2.40	9.90
Ultrabursátiles	4.00	2.77	1,950	3.90	n. d.	9.80
<b>Average</b>	<b>3.98</b>	<b>2.69</b>	<b>1,904</b>	<b>3.86</b>	<b>(0.27)</b>	<b>9.87</b>
<b>Foreign Analysts</b>						
Citi <sup>a/</sup>	3.80	2.76	1,917	4.10	(2.50)	10.10
Deutsche Bank	4.20	2.80	1,910	3.25	(1.20)	9.90
Goldman Sachs	4.20	3.00	1,950	3.25	(2.40)	n. d.
JP Morgan	3.30	2.20	1,775	3.25	(1.00)	10.20
<b>Average</b>	<b>3.88</b>	<b>2.69</b>	<b>1,888</b>	<b>3.46</b>	<b>(1.78)</b>	<b>10.07</b>

n. d.: Not available

a/ The projected deficit pertains to the national government

b/ Average unemployment rate for the year

c/ Formerly Banco Santander

Observation: These forecasts are not those of *Banco de la República* or its Board of Directors.

Source: *Banco de la República* (electronic survey).

Table A2  
Forecasts for 2014

	Real GDP Growth (Percentage)	CPI Inflation (Percentage)	Nominal Exchange Rate End of:
<b>Local Analysts</b>			
Alianza Valores	3.5	3.8	2,200
Anif	4.0	3.0	n. d.
Banco de Bogotá	4.5	3.0	1,850
Bancolombia	4.5	3.6	1,976
BBVA Colombia	4.7	3.2	1,869
Corficolombiana	5.5	3.5	1,875
Corpbanca <sup>a/</sup>	4.4	3.0	1,905
Corredores Asociados	4.5	3.4	1,900
Correval	4.6	3.0	1,850
Davivienda	4.5	2.8	n. d.
Fedesarrollo	4.6	3.2	1,899
Ultrabursátiles	4.5	2.9	2,000
<b>Average</b>	<b>4.5</b>	<b>3.2</b>	<b>1,932</b>
<b>Foreign Analysts</b>			
Citi	4.5	3.0	1,900
Deutsche Bank	5.0	3.2	1,950
Goldman Sachs	4.8	3.0	1,960
JP Morgan	4.5	2.9	1,825
<b>Average</b>	<b>4.7</b>	<b>3.0</b>	<b>1,909</b>

n. d.: not available

a/ Formerly Banco Santander

Observation: These forecasts are not those of Banco de la República or its Board of Directors.

Source: Banco de la República (electronic survey).

lysts who were consulted expect growth in GDP to average 3.9%.

As for inflation forecasts, the local and foreign analysts predict an annual increase in prices of 2.7% by the end of the year. This percentage is within the target range set by the Board of Directors of *Banco de la República* (BDBR) for 2013 (between 2.0% and 4.0%).

In terms of the exchange rate, the local analysts expect the representative market exchange rate (RMER) to average \$1,904 by the end of the year, compared to \$1,831 estimated in the survey considered in the last edition of this report. The foreign analysts expect the RMER to be near \$1,888 by the end of the year.

With respect to the rate on time deposits (DTF), the local analysts forecast 3.9%, on average. They also expect the unemployment rate to be 9.9%.

## 2. Forecasts for 2014

The local analysts forecast 4.5% economic growth in 2014 and the foreign analysts, 4.7%. As for inflation, the local and foreign analysts are forecasting 3.2% and 3.0%, in that order. The local and foreign analysts expect the exchange rate to average \$1,932 and \$1,909, respectively.

This report was coordinated, edited and diagramed by the Publications Management Section of the Administrative Services Department in Times New Roman 10.5. The printing was coordinated by *Banco de la República's* Document Management Department.

Printed by Nomos.

May 2013