Inflation Report

September 2014*

* Submitted by the Technical Staff for the meeting of the Board of Directors on October 30, 2014.

Banco de la República
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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. BDBR policy initiatives are designed to meet each year's target and to provide for long-term inflation at around 3%. 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 that 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 *Banco de la República*'s website (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 medium-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 economic growth.

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Developments in Inflation and Monetary Policy Decisions

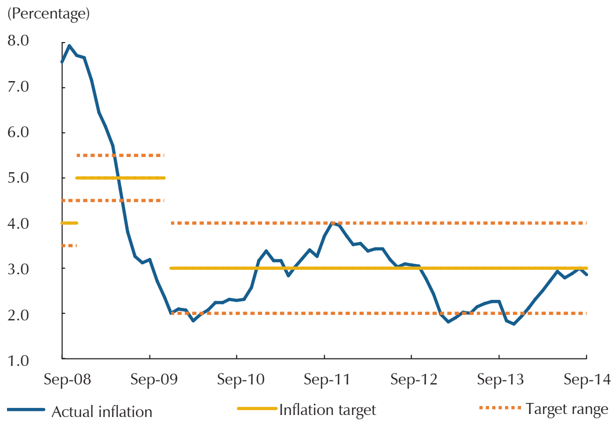
The Colombian economy performed well between June 2013 and the same month in 2014, in contrast to the low growth reported by the largest economies in the region and other emerging countries. Colombia's output rose 5.5% during this period, up from 3.2% in the previous four quarters.

There are several reasons why the Colombian economy outperformed others in the region. The first is the monetary policy stimulus that came from lowering the benchmark interest rate from 5.25% to 3.25% between July 2012 and March 2013. This was done in an environment where inflation and inflation expectations remained at low levels and there was an excess of spare capacity in the economy. The low real interest rates, together with high levels of confidence, bolstered consumption and private investment. Secondly, the strong increase in civil works and building construction during the first half of 2014, as well as more public spending, fueled domestic demand in a context of weak external demand.

The last reason is that international oil prices fell, but not at the pace of the decline witnessed in some commodities exported by other emerging economies, and coffee prices remained high. So, the deterioration in Colombia's terms of trade up to the first half of the year was less than in the case of other commodity-exporting countries. Moreover, external portfolio flows increased significantly as of the second quarter of 2014, after JP Morgan rebalanced its index in sovereign emerging markets bonds. This higher rate of external financing, accentuated in the third quarter, helped to maintain the momentum in domestic demand.

With respect to prices, inflation began to converge towards the long term goal (3%) as of early 2014, from the low level registered in late 2013 (Graph A). The various measures of core inflation and inflationary expectations behaved similarly. At the same time, the economy continued to show signs of strengthening and approached its long-term potential output.

Graph A
Total Consumer Inflation



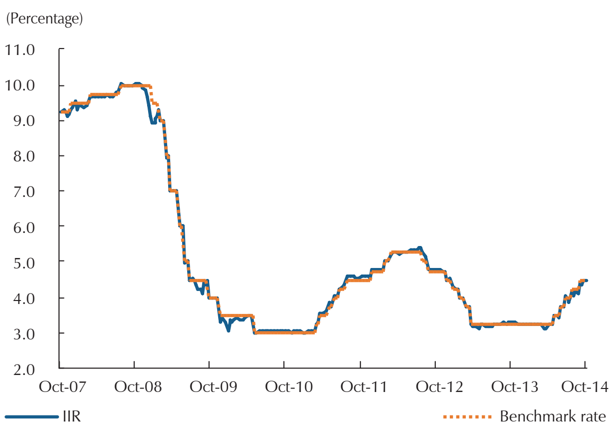
Source: DANE and *Banco de la República*

Given these circumstances, the Board considered appropriate to move towards a less expansionary monetary policy stance. Accordingly, between April and August 2014, it gradually raised the benchmark interest rate, by 125 basis points, to 4.5% (Graph B).

Annual inflation was 2.8% by the end of the third quarter, just as the technical staff had anticipated. The four measures of core inflation declined and averaged 2.63% in September. Analysts' average inflation expectations at one year and those derived from public bonds with longer maturities remain stable, at slightly above 3%. The estimates also suggest that the year-end inflation may be in the upper half of the target range.

As for the external situation, the indicators of global activity towards the end of the third quarter of 2014 suggest external demand was weaker than expected. So, the new average growth forecasts for our trading partners during the remainder of 2014 and in 2015 declined. According to those predictions, foreign demand would be driven primarily by the United States, while the euro zone would be sluggish. China would experience a slight slowdown, and some trading-partner countries in the region would continue to grow at rates below their averages in recent years.

Graph B
Banco de la Republica's Benchmark Interest Rate and the Interbank Interest Rate (IIR)
(2007-2014) [a/]



a/ The figures pertain to data for business days; the last figure is for October 10, 2014.
Source: Colombian Superintendence of Finance and Banco de la República

Domestically, the new indicators of economic activity in the third quarter of 2014 suggest a slightly less GDP growth compared to the first half of 2014. The performance of retail sales, consumer credit, the consumer confidence index and the labor market all suggest the strong momentum in consumption would continue. The increase in foreign purchases of machinery and transportation equipment, and the trend in civil works suggest investment will perform well, though at rates below those observed in the first half of the year. The foreign trade indicators suggest net exports would have contributed negatively to growth.

The annual increase in bank loans continued to decline during the third quarter, but is still growing at higher annual rates than the nominal GDP estimated for this year. The reduced momentum was in commercial loans. The slowdown in mortgage lending during the same period was offset by a slight increase in consumer loans; consequently, growth in lending to households did not change. All this occurred in a context marked by weak pass-through of the benchmark interest rate hikes to interest rates on loans.

With the new information on external and domestic economic activity, the technical staff forecasts a level between 4.5% and 5.5% for the economic growth in 2014; with 5% as the most likely figure. The risks towards 2015 are originated mainly in the external sector. Specifically, there is uncertainty about how oil prices will behave their direct and indirect impact on the Colombian economy, and how the European economy will perform. The normalization of monetary policy in the United States raises concerns in the markets.

However, the recovery of the United States will be a positive factor, since that country is our largest trading partner. In turn, the exchange rate is beginning to play an important stabilizing role against negative shocks from abroad. Finally, the credibility of the inflation target gives monetary policy some maneuvering space. In general, the task of economic policy will be to maintain confidence in the Colombian economy, amidst an uncertain scenario.

In short, growth in domestic demand remains strong in a context of nearly full utilization of productive capacity. At the same time, inflation expectations are still close to 3%. This is in an environment of declining terms of trade and growing uncertainty about the recovery in global economic activity and the cost of external financing. These factors could influence aggregate demand and the exchange rate.

Having assessed the risk balance, the Board of Directors decided - at its meetings in September and October 2014 - to make no change in the benchmark rate. This decision was taken in an environment of declining terms of trade and growing uncertainty about the recovery in global economic activity and the cost of external financing. These last factors can affect aggregate demand and the exchange rate.

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Inflation Report

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I. The External Situation and Balance Of Payments

The 2014 growth forecasts for Colombia's trading partners were revised downward in this report, due to more of a slowdown in Latin America and sluggishness in the euro zone. However, some recovery during the coming year is expected.

Most countries, both developed and emerging markets, have seen less inflationary pressure. The most obvious case is the euro zone, where the risk of deflation is high.

The forecasts for commodity prices, especially the price of oil, were lowered following the downturns witnessed in recent months. Some decline in Colombia's terms of trade is anticipated.

The country's trade balance has deteriorated as a result of export supply shocks and the momentum in imports. Given this situation and favorable conditions for external financing, the current account deficit is expected to increase in 2014.

A. THE INTERNATIONAL SITUATION

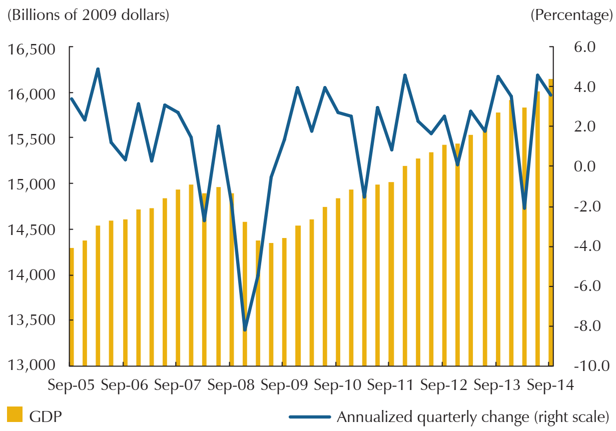
1. Real Economic Activity

Real global activity during the third quarter of 2014 was mixed. The favorable figures in the United States indicate the country continued the momentum it achieved three months ago. On the other hand, the economy in the euro area remained weak during this period. Some emerging markets slowed from the previous quarter, with growth figures in China and Latin America being below those witnessed in recent years.

Global economic performance during the third quarter was mixed. The United States maintained its momentum, while the euro zone and several emerging economies weakened.

In the case of the United States, an initial estimate points to 3.5% annualized quarterly (a.q.) growth in the country's gross domestic product (GDP) during the third quarter of 2014 (Graph 1), thanks to increases in each of the components of demand, with net foreign trade contributing the most. This is the result of significantly more exports (7.8% a.q.) and a drop in imports (1.7% a.q.). Government spending, non-residential investment and household consumption also trended favorably, expanding

Graph 1
Real GDP in the United States



Source: Bureau of Economic Analysis

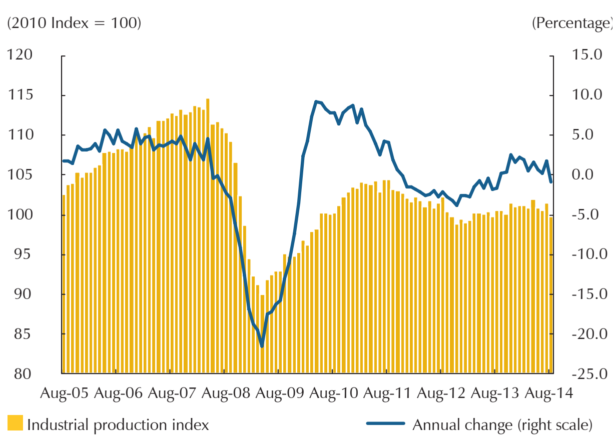
at respective rates of 4.6%, 5.5% and 1.8% a.q. Residential investment also contributed to this growth, although less so.

The job market continues to recover, thanks to good performance in real activity. Job creation remained dynamic and, as a result, nonfarm payrolls expanded at an average monthly rate of about 224,000 new jobs during the third quarter. Consequently, the unemployment rate held to a clear downward trend and was 5.9% in September.

Even so, other job market indicators were still a long ways from the levels witnessed prior to the crisis, although they continued to improve. For example, long-term unemployment[1] and underemployment[2] remain high and suggest there still is some surplus capacity in the job market.

In contrast, the second-quarter GDP figures for the euro zone showed a stagnant regional economy and the latest indicators suggest this situation would have continued during the third quarter. With figures at August, industrial production showed a negative annual change (Graph 2), while annual growth in exports to countries outside the Euro zone was very modest, as were retail sales.

Graph 2
Euro Zone Industrial Production Index



Source: Datastream.

The outlook, by countries, remains mixed (Graph 3). According to the manufacturing index, the recovery in Spain would have continued, thanks to the competitive improvements brought about by the reforms adopted in the wake of the crisis. On the other hand, the German economy would have lost momentum as a result of less external demand and worsening consumer and business confidence. The French and Italian economies would have remained sluggish or declined, due to the structural problems they continue to face.

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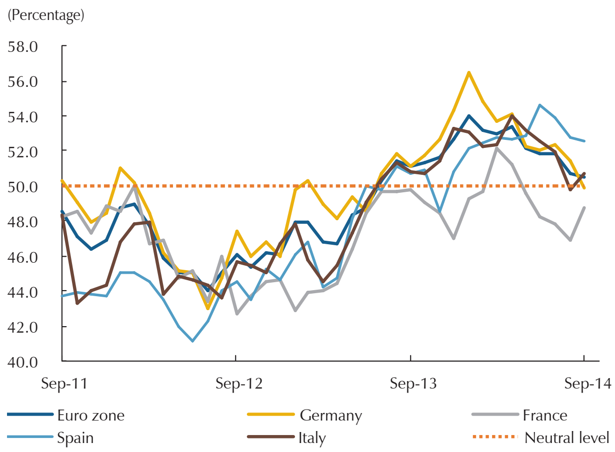
1 This refers to the number of persons who have not found a job in more than 27 weeks, as a portion of the total unemployed.

2 Total number of unemployed, employees with part-time jobs who report wanting to work full time, and those outside the labor supply who would be willing to work if they find a job (marginally attached to the job market), as a proportion of the workforce and those marginally attached to the job market.

Graph 3
Manufacturing Index for Several European Economies
(Purchasing Managers' Index; PMI)



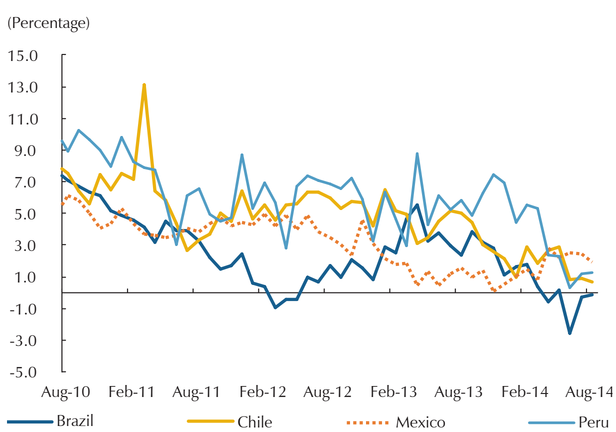
Source: Bloomberg.

A third-quarter slowdown was observed in the emerging countries. In the particular case of China, annual GDP growth was 7.3%. This implies a reduction from 7.5% three months ago, which is the government's goal. Similarly, by September, the records for other indicators of real activity, such as retail sales and investment in fixed assets, continued the downward trend they have exhibited so far this year. It is hoped this moderation in China's economic growth obeys the transition to a more sustainable model of development in the medium term, specifically one that depends less on credit, foreign demand and investment, especially residential investment, and more on private consumption. However, net exports at September were still an important component of China's economic growth.

In Latin America, the latest indicators of real activity show countries in the region, with a few exceptions, continued to lose momentum during the third quarter (Graph 4). Overall, foreign sales remained weak, given the decline in the terms of trade, the slump in global demand and several supply shocks related to the weather. Household and business confidence declined as well, affecting decisions on investment and consumption.

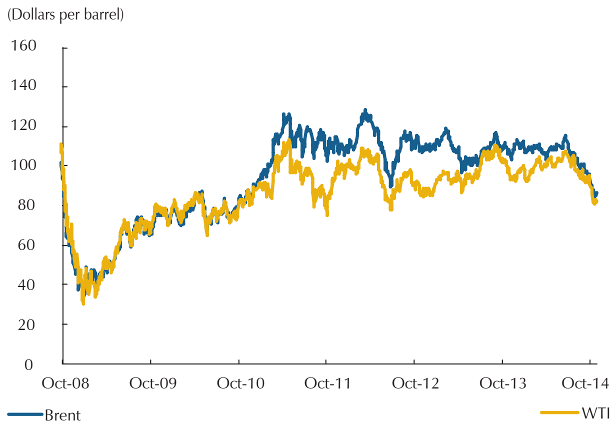
An analysis by country shows several idiosyncrasies that help to explain the slowdown in growth. Peru, for example, encountered less spending by local governments and problems with mining production, mainly associated with operational delays in certain projects and lower grade (quality) gold and copper in several regions. Meanwhile, in Brazil, the uncertainty generated by elections and the additional holidays declared as a result of the World Cup partly explain the country's modest expansion. It is important to mention Argentina and Venezuela, where structural problems led to contractions in real economic activity in an atmosphere of high inflation. Furthermore, the business cycles in Latin America are not always in sync (see Box 1, p. 32); this is a point to bear in mind.

Graph 4
Annual Growth in Monthly Economic Indexes for Several Latin American Economies



Source: Datastream.

Graph 5
International Oil Prices (Brent and WTI)



Source: Datastream.

2. Commodity Prices, Inflation and Monetary Policy

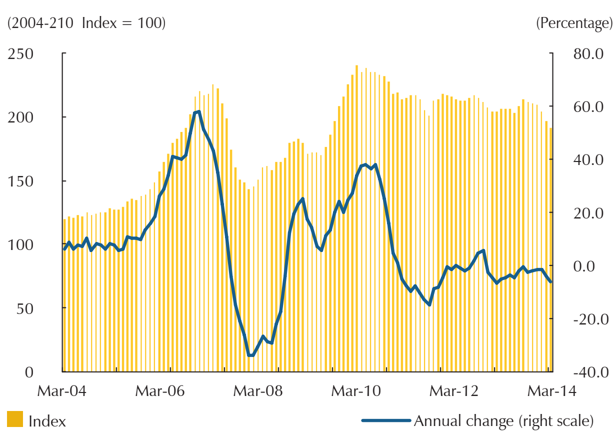
As for the prices of commodities exported by Colombia, the figures at October show oil dropped about 25% from its highest value in June of this year ($ 115.4 per barrel) (Graph 5). As a result, the average price for the entire year was below the price was forecast in the previous edition of this report. Consequently, the technical staff lowered its forecasts for 2014 and 2015.

Several factors come together to explain this significant drop. First, the emerging economies are weaker and the euro zone has not performed well. As a result, projections on the demand for crude oil were downgraded for the remainder of this year and for all of 2015. In addition, the supply increased significantly, thanks to the recovery of production in Libya and the increase in extraction in the United States, particularly oil shale. Even so, the members of the Organization of Petroleum Exporting Countries (OPEC) have not adjusted their quotas, so the supply remains ample.

International coffee prices are still at the relatively high levels witnessed since the end of the first quarter in 2014. In this case, supply prospects remain plagued by phytosanitary problems in several Central American and South American countries and by persistent uncertainty about how the lingering effects of the drought earlier this year will effect production in Brazil.

In contrast, nickel prices have fallen in recent months, due to less demand for this metal in response to the slowdown in global economic activity and a significant destocking of inventory in China. The latter occurred after Chinese banks refused to accept this asset as collateral for new loans.

Graph 6
International Food Prices



Source: United Nations Organization for Food and Agriculture

International food prices during the third quarter continued the declines initiated three months earlier, as reflected by the annual change in the food price index of the Food and Agriculture Organization of the United Nations (FAO) (Graph 6). This is largely the result of a better outlook for the global supply of cereals, thanks to increased production in the United States, India and the European Union. Lower oil prices also influenced this outcome, as less expensive oil meant lower costs

Graph 7
Colombian Terms of Trade Index
(Commerce method)

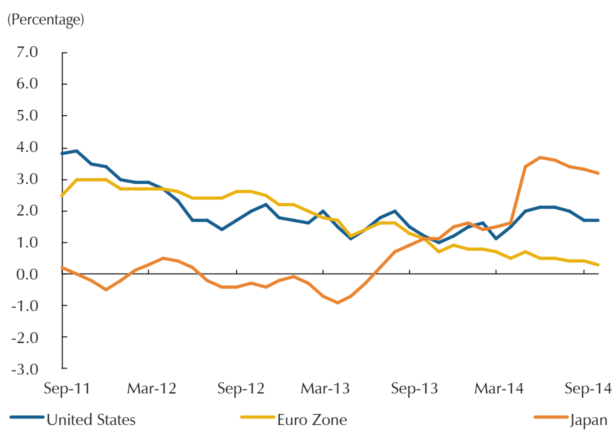
Observation: See Box 2 in the September 2013 edition of the *Inflation Report* for more information on the commerce method.
Source: *Banco de la República*

for transportation and for some of the input required to produce these items, just as it favors the substitution of plant-based fuels for those derived from petroleum.

The country's terms of trade have not changed much since the beginning of the year. This is according to the figures for August and the commerce method[3] (Graph 7). However, this indicator would drop in the coming months amid an environment of lower commodity prices.

As for inflation, most countries - both developed and emerging - have seen less pressure, coupled with downward trends. The most obvious case among the developed economies is the euro zone, where the risk of deflation remains high. In fact, annual consumer declined to 0.3% during the third quarter. Meanwhile, in the United States, this indicator was lower than the levels observed three months ago. The deflator for consumption, a measure closely monitored by the Board of Governors of the Federal Reserve System (Fed), also declined with respect to the second quarter and remained below the long-term goal. Finally, the annual variation in prices in Japan also fell, but remained high thanks to the consumption tax hike that took effect in April (Graph 8).

Graph 8
Annual Inflation in Several Developed Countries



Source: Bloomberg.

With respect to monetary policy, the Fed announced the end of its financial-asset buying program, as expected. The announcement came at its October 2014 meeting. The benchmark rate stayed at 0.25% and is not expected to increase before the second half of 2015. Meanwhile, deflationary fears and weak economic performance in the euro zone prompted the European Central Bank (ECB) to take additional stimulus measures. The policy interest rate and deposit rates were reduced as a result. Additionally, it was announced that a program to buy covered bonds and asset-backed securities would initiate in the final quarter of the year to bolster the supply of credit

3 The commerce method to measure the country's terms of trade relies on export and import registration data (DIAN and DANE). Pursuant to international recommendations (concerning the volatility of the series, homogenizing unit values, etc.), implicit prices are calculated for each tariff item and then weighted in a chained Paasche-type price index. See Box 2, *Inflation Report*, September 2013.

The central banks in Japan and the euro zone have adopted additional monetary stimulus measures to reduce inflation.

in the region. For its part, the Bank of Japan announced it will increase in its securities purchase program by ¥ 10 billion (b).

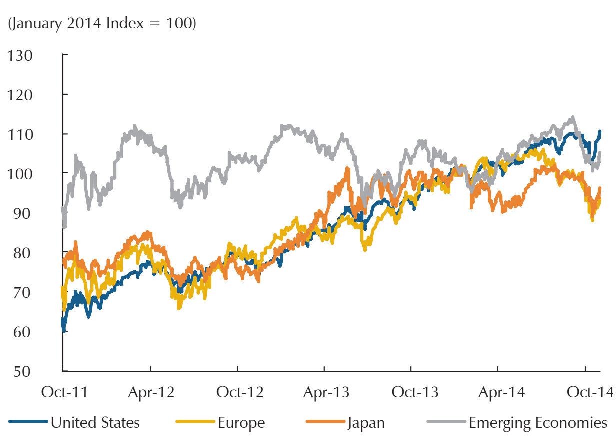
The outlook for inflation and the response to monetary policies in the Latin American economies have been mixed. On the one hand, both inflation and inflation expectations in Brazil stayed above the central bank's target range; accordingly, it decided to raise its benchmark rate. Meanwhile, peso depreciation in Chile brought upward pressure to bear on prices in that country; however, since agents' expectations remain anchored at around 3.0% and the economy has weakened, the country's monetary authority decided to lower its benchmark interest rate from 4.0% in June to 3.0% October. In Peru, some of the supply shocks that kept inflation high during the first part of the year have disappeared, allowing for a reduction in this indicator in recent months. As a result, and given the slowdown in real economic activity during the year, the Central Reserve Bank of Peru lowered its interest policy rate by 50 basis points (bps) in June, placing it at 3.5%.

As for the emerging economies of Asia, annual inflation fell in China, South Korea, India and Taiwan, and remained at low levels in Indonesia. Accordingly, the Central Bank of Korea lowered its benchmark rate by 25 basis points to 2.0%, while the Central Bank of China made several cuts in rates on short-term financing by banks and eased a few of the restrictions on conditions for mortgage lending.

3. Financial Markets

International financial markets saw increased volatility during September and the first half of October of this year, in an environment of added risk aversion. This was due, in large part, to growing uncertainty about monetary policy decisions in the developed countries and deteriorating economic conditions in the euro zone and in emerging markets. However, good economic results and the reported quarterly corporate earnings by companies in the United States, along with further monetary stimulus in Japan, led to a reversal of this trend during the final days of October. As a result, the major world stock indexes decreased until the middle of that month, when they began to recover quickly (Graph 9).

Graph 9
Global Stock Indexes

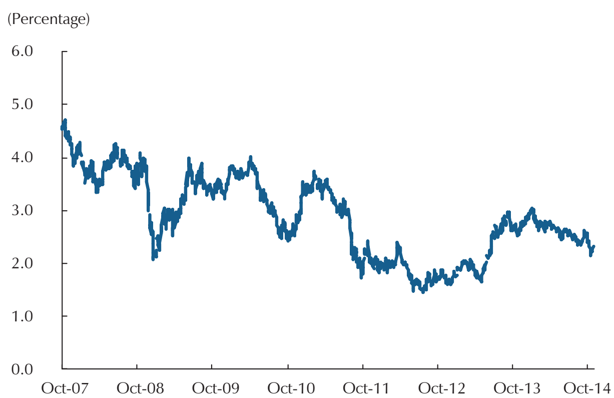


Source: Bloomberg.

In the United States, the rates on 10-year bonds behaved very much like the stock indexes, falling between September and early October, before recovering somewhat in the latter part of this month (Graph 10). As a result, these rates were below the levels observed in December 2013, when the Fed began to gradually taper its asset buying program. Because short-term rates declined less than long-term rates, the yield curve flattened, suggesting that financial markets would be anticipating a postponement of rate increases in the US economy until the final quarter of 2015.

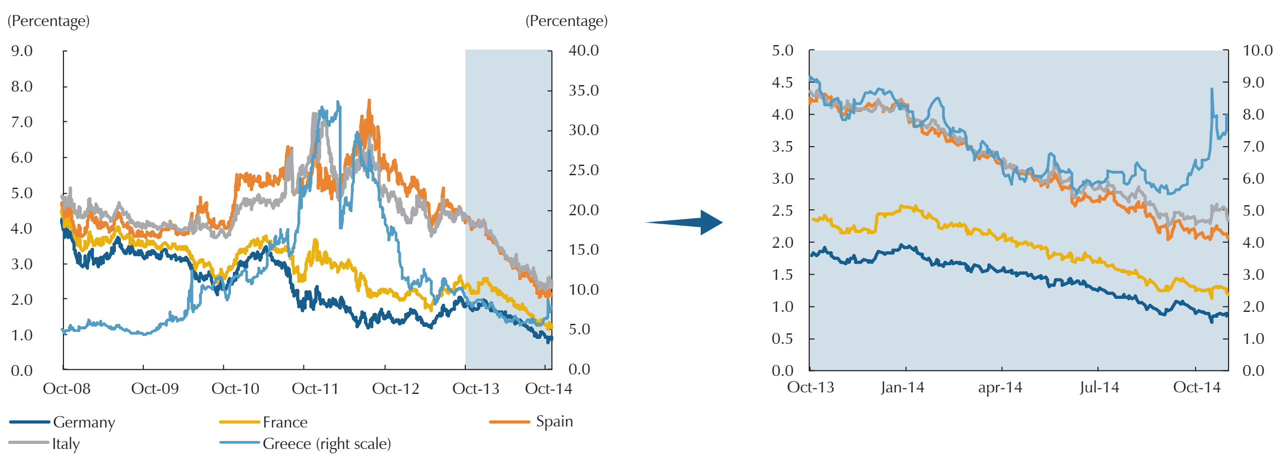
The rates on 10-year sovereign bonds in the euro zone remained low for Germany, Spain, Italy and France, while Greece posted some increase (Graph 11). In this last case, the rise was explained by the Greek government´s desire to suspend the debt restructuring program that began in 2010, promoted by the ECB, the European Commission and the International Monetary Fund (IMF). This has revived doubts in financial markets about whether the country is fiscally sustainable.

Graph 10
10-year Interest Rates on United States Government Bonds



Source: Bloomberg.

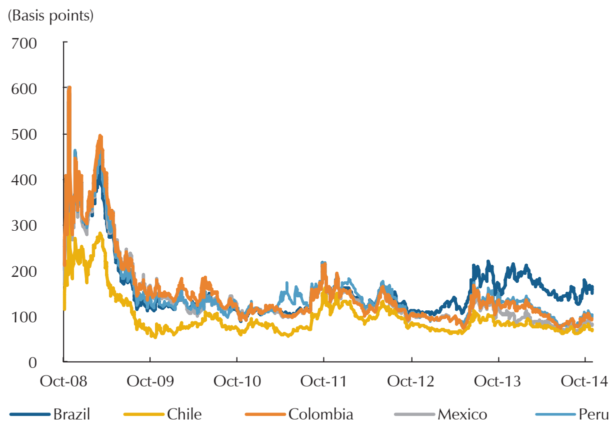
Graph 11
10-year Interest Rate on Government Bonds of Several Euro Zone Countries



Source: Bloomberg.

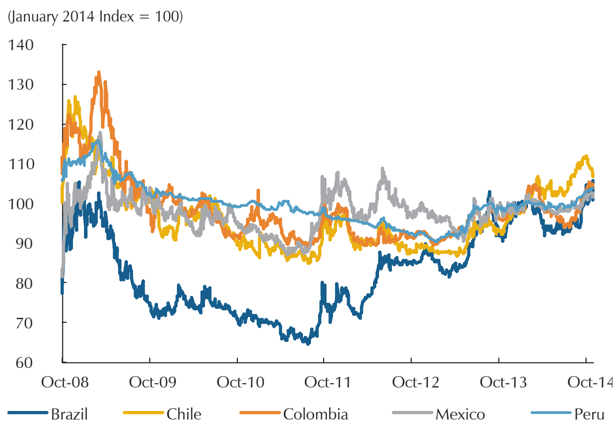
In the case of Latin America, risk premiums increased in the region, given the economic weakness of some countries and the increase in global risk aversion. Credit default swaps (CDS) at five years were above the levels recorded in the second quarter (Graph 12). The Latin American currencies depreciated sharply between July and October compared to the depreciation in January 2014, with Chile's currency being the only exception. However, the Chilean peso had depreciated earlier. During the year to date, the currencies of Chile and Colombia are the ones that have weakened, with respective reductions of 10.0% and 6.6% (Graph 13).

Graph 12
Five-year Credit Default Swaps (CDS) for Several Latin American Countries



Source: Bloomberg.

Graph 13
Exchange Rate Indexes for Several Latin American Countries



Source: Bloomberg.

4. Forecasts by the Technical staff at *Banco de la República*

The growth forecasts for Colombia's trading partners were revised downwards from the estimate published in the June 2014 edition of the *Inflation Report*. This is due to added negative factors in the euro zone, in China and in several Latin American economies. As a result, the country's major trading partners (weighted by non-traditional trade) are expected to grow 2.0% this year and 2.6% in 2015, which is less than the forecast three months ago: 2.5% and 3.2%, respectively (Table 1).

On a country basis, the good performance of the US economy in the third quarter was akin to the forecast in the June edition of this report. However, due to several revisions to the GDP figures for 2013 and the first quarter of the year, the forecast for growth during 2014 as a whole was raised from 1.9% to 2.1%. Implicit in this forecast is the assumption that the momentum observed so far in the US economy likely will continue during the final quarter of the year, driven largely by domestic demand. The job market would continue to recover in this context.

As for 2015, household consumption and investment are expected to remain favorable, driving economic growth during the year and helping to eliminate the excess capacity that persists in the labor market. Moreover, in a scenario of reduced global demand, the external environment will contribute less to the expansion in real activity. So, the forecast for 2015 would be around 2.8%.

These predictions assume the Fed will not change its stance during the rest of the year, as far as monetary policy is concerned, and will increase its benchmark rate gradually during the second half of 2015. The tapering monetary stimulus is not expected to prompt a significant increase in volatility on financial markets and should pass through appropriately to market rates.

In the case of the euro area, productive activity has weakened relative to the forecast in the previous edition of the *Inflation Report*, and the recovery anticipated for this year has failed to materialize. Business and household confidence has deteriorated sharply, especially in Germany. This, in turn,

Table 1
Growth Forecasts for Colombia's Trading Partners

Growth forecasts for the country's trading partners	2013	Forecasts for 2014 Scenario			Forecasts for 2015 Scenario		
		Minimum forecast	Central forecast	Maximum forecast	Minimum forecast	Central forecast	Maximum forecast
Main partners							
United States	2.2	1.8	2.1	2.4	1.8	2.8	3.5
Euro zone	(0.4)	0.5	0.8	1.0	0.5	1.2	1.6
Venezuela	1.3	(4.0)	(2.0)	(1.0)	(4.0)	(1.0)	1.0
Ecuador	4.5	3.5	4.2	5.0	3.0	4.0	5.0
China	7.7	6.9	7.2	7.5	6.4	7.0	7.5
Other partners							
Brazil	2.5	0.0	0.4	0.6	0.5	1.3	2.1
Peru	5.8	3.0	3.5	4.0	3.0	4.7	5.5
Mexico	1.1	2.0	2.4	2.8	2.0	3.5	4.5
Chile	4.1	1.5	2.0	2.5	2.5	3.5	4.0
Total trading partners (non-traditional trade-weighted)	**3.0**	**1.4**	**2.0**	**2.5**	**1.4**	**2.6**	**3.4**
Developed countries[a/]	**1.4**		**1.8**			**2.3**	
Emerging and developing countries[a/]	**4.7**		**4.4**			**5.0**	
Total worldwide[a/]	**3.3**		**3.3**			**3.8**	

a/ IMF forecasts at October 2014
Source: *Banco de la República's* calculations

has affected the prospects for growth during the remainder of the year. In this context, the actions of the ECB would have an important impact in the final quarter, which means economic growth would be modest at best. Accordingly, the forecast for all of 2014 was revised downward from 1.0% to 0.8%.

The possibility of the ECB adopting additional policies in 2015 cannot be ruled out. In addition to those in place already, they would help to gradually restore the credit channel in the region and to depreciate the euro against the dollar and the pound. This should boost domestic demand within the region and its foreign trade, which would accelerate growth to some extent, compared to what was observed in 2014. Similarly, a weak currency and improved economic activity would slow disinflationary pressures. Even so, some countries in the region, such as France and Italy, remain at a standstill because of the structural problems still facing their competitiveness. This being the case, growth during 2015 would be 1.2%.

The Chinese economy would continue to slow down in 2015. In contrast, Latin America is expected to recover to some extent.

Productive activity in China is expected to slow during the latter part of the year and in 2015, as that country continues to rebalance towards an economy supported by private consumption, coupled with gradual financial market liberalization. In this context, the momentum in investment in fixed assets and lending witnessed in past years should continue to decline gradually and make less of a contribution to growth. A portion of the macroeconomic imbalances that have formed in the Chinese economy should be corrected as a result. In addition, the slowdown in global demand would imply that foreign trade would not contribute significantly to the expansion in real activity.

As for Latin America, the Peruvian economy is expected to recover somewhat during the latter part of the year and to accelerate in 2015, while real economic activity in Brazil and Chile would remain weak during that period. However, the increase in Chilean government spending and less uncertainty following elections in Brazil are expected to give a boost momentum to the growth of these economies in 2015. Other countries in the region, such as Venezuela and Argentina, would continue to face structural problems that would hamper their growth this year and the next.

Weak global demand for raw materials, especially in China and the euro area, would continue to damper commodity prices. In the case of oil, prospects for an increase in supply in the United States remain good, which would keep the price of oil well below the levels seen in recent years. However, the possibility that OPEC might cut its production or that geopolitical tensions in Iraq and Libya might lead to interruptions in crude oil production cannot be ruled out. In this context, the price of crude per barrel is expected to average US $ 102.4 in 2014 and $ 95 in 2015. These are significantly lower than the prices forecast in the previous edition of this report: US $ 109 and US $ 104.

The outlook for the prices of other commodities Colombia exports is mixed. On the one hand, coal prices continue to decline due to global replacement of this mineral by natural gas or petroleum derivatives used to generate energy. On the other, coffee prices would remain high because of difficult weather conditions and problems with pests and blight in some producing countries (Table 2).

The forecasts for oil prices were revised downward following the plunge witnessed in recent months.

As in previous quarters, the baseline scenario continues to show significant downside risks, which currently outweigh those assessed three months ago. The greatest risk now stems from further weakening of the major economies in the euro zone, with Germany leading the way, due to more deterioration in confidence and a hard-hit external sector. This being the case, disinflation would be accentuated by lower commodity prices and by weaker domestic demand, while the ECB measures and those of other policymakers would

Table 2
Benchmark Price Forecasts for Colombian Commodity Exports

Major products	2013	Forecasts for 2014 Scenario			Forecasts for 2015 Scenario		
		Minimum forecast	Baseline forecast	Maximum forecast	Minimum forecast	Baseline forecast	Maximum forecast
Colombian coffee (ex dock; dollars per pound)	1.48	1.80	1.90	2.00	1.70	2.00	2.30
Brent crude (dollars per barrel)	108.7	100.0	102.4	104.0	85.0	95.0	105.0
Coal (dollars per ton)	88	72	75	78	64	72	80
Nickel – London exchange (dollars per ton)	15,091	15,495	16,169	16,843	14,822	17,516	20,211
Gold[a/] (dollars per troy ounce)	1,411	1,290	1,270	1,250	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; *Banco de la República's* calculations

be insufficient. This problem could spread to other countries, especially the Asian economies, through trade and added pessimism in the markets.

A sharper slowdown in the emerging economies is another important downside risk. On the one hand, China might see more of a decline in its growth, due to problems associated with the country's financial stability. In the case of the Latin American economies, lower international prices could further affect their momentum.

Finally, normalization of monetary policy in the United States, or an escalation in geopolitical conflicts in the Middle East or Eastern Europe could have adverse effects on financial markets and business and household confidence around the world. This would impact consumption and investment decisions, as well as capital flows to emerging markets.

B. BALANCE OF PAYMENTS

The country's trade balance declined sharply during the second quarter of 2014, widening the current account deficit for that period.

Colombia's balance of payments in the second quarter of 2014 showed a current account deficit equal to 4.4% of GDP (US$4,228 m), which is up from the preceding period (2.4% of GDP, US$2,196 m). Once again, the increase was associated with a sharp reduction in the country's trade surplus, given less income from exports and dynamic growth in imports. Export performance was affected by the drop in mining exports, particularly gold, ferronickel and petroleum derivatives,[4] as well as the sharp decline in industrial exports. Merchandise imports remained dynamic during the same period, thanks to strong domestic demand, ample conditions for external financing, and exceptional fuel purchases as a result of the supply shock caused by shutdown of the Cartagena refinery (Reficar). Net income from transfers

4 The latter was due primarily to shutdown of the Cartagena Refinery.

The drop in revenue from worker remittances, particularly due to the cutback in these flows from Venezuela, also contributed to the deterioration in the external balance.

declined as well, given the plunge in worker remittances, particularly from Venezuela. This was offset, in part, by a slight reduction in net outflows of factor income, thanks to increased revenues from remuneration on direct investments abroad.

As for external funding, the current account deficit in the second quarter was supported by US $ 3,814 m in net capital and financial account income (4.0% of GDP); this is US $ 1,821 m more than during the previous year (2.2% of GDP). The investment portfolio was main source of external resources in the second quarter of 2014, having come to US $ 6,114 m in that period, with investment in long-term government bonds being especially important. These resources are associated with the effect produced by the restructuring of JP Morgan's emerging markets bond indexes, with Colombian government bonds gaining a larger share, and by the sale of government bonds on international markets. Foreign direct investment (FDI) rose 22.1% annually, amounting to US $ 4,890 m during that period, propelled by sectors other than mining and oil. However, these entries were partly offset by an increase in the outflow of direct and portfolio investment abroad, which came to US $ 4,735 m versus US $ 988 m in outflows during the same period last year.

The cumulative balance of payments for the first half of 2014 shows a current account deficit equal to 4.4% of GDP (US $ 8,107 m), which is more than it was during same period last year (3.0% of GDP , US $ 5,453 m). The trade deficit is expected to persist throughout the third quarter of 2014. The available figures on foreign trade of goods during July-August 2014 indicate the trade balance remains negative, with a deficit of US $ 620 m. Total exports in dollars during that period increased 2.6% over the previous year (Graph 14), bolstered by agricultural and industrial exports. Yet, despite the recovery in exports, the value of imports FOB[5] rose 9.3% in annual terms (Graph 15), increasing the trade deficit observed up to now (see the shaded section on page 29).

The current account deficit in the second quarter of 2014 was financed largely with a significant increase in resources derived from portfolio investment.

The trade deficit could be offset, in part, by reduced outflows of factor income, given the decline in oil prices observed since the second half of June, which could reduce profit remittance in the petroleum sector. Net income from current transfers could increase during the third quarter, thanks to economic recovery in the United States and Spain. However, the drop in remittances from Venezuela could continue to have an impact.

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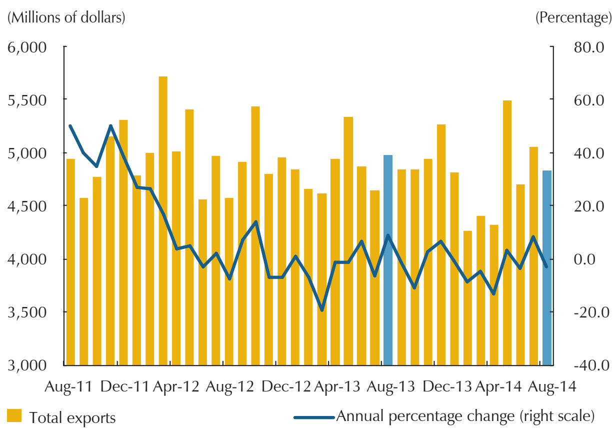
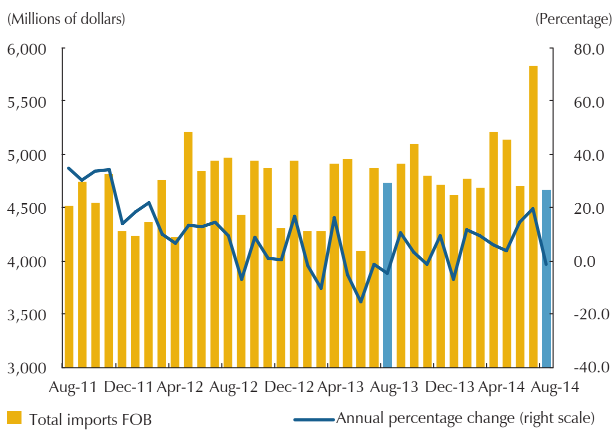
5 Unlike the measure of the balance of payments, which considers the value of imports FOB (free on board), the GDP calculation, based on the national accounts, considers imports CIF (cost, insurance and freight), which include the value of freight and insurance. The average total dollar value of the latter was US $ 5,493 m during July and August 2014, which represents 8.9% annual growth.

Graph 14
Total Exports
(Monthly)



Source: DANE; *Banco de la República*'s calculations

Graph 15
Total Imports (FOB)
(Monthly)



Source: DANE; *Banco de la República*'s calculations

The available figures on capital flows from the exchange balance[6] suggest FDI flows during the third quarter of 2014 would remain at levels similar to those observed during the same period last year. The entry of resources in the form of financial and portfolio investment by the private sector would continue to register important growth compared to one year ago, but with a downward trend during the quarter. This would be associated with the end of the period of gradual adjustment in the composition of the JP Morgan emerging markets bond indexes.

The balance of payments for 2014 as a whole is expected to show a current account deficit between 4.4% and 4.8% of GDP, with a higher central forecast than in 2013 (3.2% of GDP) (Table 3). This would be consistent with an annual decline of -4.2% to -0.4% in total exports in dollars, given less active foreign demand for non-traditional products, fewer exports of petroleum derivatives due to shutdown of the refinery in Cartagena, and less revenue from oil exports, which would be affected during the last part of the year by falling in international oil prices, despite an anticipated increase in oil export volume. On the other hand, imports would continue to grow between 4.3% and 8.3% for the year, thanks to the momentum in domestic demand, which is expected to be good. Also the country will need to import a portion of its fuel. However, some imports are expected to slow during the remainder of the year, given the increase in the depreciation of the local currency.

Besides a larger trade deficit in 2014, the service deficit is expected to increase due to higher estimated outlays for travel and transportation expenses during the year. In contrast, a slight reduction is anticipated in net outflows of factor income associated with fewer profits remitted from the mining and energy sector and moderate growth in revenue from remuneration on direct investments abroad. Income from current transfers would be affected in 2014 by the decline in worker remittances observed so far this

6 Although the capital flows registered in the exchange balance are not exactly what is entered in the balance of payments, since the former refer to the entry and outflow of foreign exchange, they give some idea of the trend.

Table 3
Balance of Payments
Annual Flows

	2010	2011	2012 (pr.)	2013 (pr.)	2014 (proj.)
	(Millions of US Dollars)				
Current account (A+B+C)	(8,666)	(9,713)	(11,300)	(12,276)	(17,665)
Percentage of GDP	(3.0)	(2.9)	(3.1)	(3.2)	(4.6)
A. Goods and services	(1,887)	950	(843)	(2,652)	(7,845)
B. Primary income (factor income)	(11,227)	(15,497)	(15,036)	(14,196)	(14,002)
C. Secondary income (current transfers)	4,448	4,834	4,579	4,572	4,182
Financial account (A+B+C)	(8,921)	(8,844)	(11,294)	(11,723)	(17,508)
Percentage of GDP	(3.1)	(2.6)	(3.1)	(3.1)	(4.5)
A. Direct investment (ii-i)	(947)	(6,228)	(15,646)	(8,546)	(11,226)
I. Foreign investment in Colombia (FDI)	6,430	14,648	15,039	16,198	16,461
II. Colombian investment abroad	5,483	8,420	(606)	7,652	5,235
B. Portfolio investment	(973)	(6,090)	(5,690)	(6,978)	(10,120)
C. Other investment (loans, other types of credit and derivatives)	(10,144)	(267)	4,636	(3,145)	(1,026)
D. Reserve assets	3,142	3,742	5,406	6,946	4,863
Errors and omissions (E & O)	(255)	869	6	553	156

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

year, although a slight recovery is anticipated during the remainder of the period, thanks to the boost that could come from the improvement in performance expected for the United States and Spain.

The current account deficit anticipated for 2014 would continue to be financed largely with FDI resources, which are expected to be slightly higher compared to last year, mainly due to support from sectors other than mining and energy. In turn, resources from net foreign direct investment would increase, as direct investment abroad by Colombians is expected to be less than in 2013. A significant increase in foreign portfolio investment flows is expected as well, directed predominantly to the market for local government debt and long-term government bonds sold on international markets. This revenue would be offset, in part, by an increased accumulation of assets abroad by the private sector. The exercise used to project the balance of payments reflects a change in gross international reserves that is consistent

The current account deficit in 2015 is expected to be between 4.0% and 4.7% of GDP.

with the intervention announced by *Banco de la República*[7] and the financial returns associated with that intervention.

External financing conditions for the Colombian economy are not expected to change significantly in 2015, particularly with regard to net direct investment in the country. This would provide enough resources to support a current account deficit similar to the one predicted for 2014. However, the improvement in external demand anticipated for 2015, in addition to overcoming the supply problems that affected performance this year in certain sectors (refined products) suggest a slight correction in the country's external balance during the years ahead.

These forecasts take into account some international prices for raw materials exported by Colombia and the growth of its trading partners, as considered in the baseline scenario presented in Part A of this chapter. However, as noted in that section, the risks that prevail are on the downside, both in terms of global growth and raw material prices. If this bearish scenario emerges, the current account deficit could be adjusted more than anticipated in the baseline forecast, amidst a context of less external funding and further depreciation in the exchange rate. In this sense, the estimated range for the external balance next year would be between -4.0 and -4.7% of GDP.

7 This takes into account the announced purchase of up to US$1 billion in foreign currency between October and December 2014.

EXPORTS AND IMPORTS IN DOLLARS DURING THE SECOND QUARTER OF 2014 AND SO FAR IN THE THIRD QUARTER

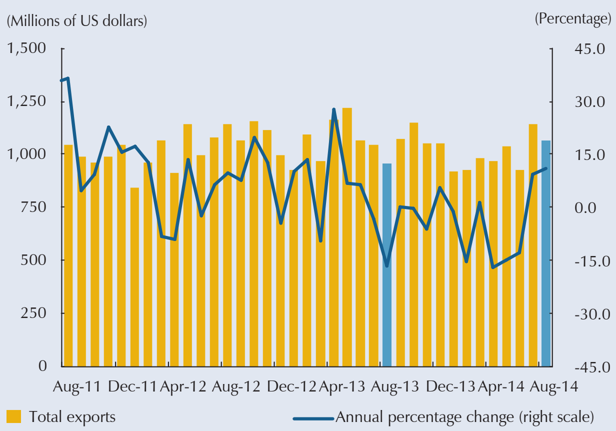
Total exports fell 4.2% during the second quarter of 2014 compared to the same period in 2013. This was due to fewer exports of mining and industrial goods, which declined 2.8% and 15.0% annually, respectively. The negative results for the first group were associated with the drop in foreign income for refined products, ferronickel and gold, mainly because of less export volume in all cases. This was partially offset by increased export quantities of coal and oil, coupled with higher oil sale prices. Industrial exports were affected mainly by the drop in vehicle exports, which declined 50.5% with respect to the same period last year. It is worth noting that industrial exports during this period declined to all destinations except for the United States, where they rose 2.8% annually during the second quarter. Agricultural products were favored by higher production volumes. In the case of coffee, this situation was reinforced by higher export prices.

Imports grew 7.8% annually during the same period, propelled largely by foreign purchases of intermediate goods (11.7% annually), particularly petroleum byproducts (see Box 2, p. 50) and, to a lesser extent, by imports of consumer goods (10.2% annually). Imports of capital goods also increased during the same period, although more moderately than other types of goods (2.5% annually).

Exports in dollars during July-August 2014 reflected a recovery bolstered by foreign sales of agricultural and industrial goods. Agricultural exports rose at an annual rate of 16.6% during that period, while industrial exports were up by 10.1% (Figure A). The increase in agricultural exports was associated with coffee sales, which climbed in export volume and international price during this period, favoring external sector revenue. Banana sales increased during the same two months, while exports of flowers declined 6.1% for the period.

Mining exports fell at an annual rate of 0.9% during July-August 2014. This was due to fewer exports of crude oil and derivatives thereof, reflecting lower international oil prices and the supply shock in refined products (See Box 2). Gold exports also continued to decline during that period. In contrast, the revenues from exports of coal and ferronickel increased in July-August 2014 at annual rates of 14.7% and 15.5%, respectively.

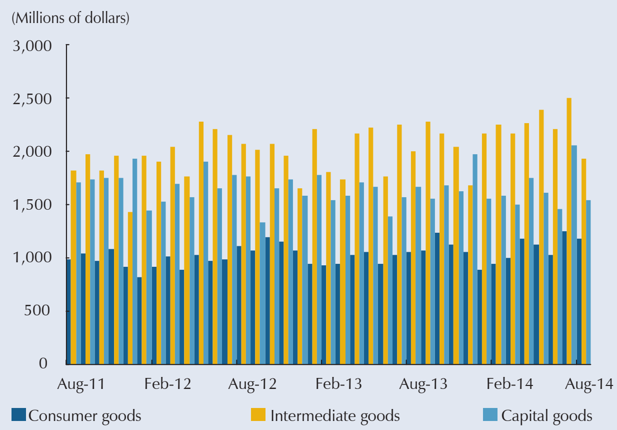
Graph A
Industrial and Other Exports[a/]
(Monthly)



a/ Does not include petroleum or derivatives thereof, coal, ferronickel, gold, coffee, bananas or flowers. Includes other mining products and agricultural goods.
Source: DANE, *Banco de la República*'s calculations

FOB imports in dollars during July-August 2014 saw 9.3% annual growth. This increase is mainly due to more foreign purchases of consumer goods, which rose 16.8% annually, reflecting the good performance of imports of durable and non-durable goods (23.0% and 10.5%, respectively). A high point in terms of durable goods is the important growth in vehicles imports (23% annually). In addition, annual purchases of intermediate goods were up by 4.2%, thanks largely to more requirements for fuel (5.7% annually) and raw materials for industry (4.9% annually). Purchases of capital goods recovered during those two months, registering an increase of 11.1% due to added purchases of capital goods for industry and transport equipment (Graph B).

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

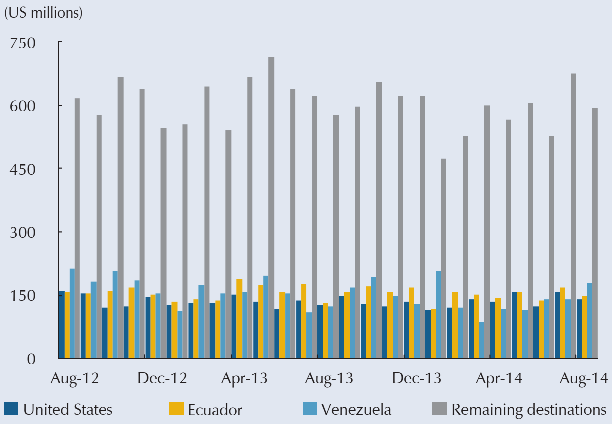


Source: DANE, *Banco de la República*'s calculations

Industrial exports[1] between July and August 2014 increased to all destinations. Trade with Venezuela benefitted the most during this period (38.2% annually) (Figure C), with US $ 322 m in exports to that country, which account for 14.6% of exports during those two months. Generally speaking, the good performance of industrial exports was associated with the increase in exports of food and beverages, vehicles, leather goods, chemicals and machinery and equipment.

1 These exports do not include petroleum or derivatives thereof, coal, ferronickel, gold, coffee, bananas or flowers. They account for 22% of all exports during this period. Industrial exports represent 96% of this group.

Graph C
Non-commodity Industrial Exports to the United States, Ecuador, Venezuela and All Other Destinations
(Monthly)



a/ Coffee, petroleum by-products, ferronickel, gold, bananas and flowers are not taken into account.
Source: DANE, *Banco de la República*'s calculations

BOX 1
SYNCHRONIZATION OF LATIN AMERICA'S ECONOMIC CYCLE

Luis Eduardo Arango
Juliana Avila
Alvaro Jose Pinzon *

Economic cycles are sequences of growth and contraction in the economy. The first are characterized by increased momentum in economic activity; the second, by declines in production and deterioration in the economic environment. The highest point of economic expansion is known as a peak, and from there the recession phase begins; its lowest point is known as a valley and marks the beginning of the expansion phase (Alfonso et al., 2013). Sometimes, the cycles in an economy are guided by global phenomena that do not affect only one country. For this reason, there can be some synchronization in the economic cycles of nations that have similarities in terms of their productive structure or trade dependence.

The purpose of this article is to analyze the degree to which the economic cycles in several Latin American countries (Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela) have been synchronized in recent decades. Real gross domestic product (GDP) and the industrial production index (IPI) are examined to that end. These variables quantify economic activity in each economy.

Synchronization and Correlations in GDP

The quarterly GDP series from 1996 to 2013 are used to estimate the chronology of the cycles, based on the recession criterion of the Euro Area Business Cycle Dating Committee of the Center for Economic Policy Research (CEPR).[1] The transitory components are estimated with a Hodrick- Prescott filter. The objective is to calculate cross correlations among the countries in five-year windows.

The chronology of the economic cycles is shown in Figure B1.1, with the shaded areas representing the recession phases in each country. Venezuela and Brazil were found to be the most volatile economies; that is, those registering shorter complete cycles, while the less volatile is Colombia, which registers no complete cycles, followed by Chile. The Venezuelan economy was found to have the most prolonged recession phases (fifteen months in 1998 and in 2009).

The average economic cycle for the countries analyzed is 47 months (almost four years), with a 40-month expansion period (3.3 years) and a recession of eight months, approximately. This means the economic cycles that were detected are asymmetric; in other words, the recessionary periods are much shorter than the periods of expansion in all the countries (Table B1.1).

Colombia, according to the CEPR criterion, registered only one contraction from 1996. It occurred in 1998-1999,[2] preceded by a period of rapid growth, and coincided with the contractions that occurred in all the economies analyzed, except that of Mexico.

Brazil, Mexico, Ecuador, Peru and Venezuela experienced a decline in economic activity between 2000 and 2001, coinciding with the burst of the dot-com bubble.[3] All the economies analyzed, except the Colombian economy, experienced a recession phase associated with the sub-prime crisis[4] between 2008 and 2009.

Mr. Arango is lead researcher in the Research Unit. Ms. Ávila and Mr. Pinzón are research assistants. The opinions expressed herein imply no commitment on the part of *Banco de la República* or its Board of Directors. The article is based on Arango, Ávila & Pinzón (2014).

1 This criterion defines a recession as a significant decline in the level of economic activity, usually visible in two or more consecutive quarters of negative growth in GDP, employment and other macroeconomic variables. In this article, the criterion applies only to real GDP, making it more lax.

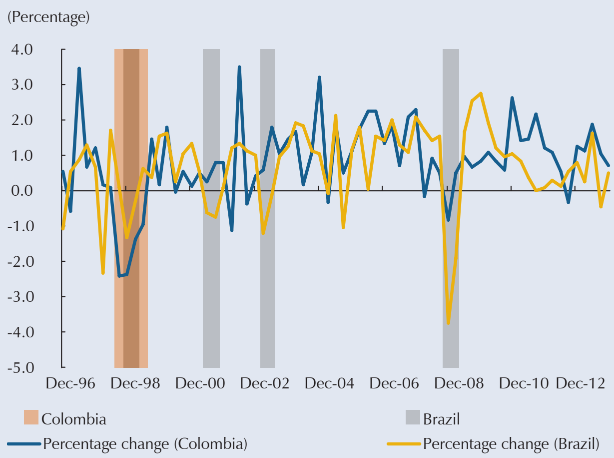
2 The booms that preceded these years managed to expand consumption, investment and the country's debt; however, with the deterioration in terms of trade and the debt becoming more expensive due to peso devaluation, as a result of the Asian crisis, Colombia suffered a severe contraction in investment, production and consumption, together with increased interest rates and reduced liquidity, all of which made it difficult to fulfill its debt obligations (Aparicio *et al*., 2012).

3 When the dot-com bubble burst, there was a widespread collapse of Internet companies as a result of their rapid valuation between 1997 and 2000. An estimated 5,000 Internet companies disappeared (through bankruptcies, mergers and acquisitions) (Lin and Treichel, 2012).

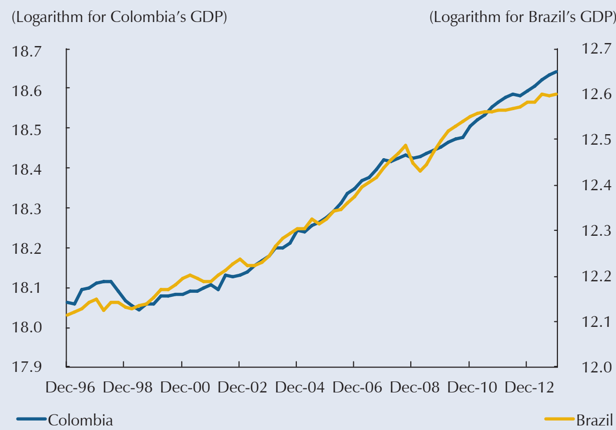
4 The 2008 financial crisis occurred when the housing bubble gave way in the United States. This provoked the so-called subprime mortgage crisis in October 2007 (Correia et al., 2009).

Graph B1.1
Recessions and Percentage Changes in GDP

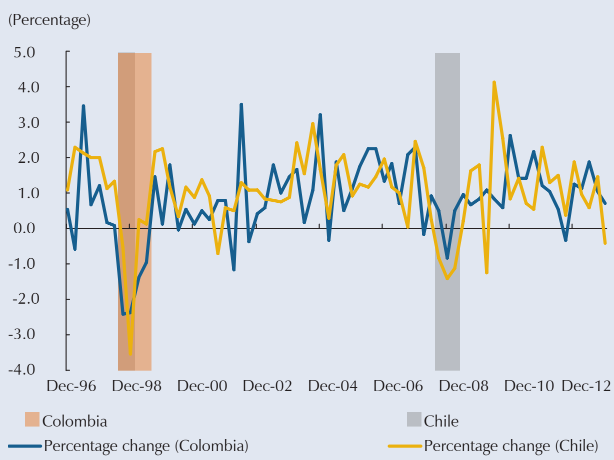
A.



B.



C.



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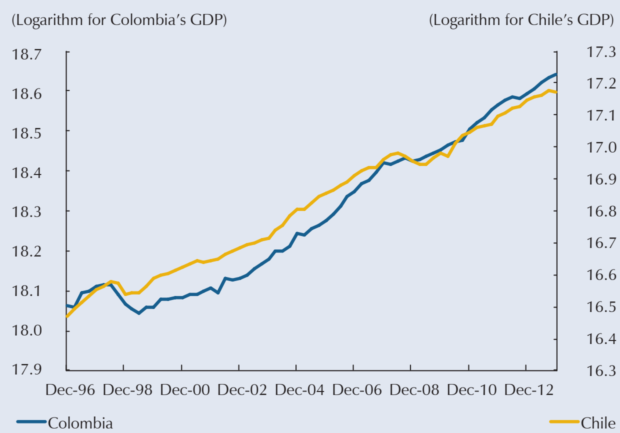

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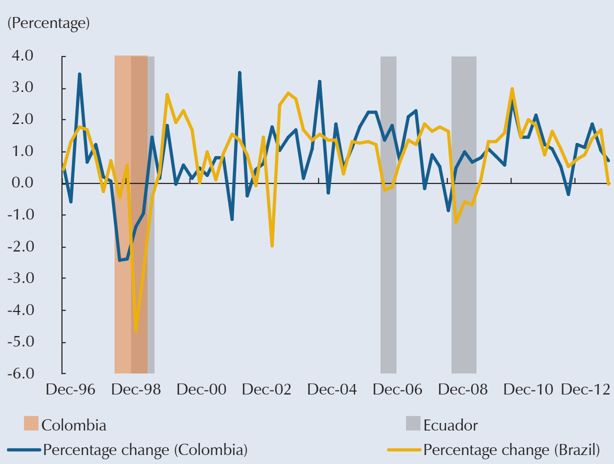

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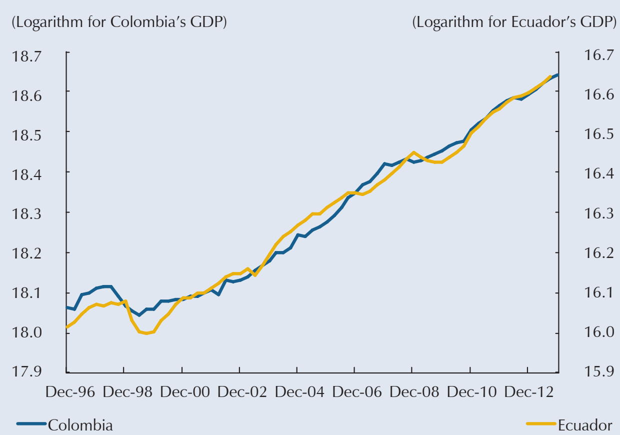
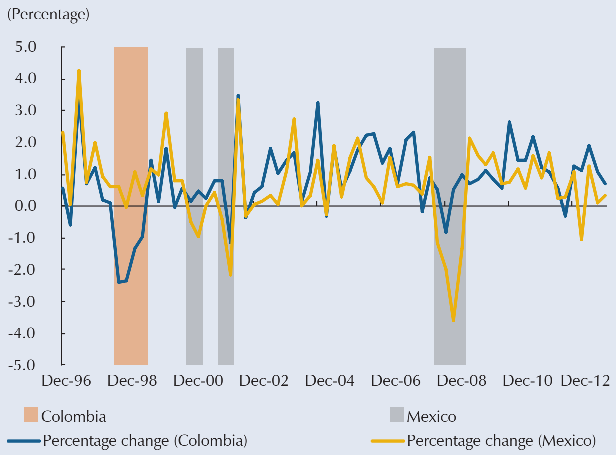
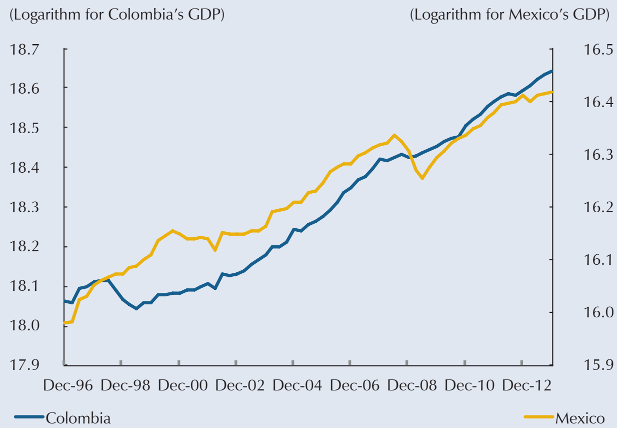


Graph B1.1 (Continued)
Recessions and Percentage Changes in GDP

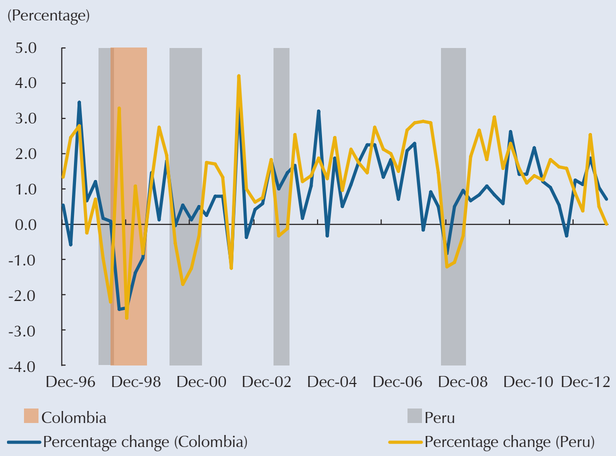
G.



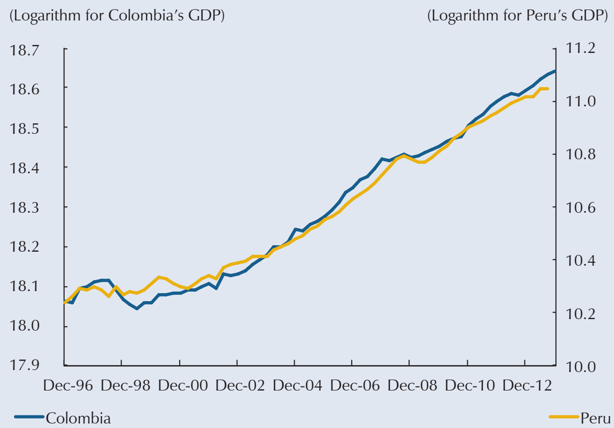
H.



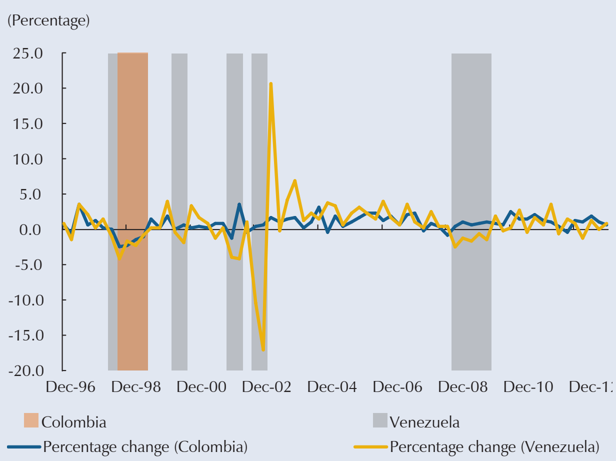
I.



J.



K.



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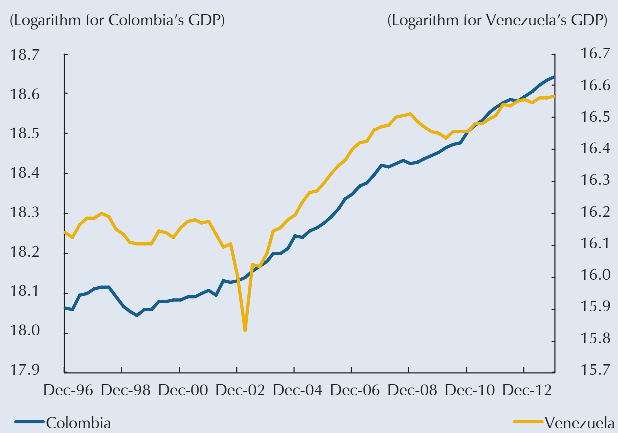


Source: Central Bank of Brazil, Central Bank of Venezuela, *Banco de la República*, ECLAC and the International Monetary Fund. Authors' calculations

Table B1.1
Average Real GDP Economic Cycles in Latin America

Country	Full Cycles on Record	Average duration (months)			
		Full Cycle Peak to Peak	Expansion	Full Cycle Valley to Valley	Contraction
Brazil	3	40	34	40	6
Chile	1	120	114	123	7.5
Colombia	0	n. a.	n. a.	n. a.	12
Ecuador	3	54	47	55	7.5
Mexico	2	46.5	40.5	49.5	8
Peru	3	43	35	44	8.3
Venezuela	4	32.3	24	32.3	9.6
Average		47.1	39.9	48	8.1

n.a. Not applicable
Observation: Based on Arango, Avila and Pinzón (2014).
Source: Central Bank of Brazil, Central Bank of Venezuela, *Banco de la República*, ECLAC and the International Monetary Fund. Authors' calculations

Graph B1.1 provides information on the synchronization of Colombia's recessions with those of the other countries analyzed. The left column shows the recession phases in Colombia's economic cycle, accompanied by those of the countries in the sample, together with the seasonally adjusted quarterly changes in GDP (on the basis of which the recessions were identified).

The contraction phase identified for Colombia also occurred in most of the countries analyzed; i.e., the crisis of the late nineties coincided with recessions in other Latin American countries. However, not all the crises registered in the other countries occurred in Colombia. For example, Mexico and Peru posted three and four contractions, respectively, but none coincided with the contraction in Colombia. This suggests that dynamics of GDP in those economies have been more vulnerable to the international situation than in Colombia.

The connection between the economic cycles of countries is another way to analyze their degree of synchronization. The transitory components of GDP, obtained using the Hodrick-Prescott filter, are used to determine the correlation coefficient. However, to analyze how synchronization changes over time, a five-year window is constructed to estimate the correlation.[5]

A positive and significant correlation value implies that both countries grow (decline) simultaneously with respect to their trend. A negative value indicates that, when one country grows above its trend, the other country declines.

Based on this calculation, a period of negative and significant correlation was found only with respect to Brazil. With the other countries, there were periods of negative correlation, but they were not significant. On the other hand, up until 2006, the correlation with Mexico was not significant, but it has been high ever since (near 0.8). In the case of Brazil, a correlation statistically different from zero was found only during 2006-2010. Chile and Peru registered a negative but not significant correlation with Colombia during 2003-2006. The same occurred with Venezuela between 2003 and 2006, and with Ecuador between 2006 and 2009.

The extent of the correlations has changed during the course of time; however, the country that is now most correlated with the Colombian economy is Mexico, followed by Ecuador and Chile. The development of cross correlations in the short term (the last two years) between Colombia and the countries analyzed has decreased, reaching values below 0.5, as is the case with Venezuela.

Synchronization and Correlations in IPI

The industrial production index (IPI)[6] between January 1991 and February 2014 is the second indicator used

5 The window moves from one period to the next; that is, quarterly, until it reaches the latest available figure on the variables. The evolution of the correlation coefficient throughout the period in question is identified in this way.

6 For Peru, the manufacturing index (MI) was used as an approximation to the IPI, since the sample period of that larger indicator and its evolution is very close to that of IPI. Ecuador and Venezuela were excluded for lack of data.

to determine the cycles and synchronization. It measures the evolution of industrial production by quantities, eliminating the influence of prices.

The Bry-Boschan algorithm[7] was used to estimate the industrial cycles in the Latin American countries in the sample. The chronology of the cycles identified is shown in Graph B1.2, where the shaded areas pertain to the recession phases in each country. Three contraction periods that occurred in most of the countries stand out; namely, the Asian crisis in late 1997,[8] the crisis at the beginning of this century, and the 2008 crisis.

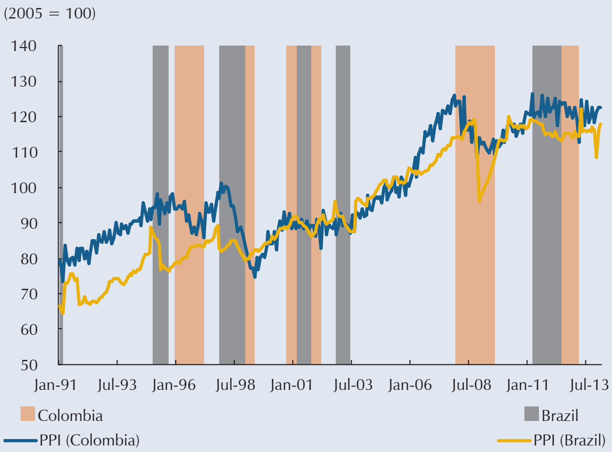
Unlike economic cycles, the Colombian industrial cycles that were identified do include the crisis at the start

7 The objective of this algorithm is to identify the local maximums and minimums of the series, once they have been softened and their extremes are eliminated. Cycles found with this method must comply with the time constraints for a full cycle as well as a phase. Here, the minimum duration of a phase is six months, while the full cycle should last more than fifteen months (Alfonso et al., 2013).

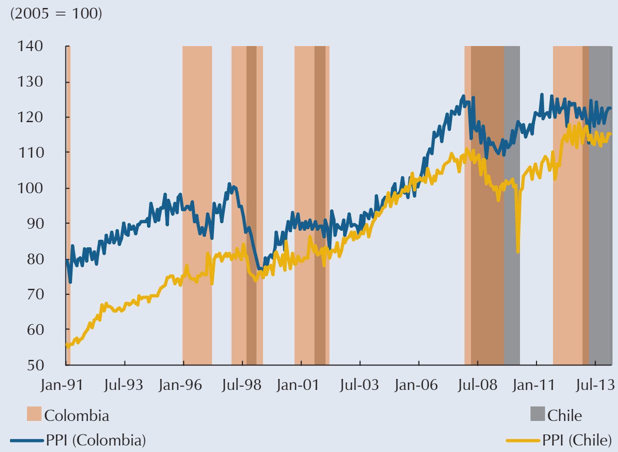
8 The so-called crisis in the Asian countries was the one triggered in mid-1997. It began with currency devaluations in Thailand, Indonesia, Malaysia and Philippines, then spread throughout most of Asia. The drop translated into a loss of confidence on the part of the developing countries and a decline in oil prices. This led to the Russian crisis, which spread to the United States, thereby becoming a global crisis (Paredes, 1999).

Graph B1.2
GDP Recessions and Evolution

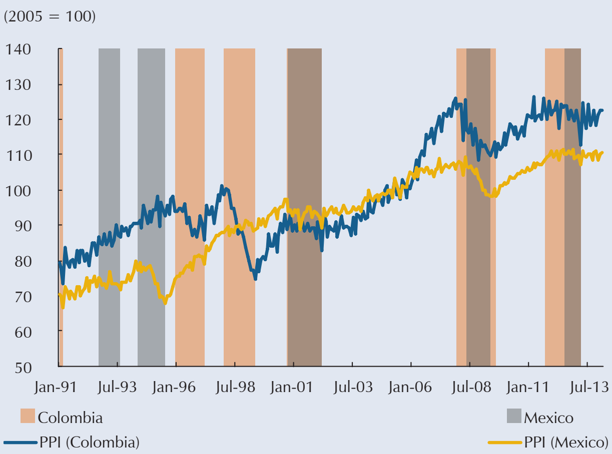
A.



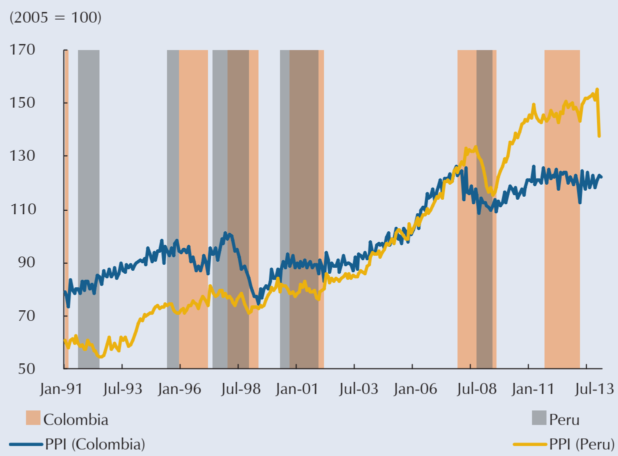
B.



C.



D.



Source: *Banco de la República*, Bloomberg, Datastream, International Monetary Fund and the Instituto Nacional de Estadística e Informática de Peru (Peruvian National Bureau of Statistics and Data Processing); Authors' calculations of the century and the one in 2008. Colombia registered six recession phases during sample period: 1991, 1996, 1998, 2001, 2008[9] and 2013. The Tequila crisis detected in Mexican industry in 1994 (Ffrench-Davis, 1997) was not reflected in the cycles (nor the GDP or IPI) of the other Latin American countries analyzed. With this methodology, the most volatile countries are Brazil and Peru; the less volatile ones are Mexico and Chile. The average duration of the industrial cycles is estimated at 55 months (4.6 years), including 40-month periods of expansion (3.3 years) and 14 months of contraction, on average. Table B1.2 provides a summary of the characteristics of the cycles, by country.

Synchronization of the Colombian industrial cycle with the cycles of the Latin American countries in the sample is analyzed below, using a shadow graph. Graph B1.2 marks the recession phases in Colombia and other countries in the sample.

The industrial recession phases in Chile and Colombia were highly synchronized during 1998-2008. However, inasmuch as the last recession phase in Colombia does not coincide fully with the one in Chile,[10] it is possible to assume they were not driven by the same factors, which would result in a decline in the extent of synchronization. With Mexico, very little synchronization in its recessions with those of Colombia is found between 1991 and 2000; yet, after 2000, both economies experienced the same contractions. On the other hand, the extent to which the economic downturns in Colombia are coupled with those of Brazil or with those of Peru is unclear, as they only coincide in the middle of the recessions identified.

The results for the contemporary correlations of the transitory components of the IPI reaffirm the analysis done on the basis of the industrial cycles identified with the Bry-Boschan algorithm. A high and significant correlation was found between Chile and Colombia (around 0.6) during much of the period analyzed, but it has declined in recent years.

The correlation with Mexico is positive and significant as of 2000, and also exhibits an upward trend since 2006. This outcome agrees with the correlation analysis based on the transitory component of GDP. Brazil, on the other hand, registered periods of high correlation, with values up to 0.6; however, this level has not been maintained and the correlation in recent years has been low (at around 0.45). The IM cycle in Peru had no correlation during much of the 1990s; however, the correlation increased at the start of the century and has remained above 0.5.

The correlation coefficient of the transitory components of the IPI has not been constant in the period analyzed. For the last year, the correlation exhibits an upward trend between Colombia-Peru and Colombia-

9 The price of oil and energy prices trended upward during 2008, until June. As of that month, the price fell sharply until December, when it began to recover slowly. This phenomenon deepened the 2008 crisis in countries that export oil and other types of energy, such as Colombia, Chile and Mexico.

10 They coincide only in the final quarter of the Colombian recession, which constitutes the first of the Chilean recession.

Table B1.2
Summary of Latin American Industrial Cycles

Country	Full Cycles on Record	Duration (Months)			
		Full cycle Peak to Peak	Expansion	Full cycle Valley to Valley	Contraction
Colombia	5	52	40	51	11
Brazil	3	57	44	67	13
Chile	5	53.2	34.4	52.8	18.4
Mexico	4	59.8	45	58.8	13.6
Peru	4	53.8	40	50.8	13.8
Average		54.8	40.2	54.6	14

Observation: Based on Arango, Ávila and Pinzón (2014) and INEL.
Source: Central Bank of Brazil, Central Bank of Venezuela, *Banco de la República*, ECLAC and INEI; Authors' calculations

Mexico, but declined between Colombia -Chile and Colombia-Brazil. Currently, Mexico is the country that has more of a correlation with Colombia, while the lowest correlation is with Chile.

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II. Domestic Growth: the Current Situation and Short-Term Outlook

In the second quarter of 2014, Colombia's GDP grew at an annual 4.3% rate, which is similar to what was expected. Fewer business days and several temporary supply shocks contributed to the slowdown.

Economic activity during the third quarter would have increased at a good pace. Domestic demand and improved export performance doubtlessly contributed to GDP growth.

As for the different branches of industry, the impetus would come from sectors such as construction and social and personal services. Industry would have seen positive growth, despite the negative impact of the Reficar shutdown.

A. GDP IN THE SECOND QUARTER OF 2014

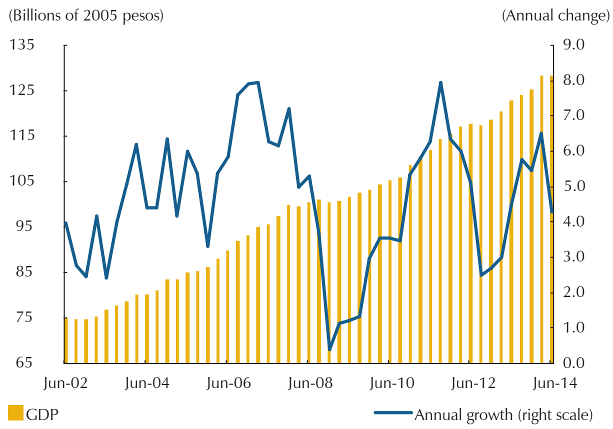
The National Bureau of Statistics (DANE) reported Colombia's GDP grew at an annual rate of 4.3% during the second quarter of 2014 (Graph 16). This represents a slowdown with respect to the figure on record for the first three months of the year (6.5%) and coincides with the most probable scenario in the growth-range forecast presented in the previous edition of this report (between 3.6% and 5.0%, with 4.3% being the most likely figure). A comparison between the first and second quarters suggests the levels of the series did not vary significantly from one period to the next (-0.1%).

The pace of economic growth during the second quarter stayed close to its average since 2001, thanks to the annual increase in domestic demand, which was quite positive.

As in some years estimated in the respective editions of this report, it is important to point out that the calendar effect of fewer business days during the period would have influenced the results published by DANE.

Despite the slowdown, economic growth remained near its average since 2001, thanks to a sizeable annual increase in domestic demand (7.7%). Given its high share of GDP, the largest contribution came from aggregate consumption, although investment also grew at a significant pace (Table

Graph 16
Gross Domestic Product
(Seasonally adjusted)



Source: DANE; *Banco de la República*'s calculations

4). The momentum in private consumption during the second quarter continued to be outstanding. In addition, a significant boost from government end consumption was also exhibited.

According to DANE, a breakdown of the components of private consumption shows slowdowns in semi-durable and non-durable goods. However, these were offset largely by the build-up in consumption of services and durable goods. This allowed household consumption to expand at a pace similar to that registered for the first three months of the year, despite the statistical effect of fewer calendar days.

The expansion in most lines of investment was less than during the first quarter. Despite a slowdown, construction of civil works was the item that contributed the most to gross capital formation. Following, in order of im-

Table 4
Real Annual GDP Growth, by Type of Spending

	2013				2013	2014		Contribution to annual growth
	I Qrt.	II Qrt.	III Qrt.	IV Qrt.	Full year	I Qrt.	II Qrt.	II Qrt. 2014
Total consumption	**3.6**	**4.2**	**4.5**	**5.0**	**4.4**	**5.8**	**5.5**	**4.4**
Household consumption	3.5	4.1	4.4	4.9	4.2	5.4	5.2	3.3
Non-durable goods	3.0	4.4	4.2	4.9	4.1	5.5	4.7	1.0
Semi-durable goods	3.7	6.5	6.0	7.4	5.9	5.9	4.8	0.3
Durable goods	(0.2)	0.5	9.6	5.4	3.8	8.3	10.0	0.4
Services	4.0	4.1	4.1	4.4	4.2	4.6	5.0	1.7
Government end consumption	5.4	5.6	5.9	6.2	5.8	8.1	6.5	1.1
Gross capital formation	**(0.1)**	**(3.5)**	**14.4**	**10.9**	**5.1**	**18.5**	**14.3**	**3.9**
Gross fixed capital formation	4.0	0.5	12.1	8.3	6.1	15.2	11.1	3.1
Agriculture, forestry, hunting and fishing	(2.2)	(5.3)	(9.7)	(14.2)	(7.9)	3.7	26.4	0.1
Machinery and equipment	3.1	2.7	1.7	4.0	2.9	12.8	6.5	0.6
Transportation equipment	(14.7)	(14.7)	1.7	9.6	(4.9)	3.6	16.1	0.5
Construction and buildings	12.2	12.5	31.8	(3.7)	12.0	8.2	2.2	0.2
Civil works	7.8	(1.3)	21.6	23.1	11.9	25.5	17.8	1.4
Services	3.0	(3.7)	14.0	4.5	4.2	7.5	7.1	0.0
Domestic demand	**2.7**	**2.6**	**7.1**	**6.5**	**4.7**	**9.0**	**7.7**	**8.4**
Total exports	**(1.1)**	**13.7**	**1.8**	**7.4**	**5.4**	**2.4**	**(8.6)**	**(1.6)**
Total imports	**1.9**	**4.1**	**4.6**	**7.5**	**4.5**	**14.2**	**9.6**	**(2.6)**
GDP	**3.0**	**4.5**	**5.8**	**5.4**	**4.7**	**6.5**	**4.3**	**4.3**

Source: DANE; *Banco de la República*'s calculations

Exports in real pesos fell sharply during the second quarter. This was due to various supply shocks in the mining sector, the temporary shutdown of the Cartagena Refinery, and mediocre external demand.

portance, were investments in machinery and equipment and in transportation equipment; these two items combined contributed 1.1 percentage points to GDP growth. The significant increase in agricultural investment associated with the cattle retention cycle and the coffee tree renewal process were highlights as well.

In contrast, the net outcome for the foreign trade accounts contributed negatively to GDP growth. Exports in real pesos posted a sharp decline, the largest since late 2009. This was due to a combination of several supply shocks in the mining sector, the temporary shutdown of the Cartagena Refinery, and mediocre external demand. Imports, on the other hand, continued to grow at a good pace, largely because of the need to satisfy the demand for refined oil products, although purchases of consumer goods and, to a lesser extent, capital goods also were an important factor.

On the supply side, the sectors that contributed the most to economic growth in Colombia were construction (mainly civil works), financial services, and social, community and personal services, in that order (Table 5). Most sectors slowed between April and June, compared to the first three months of the year. Financial services were an exception, having maintained their annual growth rate. The only branches that posted an annual contraction were industry and mining. Tax revenue was another item than continued to grow, given the momentum in the Colombian economy so far this year.

As for construction, civil works increased significantly (17.6% annually), but less so than in the first quarter (26.6%). The performance of this subsector continues to be led by the good momentum in highway, street and bridge construction, which rose 37.8% and contributed 11.5 pp to the total variation.[8]. Building construction did not perform as well as expected, having increased just 1.4% as opposed to 7.4% during the previous quarter. This is because work was focused on the stages of the construction process with less value added.

The performance of civil works during the second quarter continued to be led by the good momentum in highway, street and bridge construction.

In the financial sector, overall portfolio growth during the second quarter was at rates similar to those observed in the previous quarter (13.6%). Moreover, net interest income stayed at similar levels and profits improved slightly during the quarter. So, the annual increase in financial-sector GDP during April-June 2014 was similar to what it was three months earlier (having gone from 6.0% to 6.1%). This item is still a major contributor to the economy, given its share of GDP (19.9%), and its growth stayed above the average for the past six years (4.7 %).

8 This is due to the increase in amounts paid out by national and regional agencies to construct, maintain, repair and upgrade urban roads. These payments rose 42.2% and 60.5%, respectively.

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

Sector	2013				2013	2014		Contribution to annual growth (II Qtr. 2014)
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.	Whole year	I Qtr.	II Qtr.	
Agriculture, forestry, hunting and fishing	3.1	7.6	5.3	6.0	5.5	6.1	1.6	0.1
Mining and quarrying	0.8	4.5	6.7	7.8	4.9	5.7	(2.2)	(0.2)
Manufacturing industry	(4.7)	1.1	(0.4)	0.2	(1.0)	3.3	(1.4)	(0.2)
Electricity, gas and water	4.2	5.8	4.1	5.5	4.9	3.8	2.8	0.1
Construction	11.8	5.3	22.5	9.5	12.0	18.2	10.2	0.7
Buildings	10.2	9.5	30.4	(0.5)	11.4	7.4	1.4	0.0
Civil works	12.8	2.3	17.4	20.0	12.7	26.6	17.6	0.7
Commerce, repairs, restaurants and hotels	2.9	4.3	4.7	5.5	4.3	5.5	4.8	0.6
Transportation, storage and communication	2.3	3.3	3.5	3.4	3.1	4.5	4.4	0.3
Financial, real estate and company services	3.8	4.5	6.1	5.8	5.0	6.0	6.1	1.2
Social, community and personal services	4.9	5.1	5.0	6.2	5.3	6.5	5.8	0.9
Subtotal –aggregate value	2.8	4.3	5.5	5.3	4.5	6.4	3.9	3.5
Taxes minus subsidies	3.7	4.7	5.7	4.5	4.7	7.6	7.8	0.8
GDP	**3.0**	**4.5**	**5.8**	**5.4**	**4.7**	**6.5**	**4.3**	**4.3**

Source: DANE; *Banco de la República*'s calculations

The non-tradable sectors continued to drive Colombia's economic growth in the second quarter.

Social, community and personal services are also among the best performing sectors. This branch remained buoyant and was up 5.8%, thanks to sustained growth in the item associated with public administration and defense (6.8%) and social services and healthcare (7.5%).

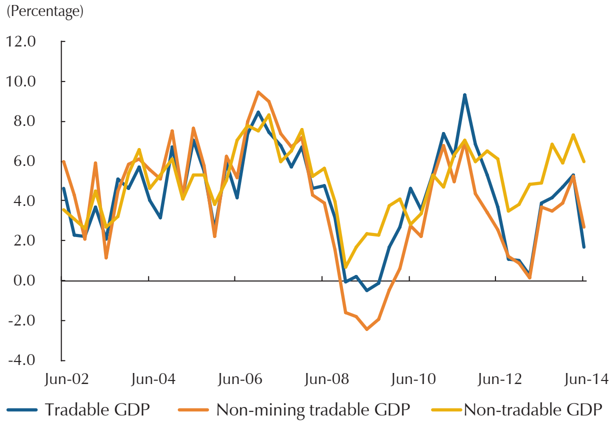
In contrast, the branches related to mining and industrial activity declined during the second quarter. As for mining, the increase in the production of coal (2.8%) and non-metallic minerals (5.4%) was offset by cutbacks in oil production, due to problems with law and order (-2.8%), and the production of and metallic minerals (-15.5%).

The annual contraction in industry was 1.4%, following 3.3% in the first three months of the year. The main sub-branches that contributed negatively were those related to oil refining, wood products, and other machinery and electrical appliances. In the first case, it is important to point out that the temporary shutdown of Reficar will affect production during the rest of the year. There also were fewer business days during that period. If this phenomenon is ruled out, the growth in industry would come to 1.0%.[9]

9 For details on this calculation, see *Borradores de Economía*, Vol. 820, "Efectos calendario sobre la producción industrial" by Luis F. Melo and Daniel Parra, *Banco de la República*, 2014.

As mentioned in the previous edition of this report, the non-tradable sectors continue to lead Colombia's economic growth, although there have been slowdowns in this case and in tradables. The annual increase in the first group of sectors was 6.0%, following 7.3% in the previous period. Meanwhile, GDP in the tradable sectors slowed significantly, having risen by only 1.7% compared to 5.3% in the first quarter of 2014. The growth in tradable goods, without mining, was 2.7% (Graph 17).

Graph 17
GDP in the Tradable, Non-mining Tradable and Non-tradable sectors.
(Annual growth)



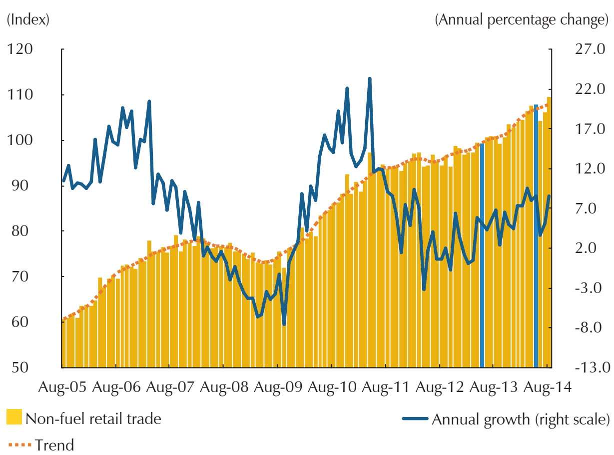
Source: DANE, *Banco de la República*'s calculations

B. THIRD-QUARTER GDP GROWTH FORECASTS

An analysis of the data at hand for the third quarter of 2014 suggests economic growth would have accelerated during this period compared to the second quarter. Even so, the increase in economic activity during these months would have been less than the average growth rate during the first half of the year. According to the estimates presented in this section, domestic demand would have continued to expand at a good pace, in a context where the momentum in consumption would have been similar to what it was during the first six months of the year. However, the pace of growth in investment would have slowed. On the other hand, the foreign trade balance would have shown better results.

In terms of private consumption, the latest DANE Monthly Retail Trade Survey (MRTS) shows retail sales rose at a real annual rate of 8.5% during August (Graph 18). This implies 6.8% growth during July-August, which is similar to the figure on record for the second quarter (6.6%). The momentum in the items comprising household consumption is expected to be more balanced than in previous quarters, although the durable goods segment, especially automobiles, still would be the most dynamic.

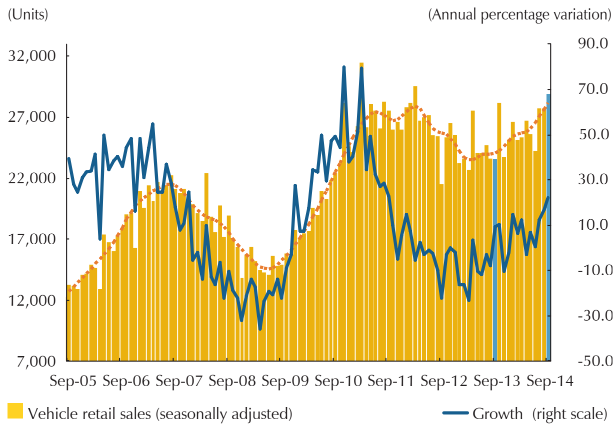
Graph 18
Monthly Retail Trade Survey
(Total non-fuel retail trade, seasonally adjusted)



Source: DANE, *Banco de la República*'s calculations

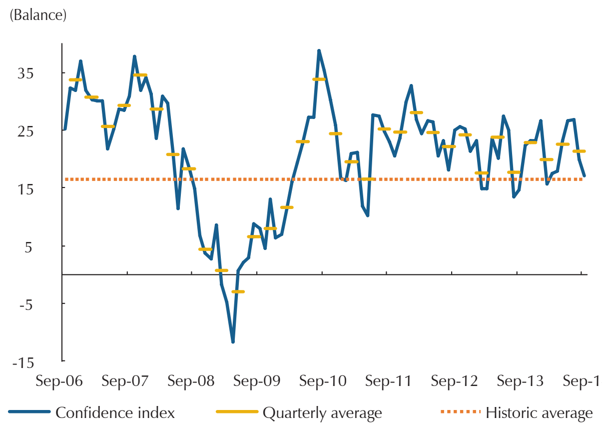
The positive situation with respect to retail sales of vehicles and motorcycles suggests this item is expanding at a good pace. Taking into account the MRTS data provided by DANE, these sales were up 13.2% annually in August and 9.5% annually in July-August (vs. 2.6% in the second quarter). The vehicle sales data published jointly by the National Association of Colombian Industrial-

Graph 19
Retail Sales of Automotive Vehicles
(Seasonally adjusted series)



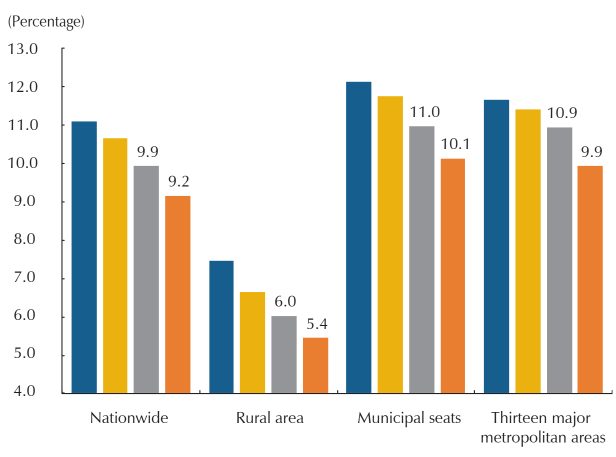
Sources: ANDI, Fenalco and Econometría; *Banco de la República's* calculations

Graph 20
Consumer Confidence Index and Quarterly Average



Source: Fedesarrollo.

Graph 21
Unemployment Rate (UR)
(June-August moving quarter))



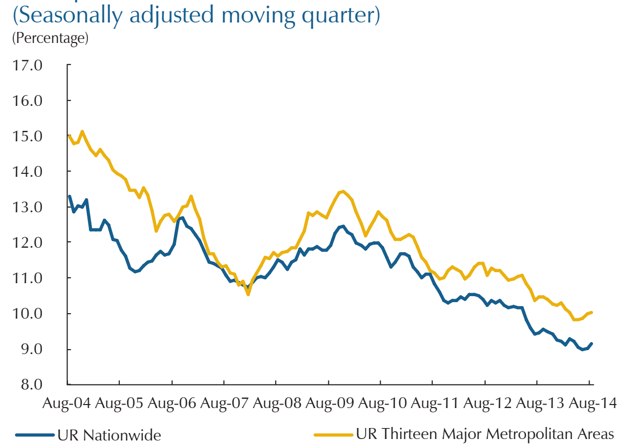
Source: DANE (GEIH); cálculos del Banco de la República.

ists (ANDI), the National Retail Trade Federation (Fenalco) and Econometria suggest a significant third-quarter increase in sales of these goods by September (Graph 19).

The forecast for growth in private consumption is backed by the performance of other economic indicators. To begin with, despite recent declines, the third-quarter average for the consumer confidence index calculated by Fedesarrollo was not that far from the average on record for the second quarter. Moreover, it continues to exceed the average for the series since 2001. Secondly, the latest results for the job market also indicate household consumption should perform well during the third quarter. The data on the moving quarter ended at August indicate the unemployment rate (TD) continued to decline, having reached 9.1% nationwide, 5.7% in the rural areas, and 10% in municipal seats and in the thirteen major metropolitan areas (Graph 21). When discounting the seasonal effect, the UR series shows the indicator continues to trend downward (Graph 22).

The behavior of the unemployment rate is explained by the momentum in employment, which is expressed by the increase in the number of employed persons. In the June-August quarter, this figure rose at an annual rate of 1.9% nationwide

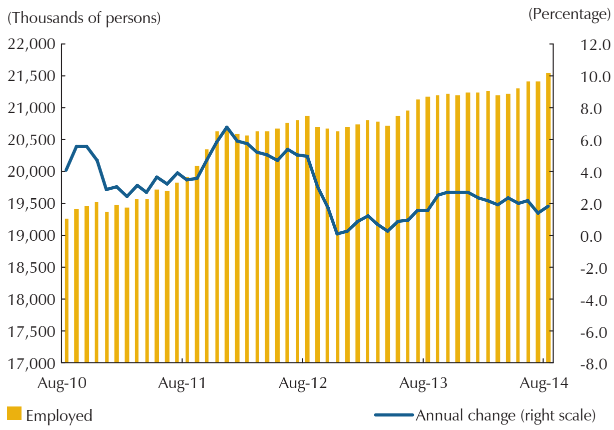
Graph 22
Unemployment Rate Nationwide and in Thirteen Major Metropolitan Areas
(Seasonally adjusted moving quarter)



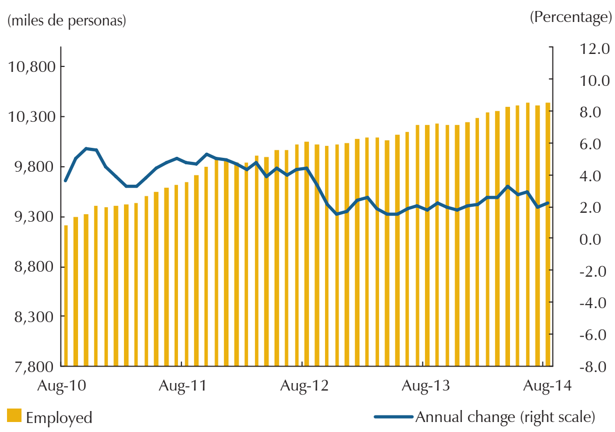
Source: DANE(GEIH); *Banco de la República's* calculations

Graph 23
Number of Employed and Annual Change

A. Nationwide Total

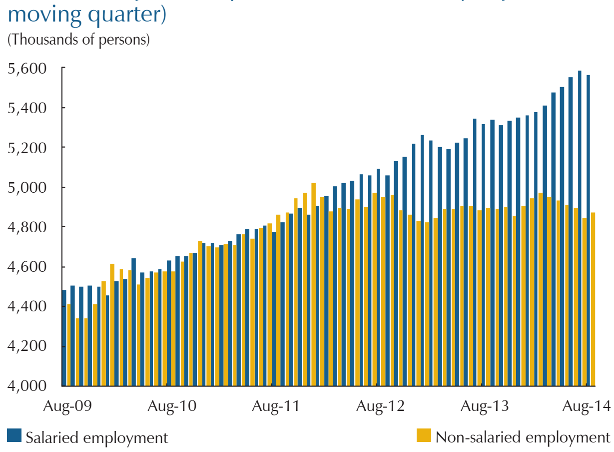


B. Thirteen Major Metropolitan Areas



Source: DANE (GEIH); *Banco de la República's* calculations

Graph 24
Employment by Type of Occupation
(Thirteen major metropolitan areas, seasonally adjusted moving quarter)



Source: DANE (GEIH); *Banco de la República's* calculations

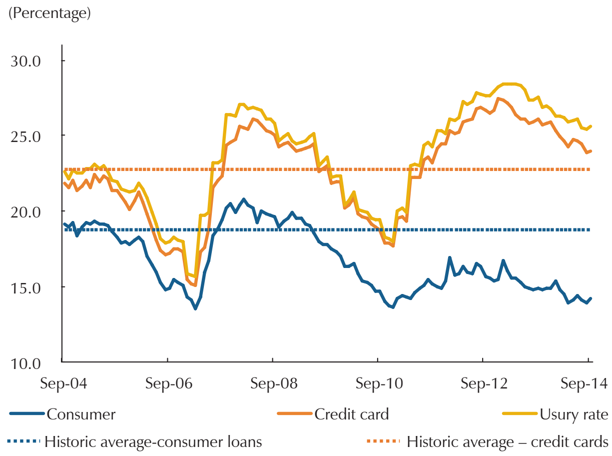
and 2.2 % in the thirteen major metropolitan areas (Graph 23).

The growth in employment can be attributed to the number of salaried employees, which was up by an annual rate of 4.7% from June to August in the thirteen major metropolitan areas, while non-salaried employment declined by 0.4% (Graph 24). This added momentum in salaried employment versus non-salaried employment is a phenomenon witnessed since mid-2012 and can be attributed to several factors. The main ones are: i) the law on job formalization and creation, or the so-called "First Job Act "(Act 1429/ 2010); ii) the 2013 tax reform, and iii) the tightening in the regulation of labor intermediation. This change in the make-up of employment can be interpreted as an increase in formalization of the job market, which implies better working conditions and, therefore, may favor household consumption.

The third-quarter figures for the consumer loan portfolio, including leasing, show 11.7% growth compared to same period in 2013, suggesting the increase in household loans was maintained during July-September, in nominal terms. This momentum continued to favor private spending. Additionally, credit access did not increase in recent months: real interest rates on consumer loans in the third quarter were, on average, similar to those registered during the second quarter. The ceiling interest rate and the credit card rates show a slight downward trend (Graph 25).

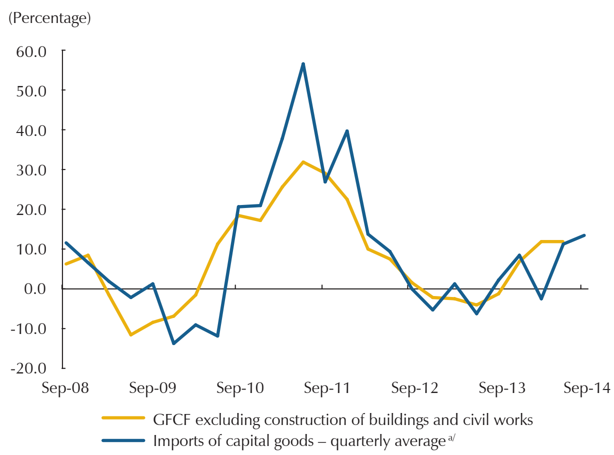
The third quarter is expected to see a slowdown in gross fixed capital formation, in addition to the one in the second quarter. However, this item would have grown at higher rates than the rest of the economy. The deceleration would be due largely to normalization of the momentum in investment in the construction of civil works. Even so, investment of this type would continue to perform well, in keeping with good results in the application of royalties assigned to local and regional governments. Building construction has

Graph 25
Real Interest Rates on Household Loans
(Non-food CPI deflated)



Source: Financial Superintendence of Colombia; *Banco de la República's* calculations

Graph 26
Imports of Capital Goods (Real) and GFCF Excluding Construction of Buildings and Civil Works
(Annual change)



GFCF: gross fixed capital formation
a/ Figures in real terms
Source: DANE (national accounts and foreign trade); *Banco de la República's* calculations

regained momentum, but unlike that of previous quarters, as will be explained later.

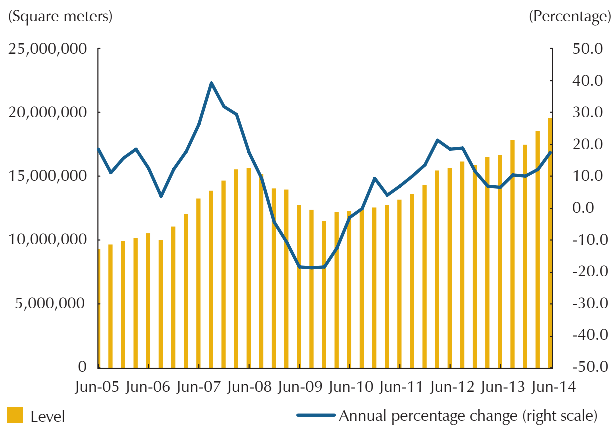
The aggregate of the other items that make up investment would have performed much as it did in the second quarter, as indicated by the results of *Banco de la República*'s August monthly survey of economic expectations (MSEE) and the momentum in the figures for imports of capital goods, in real terms (Graph 26).

Finally, the different areas of foreign trade would have performed well during the third quarter, as suggested by the export and import figures published by DANE with information up to August. In the case of exports, various supply shocks that occurred during the first half of the year, especially those affecting the oil sector, were overcome as of July. In addition, temporary shutdown of the Cartagena Refinery meant there was a larger volume of oil available for export, even with the drop in production during that period. Furthermore, coal exports would have a low base of comparison during the same period in 2013, due to a range of problems related labor strikes that occurred at the time. At the same time, imports would continue to grow at a good pace, partly due to shutdown of the Cartagena Refinery.

On the supply side, most available indicators point to better performance during the third quarter and support a slightly higher forecast for growth compared to the increase observed between April and June. These projections assume a sharp drop in the production of refined oil products, for the reasons stated earlier. However, this would be offset by favorable news in sectors such as commerce, coffee production and coal.

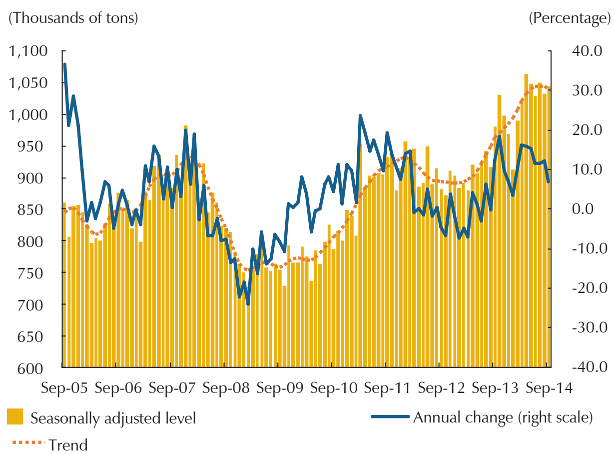
Construction would continue to play an important role in Colombia's economic growth for the third quarter. In the case of civil works, payments by national and regional agencies to construct, maintain, repair and upgrade inter-city roads are expected to remain at favorable levels. Accordingly, it is estimated that civil works will increase at a higher rate than the economy as a whole, but significantly less than during the first half of the year (22.1%).

Graph 27
Censused Works in Progress
(Quarterly and annual growth)



Source: DANE (Building Census)

Graph 28
Cement Production
(Seasonally adjusted series,
trend component and annual growth)



Source: DANE, *Banco de la República*'s calculations

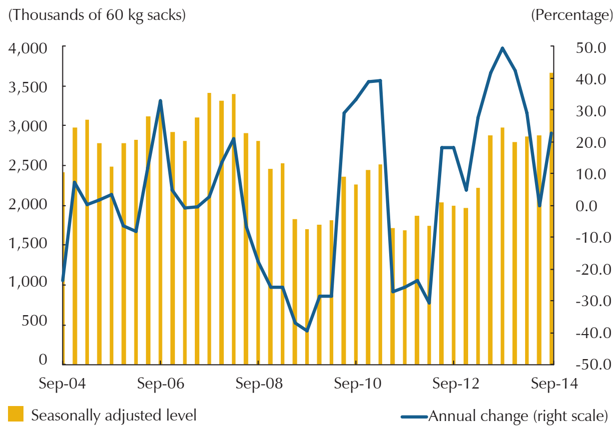
Building construction is expected to accelerate compared to the previous quarter. This forecast assumes the increase in ongoing projects observed in recent quarters is reflected in construction stages[10] that have more value added (Graph 27). The effects of the government's stimulus measures would continue to be felt (extension of the "priority interest" housing program and subsidized interest rates on mortgages). The figures at August show building permits remained buoyant during July-August, with 8.1% average annual growth and 8.7% cumulative growth for the twelve-months up to August. As for cement, the information at September shows production and shipments during the third quarter rose 10.2% and 12%, respectively (Graph 28). Both areas continue to expand at rates above the averages for the last five years (6.7% and 7.9%, respectively), confirming the sector would continue to contribute to the country's economic growth.

Growth in the agricultural sector is expected to be more than it was between April and June, thanks to an important build-up in coffee production and less of a decline the amount of cattle slaughtered. In the first case, figures released by the National Federation of Colombian Coffee Growers show the increase in production went from 0.2% the second quarter to 24.0% in the third (Graph 29). The slaughter of cattle was down 1.4% in July-August, after falling 7.8% in the second quarter. The figures on slaughtering suggest the Colombian cattle industry is in a retention phase that would have begun in prior months and could continue for several more quarters.

As mentioned, commerce remained one of the most dynamic sectors, due to good performance in retail sales. Employment generated by this branch was up 2.6% annually in August, thanks to an increase in the recruitment of permanent staff (3.9%).

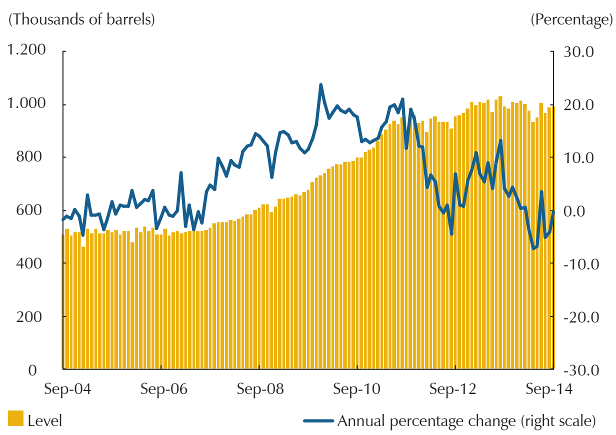
10 According to the building census method (BC) used by DANE, the construction process can be divided into six phases: excavation and foundation, structure and roof, masonry and plastering, and finishing Level 1, Level 2 and Level 3. Stages two and four have the most value added. The latest building census shows ongoing projects in the first phase of construction increased by about 11.7%. Accordingly, this momentum is expected to be reflected in better performance for phases two and four during the coming quarters.

Graph 29
Coffee Production
(Quarterly and Annual Growth)



Source: National Federation of Colombian Coffee Growers; *Banco de la República's* calculations

Graph 30
Oil Production
(Level and annual growth)



Source: Agencia Nacional de Hidrocarburos – ANH (National Hydrocarbon Agency); *Banco de la República's* calculations

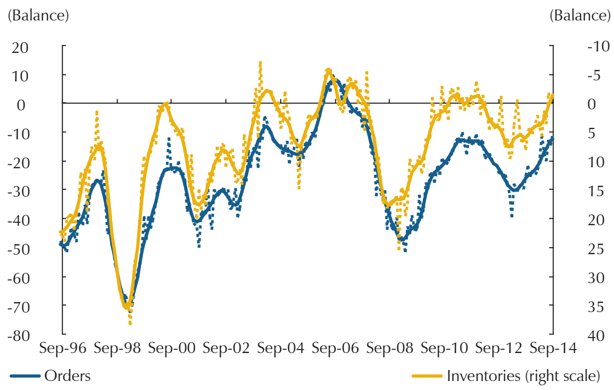
Mining presents a mixed picture: while oil production dropped sharply, coal performed positively. Oil production continued to average around 984 thousand barrels per day (mbd) during the third quarter, implying an annual contraction of 3.1% for the period. With this figure, the sector declined for the second quarter in row, since production was down 3.6% in the previous quarter (Graph 30) owing to the security problems that have affected infrastructure so far this year. With respect to coal, the figures on export volumes published by DANE point to a build-up in activity from 21.0% during the second quarter to 29.4% in July-August.

According to figures from the Monthly Manufacturing Sample (MMS), the non-coffee industrial production index (IPI) published by DANE was up 0.3% in August 2014 and showed 1.0% cumulative growth for April-May. It should be noted that shutdown of the Cartagena Refinery, although temporary, is one of the supply shocks currently jeopardizing the sector. When the item related to this sub-branch is excluded from the index, annual growth comes to around 1.1% in August and 2.3% in July-August (see Box 2, p. 50).

The results for the sector, given the information at August, are quite mixed. This is an important point to bear in mind. Subsectors such as motor vehicles (19.7%), chemicals (6.4%), beverages (5.4%), milling and starches (4.8%), non-metallic minerals (3.4%), dairy products (7.5%), clothing (7.1%) and other types of transportation (10.4%) posted important growth, while others such as petroleum refining (-16.9%), other food products (-6.8%), paper, cardboard and products thereof (-7.1%), spinning, weaving (-19.1%), and publishing and printing (-12.9%) were down sharply.

According to ANDI, the figures at August indicate entrepreneurs faced growing import competition on the domestic market throughout the year; even so, the demand for their products has grown. Furthermore, information from Fedesarrollo business opinion survey at September shows industrial orders and inventory improved with respect to the second quarter (Graph 31). This is also the case with expectations three months ahead. The trend components of these series suggest industry would continue to recover, although slowly.

Graph 31
Fedesarrollo Indicators of Industrial Orders and Inventories

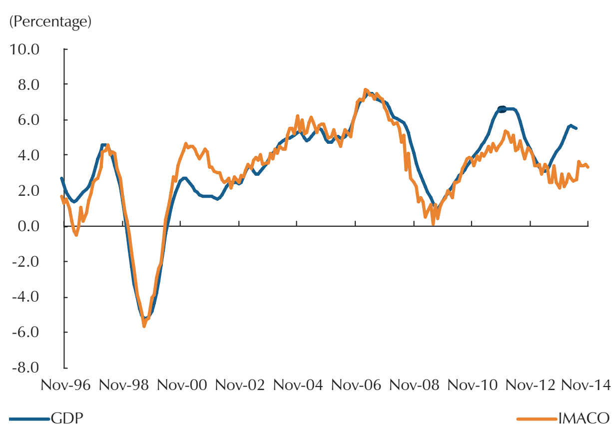


Observation: The right scale, associated with the inventory variable, is shown in reverse.
a/ The dotted and solid lines pertain to the seasonally adjusted series and the trend components of orders and inventories.
Source: Fedesarrollo Business Opinion Survey; *Banco de la República*'s calculations

Given all of the above, it is possible to expect Colombia's GDP to increase between 4.0% and 5.2% during the third quarter, with the most probable scenario being somewhere in the middle of that range. On an industry basis, the more dynamic sectors would be construction, social, community and personal services, and commerce. Yet, this forecast range contemplates a great deal of uncertainty about how investment in public works and government consumption will perform.

The Imaco leading indicator (Graph 32), calculated using a range of sector variables with information to August, suggests a lower twelve-month cumulative growth compared to the central forecast. This was taken into account when developing the GDP fan chart shown in Chapter IV of this report. The Imaco method does not contain indicators for sectors such as construction and social services, which are heavy contributors to economic growth; however, they are contemplated in the central forecast shown in the fan charts. Consequently, the Imaco indicator might be underestimating GDP growth in Colombia. The DANE monitoring indicator (IME) suggests that the average of the seasonally adjusted series for July-August would have increased slightly less than during the second quarter. Yet, despite its close correlation with GDP, this indicator does not accurately reflect its momentum, since it is subject to the revisions of the series that comprise it.[11]

Graph 32
Imaco: Leading Indicator for 5 Months of GDP[a/]



a/ 12-month accumulated annual growth
Source: Banco de la República's calculations

11 The ISE figures, with information at August, were released on November 4, 2014, several days after the meeting of the Board of Directors of *Banco de la República*, which was held on October 31, 2014.

Box 2
THE NEW CARTAGENA REFINERY: ITS IMPACT ON PRODUCTION AND COLOMBIA'S TRADE BALANCE

Aaron Garavito *
Celina Gaitán
Daniel Parra

Industrial production of refined oil products has fallen since late 2013, largely because of cutbacks in load and production at the Cartagena Refinery (Reficar). Ecopetrol's quarterly reports indicate the decline in Reficar's utilization factor between September 2013 and February 2014, and the subsequent shutdown of the refinery as of March, were required basically to prepare for operation of the new industrial complex.[1]

This had an impact on the country's gross domestic product (GDP) and trade balance. Industrial GDP for refined oil products fell 12% annually between April and June 2014, contributing 1.5 percentage points (pp) to the contraction in the oil industry and subtracting 0.2 pp from GDP growth[2] during the second quarter. Announcements in the press about the new refinery suggest it will begin operating commercially in 2015.

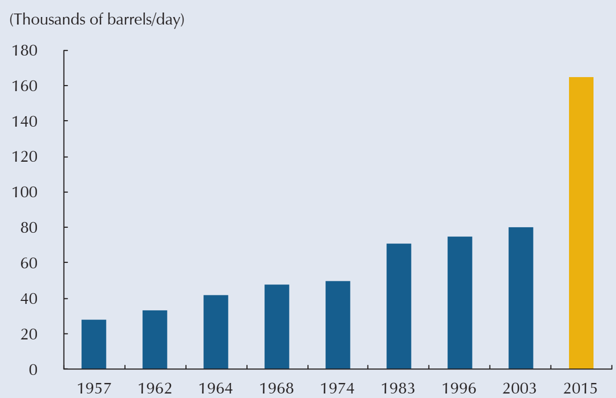
Consequently, these effects would continue throughout the remainder of 2014 and extend to the opening date in 2015.

The impact of the temporary shutdown on GDP and the trade balance are expected to be reversed once the new facility is in operation. In fact, the increase in production and value added in the process at the new plant might have additional positive effects on these indicators.

Reficar: Expansion and Modernization

Reficar was built in the fifties by the International Petroleum Co. (Intercol). Later, in 1974, it was acquired in full by Ecopetrol, with a refining capacity of 50 thousand barrels per day (mbd).[3] A number of modifications have been made since then to increase its capacity (Figure R2.1).[4] An initiative to modernize and expand the new plant, with an investment of US $ 6,467 m,[5] is now being completed.

Graph B2.1
Load Capacity of the Cartagena Refinery



Source: Authors' calculations based on information from Ecopetrol and Reficar

The new facility will be able to double Reficar's load capacity from 80 mbd to 165 mbd, process heavy crude with high sulfur content, boost the amount, quality and value of the fuels produced, increase the production of other derivatives, and raise the conversion rate[6] from 75% to 96%.[7]

This sizeable increase in the production of top-quality diesel and gasoline that meet current environmental regulations in Colombia is a particularly important feature.

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* The authors work with the Programming and inflation Department; Mr. Garavito and Ms. Gaitán are specialized analysts and Mr. Parra is a senior analyst. The opinions expressed herein imply no commitment on the part of *Banco de la República* or its Board of Directors.

1 Ecopetrol (2013-2014), Quarterly Reports.

2 The industrial item associated with refined oil products accounts for 12.4% of industrial GDP and 1.4% of total GDP.

3 Vásquez, H. (1994). "La historia del petróleo en Colombia." *Revista Universidad Eafit*, No. 93 (January-March 1994), pp. 99-109.

4 Ecopetrol (2002). "El gran salto de la refinación." *Carta Petrolera*, No. 99, pp. 17-21, Ecopetrol.

5 Press bulletin released by Reficar on February 24, 2014. See: http://www.reficar.com.co/images/PDF/informacion-actualizada-proyecto-marzo-de-2014.pdf

6 This refers to the refinery's capacity to obtain a larger of proportion of light products that are of high value.

7 Ecopetrol (2010). "Entrevista con el presidente de Reficar, Orlando Cabrales." *Carta Petrolera*, No. 121, Ecopetrol.

The added production of propylene as input for domestic industry also is of considerable consequence, as is the elimination of fuel oil, which has less market value than the oil used to produce it. Eventually, Reficar's refining margin and profitability will reflect these factors.[8]

Effects on Gross Domestic Product

Two scenarios for the start-up of commercial operations at the new plant are proposed to estimate the effects of the shutdown and subsequent inauguration of the new refinery. Both are based on news items published to that effect. In the first scenario, Reficar would initiate production gradually at the start of the second quarter in 2015. The second scenario contemplates a gradual onset of operations as of early in the fourth quarter. In both scenarios, Reficar would remain closed for the rest of 2014.

As such, a contraction of approximately 14% in the industrial GDP for refined oil products is expected. This represents a negative contribution of nearly 1.7 pp to GDP growth in the oil industry and 0.2 pp to total annual GDP growth.

This estimate takes into account the increase in production at the Barrancabermeja refinery, which partially compensates for the impact of the Reficar shutdown on GDP in 2014. Moreover, any estimate of the extent of this decline should consider the fact that Reficar did not operate at full capacity throughout 2013.[9] Therefore, the effect of the shutdown in 2014 is less than it would have been had the refinery used its entire installed capacity last year.

The following are the results obtained concerning the effect of reopening Reficar. In the first scenario, the sub-branch associated with refined oil products would increase by 38.2% in 2015 and 15.1% in 2016. This would imply a contribution of 4.7 pp to industrial GDP growth in 2015 and 1.9 pp in 2016. In terms of total GDP, this represents 0.5 pp and 0.2 pp additional points for aggregate growth in each of those years.

In the second scenario, the sub-branch associated with refined oil products would expand by 6.7% in 2015 and 49% in 2016. Accordingly, the impact on industrial GDP is estimated at 0.8 pp in 2015 and 6.1 pp in 2016, which constitutes 0.1 pp and 0.7 pp for the economy as a whole, in that order.

However, these calculations do not include the impact of the value added that comes from producing better quality products. Nor is the impact on growth in other sectors taken into account, considering the production chains that could emerge in the medium term, since the refinery is expected to increase the production of oil derivatives used as input for domestic industry.

Effect on Foreign Trade

The shutdown of Reficar implies a decline in the country's trade balance for 2014 compared to the previous year. This is due to several factors; first, the reduction in exports of refined oil products; and secondly, the increase in imports to replace Reficar production destined for the domestic market. Both these effects were offset, in part, by increased exports crude oil, since oil not loaded as refinery input can be exported. Consequently, if we assume Reficar would have operated during 2014 as it did in 2013, the trade deficit would be less in 2014; namely, within a range of 0.15% to 0.2% of GDP.

As mentioned, the new refinery doubles Reficar's production volumes, but the value added of the products obtained is greater, because the derivatives will be of better quality. Given these considerations, once the new refinery is open, it is expected to have a positive impact on Colombia's trade balance, due to the anticipated increase in exports, a possible reduction in imports, or a combination of both effects.

The estimates suggest there would be a positive shock to the trade balance within a range of 0.3% to 0.4% of GDP during the first twelve months after the plant is operating at maximum capacity. This estimate could vary due to changes in the assumptions in the exercise, such as the price of crude oil and its derivatives, production levels, etc.

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8 Reficar's website: http://www.reficar.com.co/index.php/proyectos-de-expansion/objetivos.html

9 The combined load for all the refineries in the country in 2013 came to 280 mbd, with 76.4% going to the refinery Barrancabermeja and 23.6%, to Cartagena. For this exercise, it is assumed the load for the Barrancabermeja refinery is identical to the levels observed in the second quarter of 2014.

III. Recent Developments in Inflation

Annual consumer inflation rose during the third quarter and approached the midpoint of the target range set by the Board of Directors of *Banco de la República*, as forecasted in the previous edition of this report.

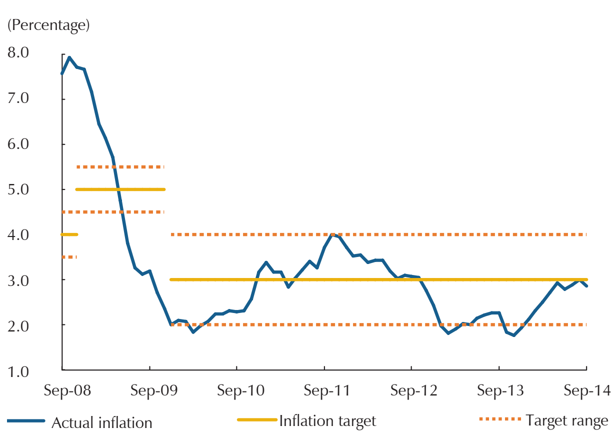
The upward pressure was concentrated on regulated items and food. Core inflation fell slightly, staying below 3.0%.

Despite good momentum in consumption, lending and sales during the third quarter, no significant demand pressures were perceived in the CPI.

Peso depreciation against the US dollar since the end of July has yet to begin to pass through to domestic prices.

Annual consumer (2.86%) inflation ended the third quarter of 2014 slightly above inflation in June (2.79%). The new level for annual inflation was higher than the market expected three to six months ago, but matches the forecast developed by *Banco de la República*'s technical staff in the June edition of the *Inflation Report*. Accumulated inflation for the first nine months of the year came to 3.08%, following 2.16% for the same period in 2013.

Graph 33
Total Consumer Inflation



Sources: DANE and *Banco de la República*

Consumer inflation has been on an upward trend (Graph 33 and Table 6) compared to last December (1.94%). As explained in previous reports, this build-up was expected and can be attributed to a low statistical base of comparison resulting from the events in 2013 that temporarily reduced consumer price hikes to a significant degree, particularly for food and regulated items. These included, among others, reductions in rates for public utilities and public transportation in several cities, and

Table 6
Consumer Inflation Indicators
(At September 2014)

Description	Dec-13	Mar-14	Jun-14	Jul-14	Aug-14	Sept-14
Total	**1.94**	**2.51**	**2.79**	**2.89**	**3.02**	**2.86**
Excluding food	**2.36**	**2.62**	**2.66**	**2.75**	**2.84**	**2.70**
Tradables	1.40	1.65	1.94	1.60	1.57	1.59
Non-tradables	3.76	3.55	3.45	3.17	3.29	3.26
Regulated items	1.05	2.21	2.14	3.60	3.83	3.25
Food	**0.86**	**2.23**	**3.11**	**3.26**	**3.47**	**3.25**
Perishables	(0.16)	3.17	8.92	9.18	8.91	7.61
Processed	(0.24)	0.92	1.44	1.66	2.09	2.14
Meals outside the home	3.26	4.13	3.52	3.45	3.47	3.23
Core inflation indicators						
Excluding food	2.36	2.62	2.66	2.75	2.84	2.70
Core 20	2.72	2.86	3.04	2.73	2.98	2.89
CPI excluding perishable foods, fuel and public utilities	2.19	2.53	2.53	2.33	2.42	2.39
Inflation excluding food and regulated items	2.74	2.74	2.81	2.51	2.56	2.55
Average of all the indicators	**2.51**	**2.69**	**2.76**	**2.58**	**2.70**	**2.63**

Source: DANE, *Banco de la República*'s calculations

a cut in indirect taxes on several items in the family basket, particularly fuel, raw materials, vehicles and certain foods. Added to this was an abundant supply of perishable foods, thanks to good weather; this allowed for a downward trend in their relative prices during several months in 2013. These events led to unusually low adjustments in a number of prices throughout 2013, even during the fourth quarter.

However, there have been no price declines in 2014, nor tax cuts or reductions in rates on public utilities and fuel. As a result, price hikes have returned to normal and are more compatible with the target set by the Board of *Banco de la República*. In addition, a cattle retention phase would have begun sometime between the second and third quarters, leading to higher than normal prices for meat and meat substitutes. Also, price hikes on the energy exchange in late 2012 have begun to pass through to consumer prices. The latest increases in this indicator, which occurred towards the second quarter of this year due to the added likelihood of El Niño weather, were short lived because that risk largely subsided.

In this environment, there continued to be very little demand-pulled pressure on prices, even with good economic growth. This is because the output gap has been close to zero, as illustrated in the next chapter.

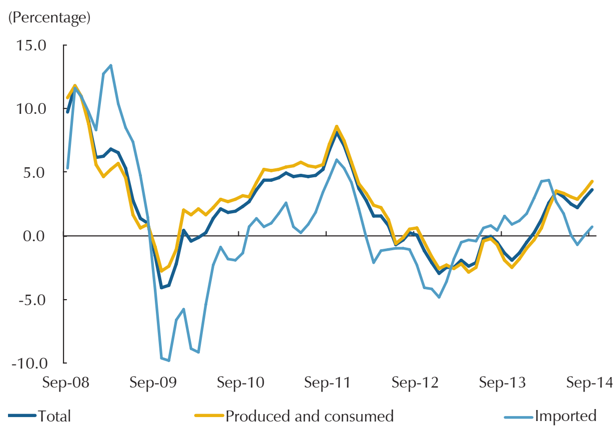
There still is very little demand-pulled pressure on prices.

On the other hand, although the exchange rate has depreciated since midyear, there has been no pass- through of depreciation to consumer prices.

This effect usually occurs with a lag of at least one quarter. Also, pass-through in the case of food and regulated items might have been cushioned by the reductions observed in international prices for fuels and imported foods.

Depreciation, however, would be pushing non-labor costs, where pass-through tends to be quicker. In fact, annual PPI inflation in August, which is a proxy for those costs, resumed the upward trend it exhibited in the first four months of 2014. Accordingly, the annual adjustment in the PPI went from -0, 5% in December of last year to 3.4% in April, temporarily falling to 2.3% in July and rising again to 3.7% in September (Graph 34). The momentum in the imported segment of the PPI included the rising the price of the dollar as of late July, which went from annual variation of 0.0% in June to 0.7% in September. It should be noted that a significant percentage of the prices in this sub-basket are set directly in dollars.

Graph 34
PPI by Origin
(Annual change)

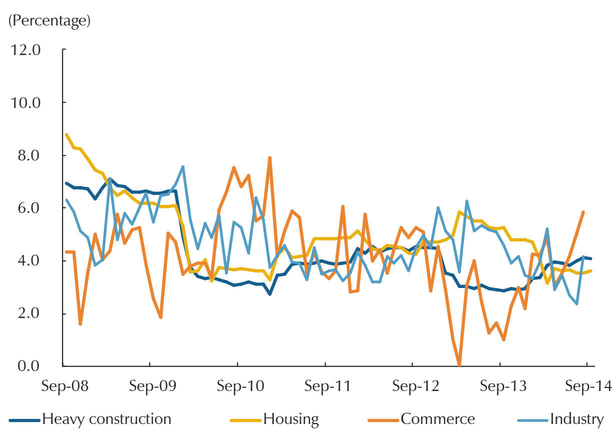


Source: DANE.

Despite the foregoing, the acceleration in the annual adjustments in the PPI has been more pronounced in the local component than in the imported segment. The annual change in prices for goods produced and consumed locally went from 3.0% in June to 4.3% in September, propelled by the surge in agricultural products (coffee, sugar cane and certain vegetables, among others). This group grew 14.2% in September as opposed to 6.9% in June.

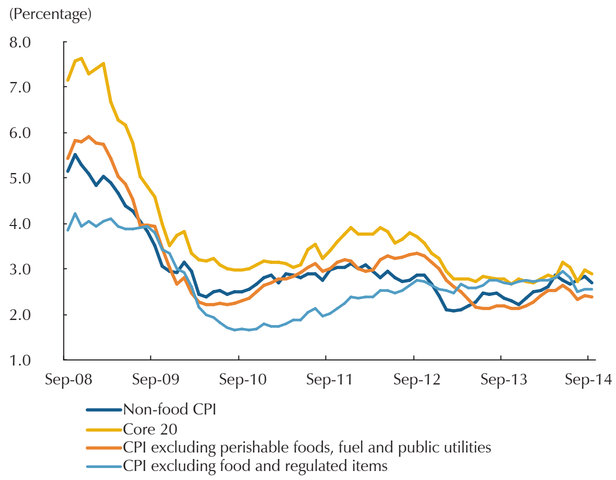
Labor costs in all sectors of commerce and industry accelerated slightly during the third quarter. In both cases, the wage hikes in August – the latest month for which information is available – were around 5.0%; while those in construction continued to show increases near 4.0% in September (Graph 35). These wage adjustments pose no serious risk to the inflation target, particularly because payroll taxes were reduced this year by lowering employer contributions to healthcare. However, for next year, if the unemployment rate continues to decline, there could be significant inflationary pressure from an eventual increase in the cost of labor.

Graph 35
Nominal Wages
(Annual percentage change)



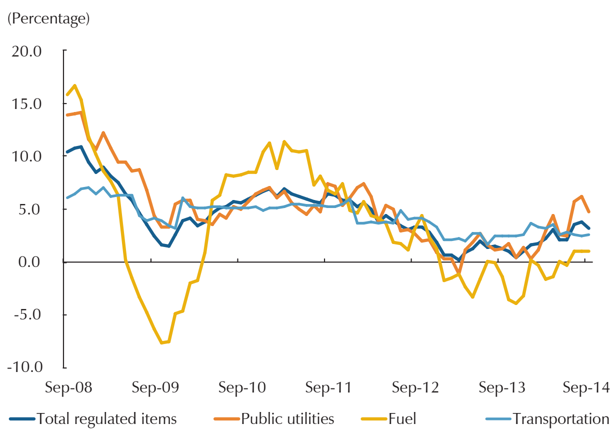
Source: DANE, *Banco de la República*'s calculations

Graph 36
Core Inflation Indicators



Source: DANE, *Banco de la República*'s calculations

Graph 37
CPI for Regulated Items and Components Thereof
(Annual change)



Source: DANE, *Banco de la República*'s calculations

A. CORE INFLATION

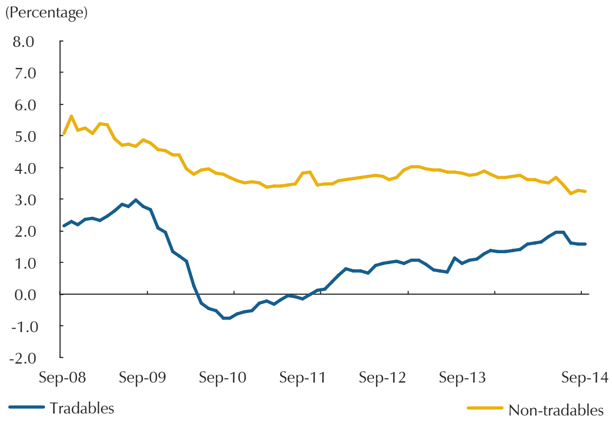
Core inflation, estimated as the average of the four indicators *Banco de la República* monitors regularly, was 2.63% at September, down 13 basis points compared to the figure for June. All the core inflation indicators ended the third quarter at levels below the middle of the target range for inflation (2% -4%). Core 20 (2.9%) was the highest; the lowest was the CPI excluding perishable foods, fuel and public utilities (2.4%). The CPI excluding food and regulated items declined the most between June (2.8%) and September (2.6%), while the non-food CPI (2.7%) was the only indicator that increased during the period (Graph 36, Table 6).

An analysis of the non-food CPI suggests inflationary pressures during the third quarter were concentrated on the segment comprised of regulated items. In contrast, the groups comprised of tradable and non-tradable excluding food and regulated items brought downward pressure to bear during those three months.

Following a decline in the second quarter, annual inflation in regulated items accelerated from 2.1% in June to 3.3% in September (Graph 37). This surge was concentrated in public utility rates and, to a lesser extent, in fuels. Annual inflation in the CPI for public utilities went from 2.5% in June to 6.3% in August, before declining to 4.8% in September. This upward trend is associated with higher electricity rates, primarily in the cities of Bogota and Medellin, (up 5.5% in both instances).

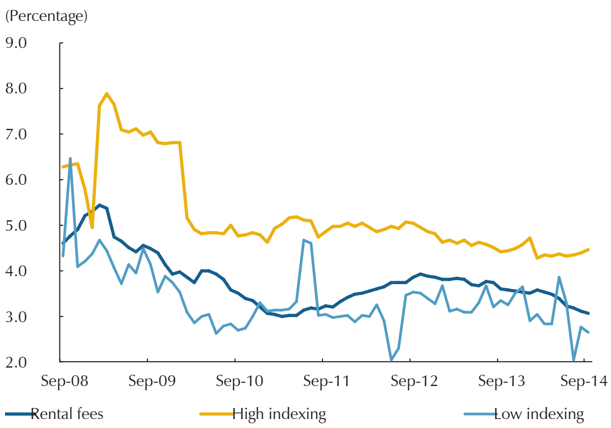
In the case of fuel, 10% depreciation in the exchange rate between July and September resulted in higher domestic prices, despite the drop in international oil prices (which came to 18% between June – when they were at their highest level - and September). The annual variation in September was in positive territory (1.0%), following the reductions observed in previous quarters (-0.3% in June). This also was due to a low base of comparison stemming from the cut in indirect taxes on fuel in 2013 –about $ 200 per gallon - authorized in the latest tax reform.

Graph 38
Tradable and Non-tradable CPI Excluding Food and Regulated Items
(Annual change)



Source: DANE, *Banco de la República's* calculations

Graph 39
Non-tradable CPI
(Annual change)



Source: DANE, *Banco de la República's* calculations

Regulated transportation fares were affected during the third quarter by reductions in the price of inter-city transportation. However, the annual variation in this group is expected to accelerate by October and even November, given the recent adjustment in taxi fares (at the start of October) and in fares for the mass transit and integrated public transportation system in Bogota (in late October).

As opposed to the situation with regulated items, the annual change in non-tradables excluding food and regulated prices declined during the third quarter of 2014, from 3.5% in June to 3.3% in September (Graph 38). The major components of the non-tradable group showed mixed results. Those with high indexing (4.5%) posted no significant changes during the third quarter; non-tradables with low indexing (comprised largely of various services other than rentals) saw their annual increase decline from 3.3% in June to 2.7% in September (Graph 39). Similarly, the annual change the category that carries the most weight in the family basket of goods and services: rental fees, posted a decline of 14 bp during the third quarter, ending September at 3.1%. This last category has exhibited a downward trend in its rate of annual adjustment for more than a year. This trend, evident in a good many of the cities measured by DANE, coincides recently, in the case of Bogotá, with an increase in the duration of leases, primarily for middle-income residential property. This is according to a recent study by Galería Inmobilaría.

The downward trend in non-tradables for nearly the past two years, coupled with their gradual convergence to 3.0%, which is the specific BDBR target, reflects moderate demand-pulled pressures. It also is consistent with the output gap estimates outlined in chapter four of this report.

The annual change in tradables excluding food and regulated prices also helped to slow consumer inflation in the third quarter, having gone from 1.9% in June to 1.6% in September. Prices for vehicles, mobile phones, electrical appliances and electronic devices continued to drop, probably taking in part of the delayed effects of peso appreciation from the second quarter. However, other prices, such those for airfares, batteries and household cleaning supplies and personal toiletries, among others, increased more than in the previous months. If the new trend towards peso depreciation as of late July were to continue, it would generate further increases in this sub-basket throughout the remainder of the year.

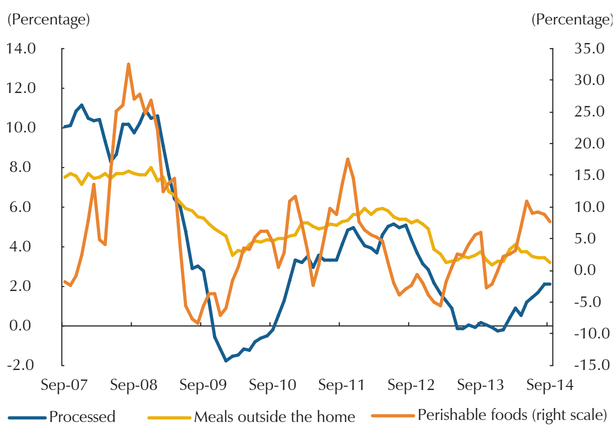
B. FOOD INFLATION

There was a slight positive trend in annual food inflation during the third quarter, having gone from 3.1% in June to 3.3% in September (Graph 40). As noted in the previous edition of this report, there were several events last year that favored low food inflation. For example, the weather conditions were ideal, with an increase in agricultural supply. International food prices tended to decline or remained at historically low levels, and the value added tax (VAT) was reduced on some agricultural input, various foods, and meals outside, among other items.

Graph 40
Food CPI
(Annual change)

Source: DANE, *Banco de la República*'s calculations

Graph 41
Food CPI, by Groups
(Annual change)



Source: DANE, *Banco de la República*'s calculations

These favorable events for prices have not been repeated this year. Furthermore, as of the first six months, there has been some upward pressure due to the apparent onset of a retention phase in the Colombian cattle industry, as reported by the ranchers association (Fedegan). Added to this is peso depreciation, which has partially offset low international prices for the agricultural products Colombia imports. This was not the case in 2013, especially during the first six months. However, it is important to point out that price increases for products such as cereals and oils have stayed quite low.

During the third quarter, the processed food segment (which includes beef and its substitutes) brought upward pressure to bear on the basket of consumer goods, having increased 2.1% in September as opposed to 1.4% in June (Graph 41). Meanwhile, the annual change in prices for perishable foods went from 8.9% in June to 7.6% in September, favored primarily by a drop of nearly 17.0% in potato prices during the third quarter. Prices for other perishable products increased, although the return to normal rainfall in the third quarter may have helped to limit these hikes. Lastly, the annual variation in the CPI for meals outside the home was 3.5% in June and 3.2% in September, possibly because the adjustments in food prices are still moderate and there is little demand pulled pressure.

IV. Medium-Term Forecasts

The Colombian economy is expected to grow by about 5.0% in 2014, thanks to a decent-paced increase in domestic demand. Less growth is anticipated for 2015.

The downside risks to growth have increased due to weaker economic performance by several of Colombia's trading partners and the drop in the country's terms of trade.

The forecast for annual consumer inflation is higher compared to what was predicted in the June edition of this *Report*. Inflation is expected to be in the upper half of the target range by the end of the year.

A. ECONOMIC GROWTH

The forecast for economic growth in 2014 is similar to the one in the previous edition of the *Inflation Report,* but the forecast for 2015 was reduced slightly and still implies a slowdown compared to the expansion anticipated for the current year. Furthermore, the downside risks weighing on medium-term growth are much higher in this report, due to deterioration in the economic performance of several of our trading partners in recent months, coupled with the decline in Colombia's terms of trade.

The technical staff at *Banco de la República* did not consider it necessary to revise the growth rate for all of 2014, since second-quarter GDP growth was above the midpoint of the forecast range, and the momentum in major items such as investment in construction and government end consumption matched expectations. So, the estimates for Colombian economic growth

The momentum in GDP will depend on the performance of Colombia's major trading partners, international liquidity conditions, and international prices for export commodities.

this year continue to suggest GDP will increase at an annual rate slightly above that observed for all of 2013 (which was 4.7%).

The momentum in GDP during the remainder of 2014, and particularly in 2015, will depend largely on how Colombia's major trading partners perform. It also will hinge on international liquidity conditions, and international prices for export commodities, especially oil and coal. Growth next year would be less than the forecast for 2014. This is consistent with a current account that is slightly smaller than the one estimated for the current year, as illustrated in Chapter I of this report.

On the other hand, the central forecast for economic growth in Colombia during 2015 assumes that the recovery registered in the US economy during the second half of the year will continue in 2015, and the euro zone will post better results than in past years. Several major Latin American economies also are expected to perform better, following the extremely poor results anticipated for 2014. As such, next year's growth for Colombia's trading partners as a whole should reflect a recovery. Nevertheless, it will continue to be mediocre compared to the growth rates observed in the past. Even so, it would help to increase Colombian exports.

As for international liquidity, the Fed is expected to begin to raise its benchmark rate gradually, as of the second half of 2015. The central forecast assumes that action taken to normalize monetary policy in the United States will not spark abrupt and substantial changes in capital flows to Colombia. This being the case, FDI income in 2015 would be only slightly less than what is expected for 2014, which - in turn - is very similar to FDI income in 2013.

On this occasion, the forecasts for economic growth are closely related to the outlook for international raw material prices. Some decline in terms of trade during the remainder of 2014 is anticipated and larger reductions are predicted for 2015. The central forecast for growth in 2015 is based on Brent crude at an average price of US $ 95 per barrel, which is less than the average price expected for 2014 (US $ 102.4 per barrel). This partly explains the downward adjustment in GDP projections for the year, considering how important this variable is to national revenue, market confidence, and the balance for the public sector. However, given the fact that international oil prices dropped even further in October, the downside risks weighing on this variable and on growth are high.

Some decline in terms of trade is anticipated during the remainder of 2014, and larger reductions are predicted for 2015.

Both the central forecast and the forecast for less growth (with Brent crude at US $ 85 in 2015) assume oil exploration and extraction will remain attractive for oil companies. If this proves to be the case, FDI in the sector would continue to be important.

Growth among the items comprising GDP on the demand side is expected to be more balanced in 2015, with exports contributing more actively.

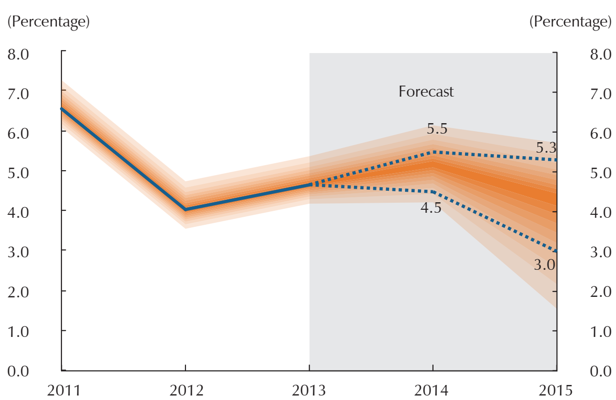
Given the above, the momentum in GDP during 2014 will be determined by the performance of domestic demand. More balanced growth among the items that make up GDP on the demand side is expected in 2015, with exports contributing more actively in that respect, as explained later in this report.

Specifically, it is assumed investment in public works and spending on government consumption would continue to contribute significantly to economic growth throughout the rest of 2014. In the first case, the amount of royalties spent by local and regional government administrations is expected to increase. In the second, more spending by the national government on commitments made with respect to personal services provided by employees in the judicial branch and additional consumption on the part of regional governments should continue to have an impact.

Investment in public works would still contribute significantly to economic growth in 2015 (although less so than in 2014). Investment execution with respect to the so-called fourth-generation construction projects is expected to be dynamic (see Box 3, p. 75), other highway and airport infrastructure projects will be reinforced, and local and regional governments will maintained the pace of investment execution. In fact, the latter tends to increase towards the end of elected officials' term in office, as would be the case in 2015.

Growth in government end consumption is expected to slow next year, partly because of a high base of comparison, but also due to less government revenue from royalties, given the drop in international oil prices. If the national government does not meet it revenue collection goals, its spending power in 2015 could be affected to some extent, so the bias in these forecasts is downward. All the uncertainty associated with the assumptions on civil works and public consumption is reflected in the broad range of the forecast, which is especially spread out for 2015 (Graph 42).

Graph 42
Annual GDP Growth Fan Chart



Source: DANE, *Banco de la República*'s calculations

As for the other items that make up domestic demand, the forecasts for private consumption during the remainder of 2014 are not much different from those outlined in the previous edition of this report. Financing for households will remain relatively inexpensive, and consumer lending will continue to expand at a good pace. Consumer loan portfolio growth is expected to slow next year, curbing the momentum in private consumption. This aggregate also could be affected in 2015 by a more depreciated exchange rate and lower terms of trade, as mentioned earlier. Even so, the steady

Accumulated depreciation in the nominal exchange rate during 2015 would raise the cost of investment in machinery and transportation equipment. This is an item with a high imported component.

improvement in job market indicators, coupled with consumer confidence and expectations that continue to outdo their historical average, should sustain the increase in household consumption during 2015 at a rate that is still favorable and close to the average for the last decade.

As for gross capital formation, the recent increase in investment in machinery and transportation equipment is expected to continue during the remainder of 2014. Several air carriers have plans to renew their fleets, which would favor an expansion of investment in transportation equipment. On the other hand, the momentum in sectors such as construction and the recovery in industry (as explained later) would contribute to further spending on machinery and equipment. The cattle retention cycle and coffee plantation renewal would help investment in agriculture to increase this year at significant rates, even though these items do not weigh heavily on GDP. Accumulated depreciation of the nominal exchange rate in 2015 would raise the cost of investment in these capital goods, which have an imported component that far exceeds that originating with domestic production. Therefore, a slowdown in both items is anticipated.

Good momentum in investment in building construction is forecast for the rest of 2014, more so than in the first half of the year. The positive performance of this sector originates primarily with the boost from various low-income home construction programs sponsored by the national government and those designed to encourage low- and middle-income buyers to purchase a home.

Growth in this item also is anticipated for 2015, although at less of a rate than in 2014. In principle, between 25% and 30% of the government's project to construct 100,000 free homes classified as "priority interest" housing (FPIH) would remain to be completed next year. This is somewhat less than the expectation for 2014. In addition, approximately 47,000 "priority interest" homes for savers (PIHS) are scheduled to be built in 2015, similar to the amount that would be delivered this year. These initiatives, together with other programs announced by the government, such as 100,000 units in the Mi Casa Ya program, and expansion of the "priority-interest" housing programs (free and for savers), would begin to affect GDP during and after 2015.

Growth in building construction next year is expected to be good, but less than in 2014.

The forecasts for foreign trade during the remainder of the year suggest export growth would be mediocre in 2014 compared to the rise in imports, which would outperform the rest of the economy. Exports would have been affected by the supply shocks to oil infrastructure in the first half of the year, plus the slow rise in external demand observed throughout 2014. The forecasts for next year assume the production targets for coffee and oil set by the National Federation of Coffee Growers (Fedecafé) and the

On the supply side, construction, social services and financial services are expected to be the best performing sectors in 2014.

Government will be met.[12] With the help of a build-up in external demand, this would allow for improved foreign sales of raw materials and industrial products.

On the other hand, the sizeable increase in imports during 2014 would have been the result of buoyant domestic demand for both consumption and investment. Imports also would be affected by the temporary shutdown of Reficar, which would have necessitated a substantial increase in foreign purchases of petroleum products. This situation will be reversed in 2015, to the extent that the beginning of operations at Reficar would increase domestic production of petroleum derivatives, thereby reducing imports of these products (See Box 2, p. 50).

On the supply side, the best performing sectors in 2014 should be building construction (for the reasons explained earlier), social, personal and community services, and financial services. The mining and industrial sectors would report lower growth rates: in the first case, expansion would be less than that observed in 2013; in the second, moderate growth after two consecutive years of contraction is anticipated. Both mining and industry have faced supply shocks so far this year, such as problems with law and order in the case of oil production, and the temporary shutdown of Reficar.

Construction will continue to contribute significantly to growth in 2015, as mentioned already. The expansion rates forecast for mining and industry in 2015 are higher than those witnessed in the past two years, since the recovery processes in these sectors would gain strength and the temporary supply shocks they faced in 2014 would disappear. The momentum in the other sectors would allow for the possibility of GDP growth near their potential.

Coal production should continue to recover during the remainder of 2014, in contrast to the reduced forecast for average oil production.

For the mining sector in particular, this report foresees continued recovery in coal production during the remainder of 2014, following the problems with law and order and the transportation difficulties that complicated the coal production chain in 2013. In the new production forecasts for this sub-branch, growth would exceed 10% for all of 2014.[13] In contrast, the forecast for average oil production in the current year was reduced in this report, due to the low results observed in the third quarter. At present, average production in 2014 is not expected to be above one million barrels per

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12 The government expects oil production to reach 1,029 thousand barrels per day (bpd) by 2015, as opposed to 990 mbd forecast in this report for 2014. The National Federation of Coffee Growers (Fedecafé) forecasts coffee production next year at 13.0 million sacks, compared to 11.9 million in 2014, as indicated herein.

13 Considering the figures at August, the volume of coal exports rose 22.6% during the year to date, as mentioned in Chapter II.

The shutdown of Reficar in 2014 caused a cutback in oil refining that affected manufacturing GDP performance. Reopening of the facility in 2015 would pave the way for a major increase in the production of refined oil products.

day. Consequently, the rate of growth in mining would be less than that of the economy as a whole and less than in 2013 (4.9%).

Coal and oil production are expected to perform better in 2015, because the supply shocks witnessed during the past year are temporary. Moreover, the investment in infrastructure to transport these products should help to improve the mining industry's growth rates. However, annual growth is expected to be less than the extraordinary double-digit rates registered between 2008 and 2011 (11.4% on average).

The forecast for GDP in 2014 assumes industry will recovery somewhat, based on investment efforts in years past and on product diversification and export markets. However, some branches of industry continue to face stiff competition from imports, according to the perception reported in the ANDI surveys of entrepreneurs. In other cases, such as publishing, printing and related activities, the contraction might continue, given the profound structural changes that are affecting this sector worldwide. Also, the shutdown of Reficar throughout 2014 would imply an annual decline in oil refining. This sub-branch accounts for approximately 12.5% of industry, which limits the growth capacity of the entire industrial sector. However, a significant increase in the production of refined oil products is expected as of 2015 and would have a favorable impact on industrial performance (See Box 2).

As for social, personal and community services, the momentum in government spending should continue to play an important role in the sources of growth during 2014, especially in areas associated with public administration and social assistance and health. However, uncertainty about how the recent decline and volatility in oil prices will affect tax revenue seems to indicate a slowdown in government spending during 2015.

Financial services would continue to contribute actively to economic growth in Colombia, given their sectorial share (19.6%) and the continued momentum anticipated for financial system investment and credit growth. In 2015, this sector also would contribute to performance of the economy in the vicinity of its long-term levels.

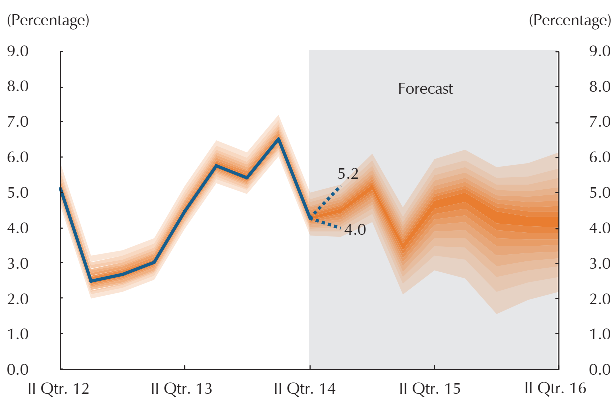
Coffee production would continue to contribute to the increase in agricultural GDP during the remainder of 2014. However, cattle slaughtering would offset that momentum.

Mixed performance is forecast for the agricultural sector in 2014 and 2015. On the one hand, coffee production would continue to contribute significantly to an increase in value added for the sector during the rest of this year; however, cattle slaughtering would offset that momentum. According to Fedecafé, coffee production would peak in 2014 and 2015, due to the renewal of coffee trees between 2008 and 2013, when more than 546,000 hectares were modernized (2,900 million trees). This meant an improvement in productivity, since 61% of the acreage used to produce coffee was replanted with rust resistant varieties, planting density was increased by 10%, and the average age of the coffee trees in Colombia was reduced from 12.4 to 8. 2 years. In contrast, there is considerable uncertainty about the cattle retention cycle and its impact during the next year and a half, since recent trading patterns, especially with Venezuela, may have altered this cycle.

Considering the foregoing, the forecast for GDP growth in the most likely scenario is around 5.0% in 2014, within a range of 4.5% to 5.5%. For 2015, this range is 3.0% to 5.2%, with the most likely figure being around 4.3%. Compared to the range in the previous report, this one is remains wide, given the existence of considerable uncertainty, both internally and externally.

The floor and ceiling of the forecast range are associated with the low scenario and the high scenario for the international context, as outlined in Chapter I. On this occasion, the biases are more downward compared to the symmetric scenario presented three months ago, as evidenced in the risk balance shown in the growth fan chart (Graphs 42 and 43).

Graph 43
Quarterly Annual GDP Growth Fan Chart



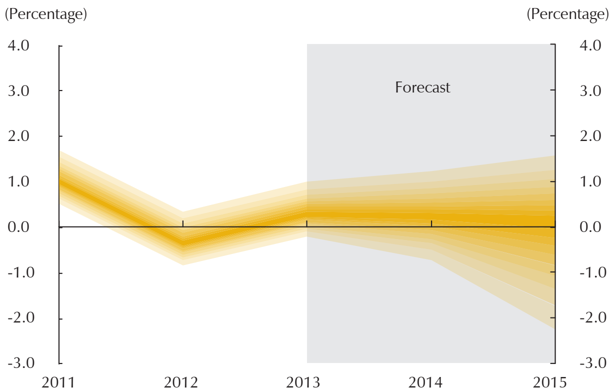
Source: DANE, *Banco de la República*'s calculations

The more pessimistic scenario contemplates a combination of factors that would result in about 3.0% annual growth for the Colombian economy. The main downside risks are associated with less growth for our trading partners, especially the United States and the Latin American countries, with oil prices that could be around US $ 85 per barrel, and with less government consumption and investment. As for domestic or internal factors, there could be more of a slowdown in government consumption than expected, given the impact of oil prices on government revenue, royalties and tax revenue, which might not meet the targets set initially, due to the latest tax reform. As for the external factors, the growth of Colombia's trading partners in the region could slow more than expected if their terms of trade continue to deteriorate. This would affect export volume. Additionally, household and business confidence would be affected significantly in an environment of greater uncertainty than is assumed in the baseline scenario.

Accordingly, the output gap estimates for the central forecast were revised downward in this report. The new exercise suggests the gap would have stayed close to zero, on average, during 2013 and would be near zero in 2014 and 2015. The models show numbers for the last two years that are slightly less than those obtained in the June report, according to the forecast for growth.

As always, it is important to take into account the considerable uncertainty associated with this estimate. Pursuant to the risk balance shown in Graphs 43 and 44, the gap in 2014 would have been between -0.7% and 1.2%, with a high level of probability. This balance has more of a downward bias that the one outlined last quarter. The downward bias for 2015 now exceeds the bias in the June report, placing the gap in a range of -2.2 to 1.6% (Graph 44).

Graph 44
Output Gap Fan Chart



Source: DANE, *Banco de la República*'s calculations

Banco de la República's models suggest the unemployment rate in 2013 would have been near the non-accelerating inflation rate of unemployment (NAIRU). So, inflationary pressure on wages has remained low. To this is added is the reduction in labor costs covered by the tax reform in 2013. However, the impact of this measure happens only once. So, by 2015, the adjustments in wage costs could be higher than in the previous two years, once the effect of the tax cut dissipates and as unemployment continues to decline.

B. INFLATION

1. Forecasts

The changes in the external environment facing Colombia, coupled with stronger supply shocks than those contemplated previously, led to an increase in the medium-term forecasts for inflation versus the forecast in the June edition of this report. The transmission mechanisms model (TMM) used by *Banco de la República* points to a rise in annual inflation in the coming months. It would be somewhat more than was predicted three months ago, with a figure that would remain above the middle of the target range throughout much of 2015, but would converge toward that point between the third and fourth quarters. Something similar happened with the central forecast of the dynamic stochastic general equilibrium model (known as Patacon); however, in this case, convergence is slower and does not occur entirely within the forecast horizon shown in this report.

Banco de la República's models anticipate a temporary increase in inflation at the end of 2014 and in early 2015.

As noted in previous sections, the changes in the international context evolve around two fundamental variables for inflation in Colombia. The first is oil prices, which have fallen sharply since June to substantially lower levels than those forecast in past reports. Prices for other commodities have declined as well, including those for agricultural commodities imported by Colombia. Secondly, a number of Colombia's trading part-

The depreciation witnessed in recent months partly explains the increase in the baseline forecast for inflation.

ners in the region experienced a slowdown pressured by declining terms of trade. This led to a reduction in their prospects for growth during the remainder of 2014 and throughout 2015, which also extends to several advanced economies, with the notable exception of the United States.

The effects of these changes on inflation are complex and do not operate in the same direction, since worsening external conditions tend to be accompanied by a greater perception of country risk and depreciation in the exchange rate, as has been the case with the Colombian peso since mid-July. From that date until the end of October, when this report was drafted, the Colombian peso depreciated 10.8%. Under these circumstances, the balance-of-payment exercises shown in Chapter I and the Bank's central models anticipate a sharper trend towards peso depreciation than was forecast last quarter.

Consequently, the inflation forecasts in this report are the result of two opposing forces. On the one hand, slower growth for our trading partners, despite the recovery forecast for 2015, brought downward pressure to bear on domestic prices through less demand for the products exported by Colombia, especially manufactured goods that are more linked to other sectors of the economy. Operating in the same direction are the reductions in international prices for raw materials and food, particularly oil, which tend to lower production and transportation costs. Likewise, by affecting the national income, the public sector balance and confidence, these reductions lead to weaker domestic demand, slowing price adjustments for a wide range of goods and services.

On the other hand, the amount of peso depreciation accumulated in recent months will tend to pass through to domestic prices, partly offsetting the downward pressures indicated above. Traditionally, the extent of pass-through to the CPI has been low in Colombia; however, the end result depends on several factors, such as the economic cycle, the behavior of foreign inflation, international raw material prices, and how permanent the movements in the exchange rate are.[14]

In the current report, the depreciation witnessed in recent months has some impact on inflation in Colombia in the medium term and partly explains the increase in the central forecast, especially for 2015. This is despite the fact that the forecast contemplates lower international prices for oil (US $ 95 per barrel, on average, for Brent crude during 2015) and for other raw materials, and relatively low growth in export markets. Nevertheless, as discussed later, this central scenario still faces important downside risks.

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14 See Box 2 in the September 2011 edition of the *Inflation Report*.

Food supply shocks are another factor that influenced the increase in the inflation forecast.

For example, at a time this report was written, the price of oil had fallen to far lower levels than those contemplated in models.

Accumulated depreciation led to an increase in the forecast for tradables excluding food and regulated items, which converge toward 3.0% more quickly on this occasion. It also explains part of the rise in the annual forecast for food and offsets the downward pressures weighing on regulated services, avoiding a substantial revision of their forecasts compared to those in the June report.

The presence of stronger supply shocks in the food sector than those contemplated earlier is another factor that influenced the increase in the central forecast for inflation. The food CPI was affected by the likelihood that the Colombian cattle industry is in a retention cycle, which should, lead to higher than usual price hikes for beef and substitutes thereof. Something of the sort began to be observed in the third quarter. The presence of a cattle retention phase was contemplated in the risk balance accompanying the central forecast in the June edition of this report. Added to this are higher-than- expected price increases for a number of perishable foods, which signal heretofore unidentified shocks to the supply of these products and have raised their forecasts.

In view of the above, the central forecast for the food CPI at the end of 2014 and throughout most of 2015 was raised significantly, with values that place the annual variation in this basket above 3.0% for several quarters. As noted already, increased cumulative depreciation of the peso also contributed to this revision. In fact, it might have had more of an impact if the forecasts for the international price of agricultural raw materials and oil had not declined. The supply shocks in question are temporary and their effect will tend to fade towards the end of next year, in which case the annual change in food prices would converge towards 3.0% by 2016. It should be noted that this forecast does not consider the occurrence of El Niño phenomenon, which remains an upside risk factor, as explained later.

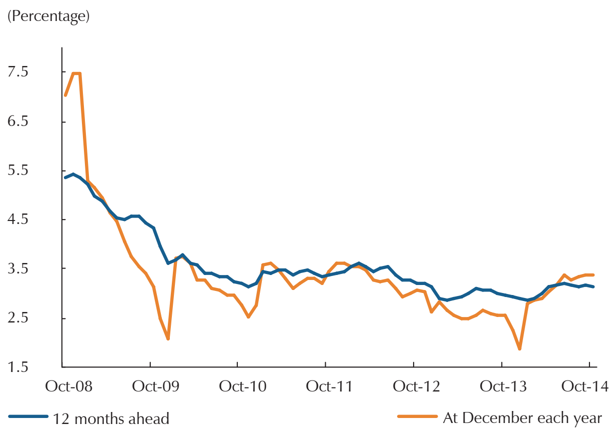
The food shocks are temporary and their impact would disappear by the end of 2015.

Apart from food, this report also includes an upward shock to the regulated CPI stemming from energy rate hikes in Colombia that surpassed the long-term target for inflation. These increases reflect the need to update consumer rates in line with prices on the energy exchange, which rose in what appears to be a permanent adjustment of about 200% (on average) since mid-2012. Pass through to the consumer would be gradual, so this shock could affect the regulated CPI beyond a year.

As for demand-pulled pressure, the central forecast includes somewhat less of an output gap for this year and the next, compared to the one used in the forecast three months ago. As mentioned in the previous section, the gap would be around 0.3% in 2014 and decline to 0.1%, on average, for 2015. This resulted in the central forecast being left at 5.0% for 2014 and reduced to 4.3% for 2015. The downward revision in the forecasts for our trading partners explains these changes to some extent.

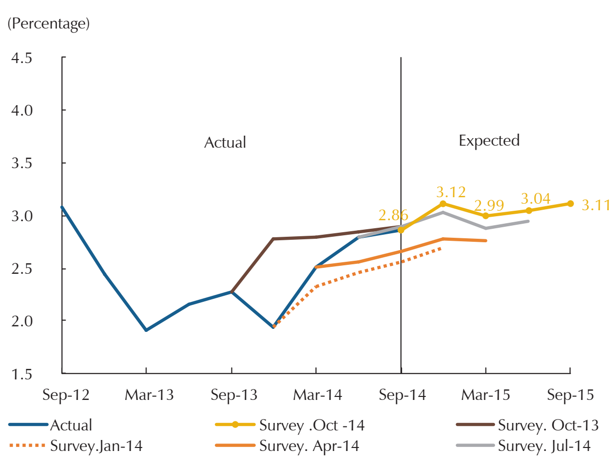
In this environment, demand-pulled pressures on consumer prices during the remainder of this year and in 2015 are lower in this report than the already low estimates in the previous edition. This was reflected in a reduction in the forecast for the non-tradable CPI; its annual variation would be much closer to 3.0% during the next five quarters, although still above that percentage.

Graph 45
Annual Inflation Forecasts by Banks and Brokerage Firms



Source: *Banco de la República*.

Graph 46
Actual Inflation and Inflation Expectations
(At three, six, nine and twelve months)
(Annual inflation)

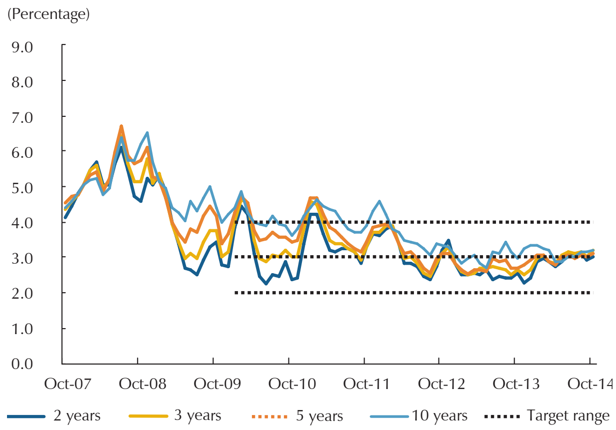


Sources: DANE and *Banco de la República*.

The available information on inflation expectations suggests they do not pose an important risk to the target for this year or the long-term target. However, they did tend to increase over expectations observed three months ago and are above the mid-point of the target range at several horizons. Such is the case with the expectations identified in *Banco de la República*'s monthly survey of market analysts in early October, which shows 3.38% anticipated inflation at December of this year and 3.15% at twelve months (compared to 3.27% and 3.16% in the previous quarter, respectively) (Graph 45). The same is true of expectations derived from the quarterly survey of employers and unions, which were 3.12% at December and 3.11% at four quarters (compared 3.0% 2.8% three months ago, in that order) (Graph 46). The measures obtained from the TES yield curve show inflation expectations slightly above 3.0% at two, three and five years (Graph 47). In all three cases, the longer-term expectations tend to decrease compared to the shorter horizons, indicating the long-term target is still highly credible and the increase in inflation anticipated for the fourth quarter of this year is perceived as temporary.

The core inflation forecast for the remainder of 2014 and for 2015 does not contemplate upward

Graph 47
TES-derived Inflation Expectations
(At two, three, five and ten years)
(Monthly average)[a/]

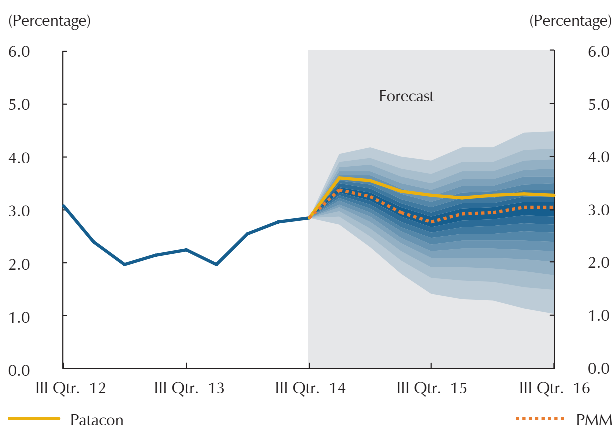


a/ Nelson and Siegel method
Sources: *Banco de la República*

pressure on labor costs, seeing as wage adjustments have stayed within ranges close to the inflation target. However, the risks are higher in this case, as noted below. With regard to raw material costs, the forecast includes mild downward shocks due to the lower prices for oil and raw materials anticipated for the coming quarters, compared to the average observed between January and September of this year. The upward effects arising from a more depreciated path for the peso are offset by lower international prices.

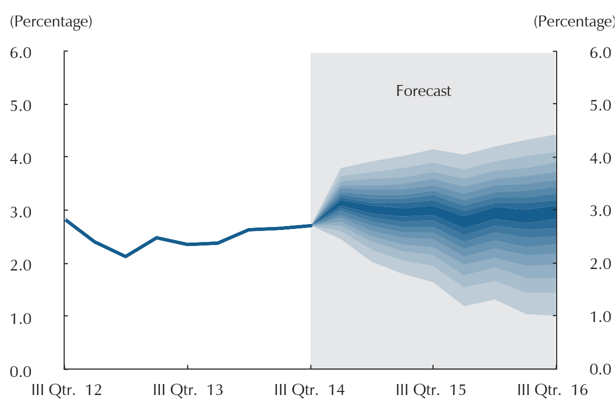
In short, inflation in Colombia would increase during the coming quarters in response to the supply shocks that are expected to affect food and regulated items and also as a result of accumulated peso depreciation. However, GDP growth that would not exceed its potential by 2015, with declines in production costs, expectations aligned with the target, and little pressure on labor costs, would keep inflation in the upper half of the target range, allowing it to converge towards 3.0% between late 2015 and 2016.

Graph 48
Total Inflation Fan Chart



PMM: Pass-through Mechanisms Model
Patacon: Policy Analysis Tool Applied to Colombian Needs (dynamic stochastic general equilibrium model)
Source: *Banco de la República*

Graph 49
Non-food Inflation Fan Chart



Source: *Banco de la República*.

The downside risks and the uncertainty surrounding the outlook for inflation are more pronounced in this Report.

2. Risk Balance

The risk balance estimated for total consumer and food inflation is shown in the fan charts (Graphs 48 and 49). More uncertainty is contemplated on this occasion than in previous reports, so the fan chart is broader. On the other hand, the central forecast for consumer inflation is higher, while the bias of the fan chart is downward, contrary to the estimate three months ago. The latter is due, among other reasons, to possible disinflationary pressures originating with the behavior of commodity prices, particularly for oil, and the impact this may have on domestic demand and the macroeconomic performance of Colombia's major trading partners in Latin America. It is noteworthy that significant upside risks still exist; however, for this report, they are more than offset by the downward pressures perceived in the forecast horizon.

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

Less global growth than is anticipated in the central forecast:

This report reflects an increase in the downside risk associated with weaker economic performance overall and especially in Latin America's emerging markets. Moreover, significant disinflationary pressures have been observed in countries of the euro area, together with signs of economic weakness in Germany, France and Italy, economies that would no longer lead the region's economic recovery. On the other hand, the situation with shadow banks in China continues to pose a major downside risk to global growth, as does less dynamic performance in that country's real estate market and investment in general. The latter is critical to determining raw material price trends. The decline already witnessed in raw material prices could have more of an effect on the performance of several Latin American economies that are important destinations for Colombian exports than the impact envisaged in the central forecast. The latest indicators for these countries already point to modest growth in production for the respective forecast horizon. All of this could have an effect on economic growth in the United States and slow its recovery.

At the time this report was written, oil prices were dropping to levels below those contemplated in the baseline forecast.

In the case of Colombia, if these risks were to materialize, they would result in weaker external demand and less investor and consumer confidence, thereby affecting the strength of domestic demand. Accordingly, the country's economic growth could fall below expectations, implying a negative output gap that would exert downward pressure on consumer inflation.

Lower prices for oil and other raw materials compared to the central forecast:

The slump in terms of trade implies less disposable income, which could diminish consumer and investor confidence, punishing domestic demand as a result.

At the time this report was written, oil prices were below those contemplated in the central forecast and were trending downward. Moreover, the outlook for the oil market suggests a relative improvement in supply, since production has been reestablished in Libya, shale oil output in the United States has increased, inventory levels are high and OPEC production quotas are stable, compared to potentially weaker global demand. Therefore, a recovery in price to levels akin to those considered in the central forecast hinges on possible agreements to cut OPEC production quotas or on the presence of increased geopolitical tensions, all of which are highly uncertain. As a result, prices are likely to remain at the current low levels (a Brent reference price of approximately US $ 85 per barrel) or decline even further.

Prices for other raw materials also might drop below the expected levels. Food is a case in point. Its markets have been affected by an ample supply, thanks to good harvests and larger inventories; however, they, too, are being hit by falling oil prices, which imply less demand for the production of bio-fuels. The market for other commodities also could be influenced by anticipated progress towards a return to normal in the stance of the Fed's monetary policy, which could reduce the sort of speculative demand that has helped to keep the prices of these commodities high in recent years.

All this creates a significant downside risk to inflation. If it materializes, disinflationary pressures would emerge on several fronts. On the one hand, lower terms of trade mean less disposable income, which could deal a blow to consumer and investor confidence, punishing domestic demand as a result. On the other hand, lower prices for oil and other commodities would reduce production and transport costs and push down the regulated price of gasoline for consumers, provided the exchange rate does not offset such pressures.

Less growth than anticipated in the baseline scenario due to internal factors:

The forecast for growth during the remainder of 2014 assumes a significant increase for investment in civil works and government consumption. Although both these items are expected to make less of a contribution to GDP in 2015, they should increase at rates above the average for the economy. As for civil works, the major infrastructure projects are expected to be implemented according to schedule and some headway in the so-called fourth generation concession plan is forecast. Various projects developed with funds provided by local governments, including the one in Bogotá, are expected to be initiated or continued. With regard to public consumption, local governments would to play a major role, as explained already. However, these forecasts face significant downside risks due to the delays

Lower prices for oil and other raw materials tend to reduce production and transport costs.

Sharp and prolonged depreciation of the peso could generate upward risks to inflation.

that tend to plague public works in Colombia, for a variety of reasons, such as the approval of environmental licenses. Moreover, the drop in oil prices could necessitate cutting resources for several of these projects, particularly by 2015.

Some increase in private consumption similar to the average for the past ten years (4.5%) is expected during the remainder of this year and in 2015. However, the potential impact of a new tax reform on disposable income and household spending, if approved, are not fully considered in the central forecast in this report. There also might be a temporary negative impact on consumer confidence while the tax situation is being ironed out. This is not contemplated in the central forecast either. All of the foregoing factors could mean slower growth in domestic demand, which would reduce the pressure on prices, especially for non-tradable goods, compared to what is anticipated in the central forecast.

Minor adjustments in regulated utility prices due to changes in the regulatory framework:

Reductions in garbage collection rates may be authorized for 2015, once the new rate schedule announced by the Ministry of Housing, Urban and Land Affairs takes effect. More than 80% of the population in approximately 350 cities and towns throughout the country would benefit from these reductions, which were not contemplated fully in the central forecast.[15]

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

More than expected depreciation in the exchange rate due to a possible increase anticipated in the benchmark interest rate in the United States (on the part of the Fed):

This report assumes the Fed will end its asset-purchase program early in the fourth quarter of this year and will begin to raise its benchmark interest rate at the onset of the second half of 2015. However, good indicators for US growth and employment in the second and third quarters suggest the Fed could speed up its timetable for raising that rate. If this proves to be the case, it might spark major changes in capital flows to emerging markets, including Colombia, which could weaken the Colombian peso more than is contemplated in the central forecast. An impact on the sovereign risk premium cannot be ruled out either and would affect exchange rate stability, particularly if this occurs amid a sharp decline in terms of trade that seriously weakens the country's external and fiscal balances.

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15 See Resolution CRA 643/2013 (The New Garbage Collection Rate Schedule).

Upward pressure on wages could begin to emerge in 2015.

If this risk were to materialize, the added depreciation could bring more upward pressure to bear on the cost of raw materials and imported foods, and the prices of tradable goods and regulated items in general. The impact on overall consumer inflation could be exacerbated to the extent that movement in the exchange rate becomes more lasting and inflation expectations are influenced.

Additional supply shocks that raise the price of domestically produced food more than anticipated:

Possible climate changes during the remainder of the year and in part of 2015, due to the prospect of El Niño weather, coupled with variations in the supply of certain agricultural products, pose a risk to rising food prices. Although the intensity of El Niño would be moderate, it could affect agricultural performance and postpone planting. This would raise prices for a number of foods as of the fourth quarter of this year and the second of 2015, and those increases might be higher than what is contemplated in the central forecast. The upward effects of production shocks, in the midst of continuation of the agricultural supply cycle, cannot be ruled out either. Recent months have witnessed a decline in the amount of cattle being slaughtered, which is specific to a retention phase that can last several quarters and would raise prices for beef and substitutes thereof. These circumstances are only partly considered in the central forecast. In principle, all these shocks are temporary; however, depending on how they influence expectations, they could have a more lasting impact on inflation.

The risk of an agricultural supply shock is less in this report than it was last quarter, mainly because the major meteorological agencies say the likelihood of El Niño weather has declined. Most models continue to indicate the intensity of this phenomenon would be moderate and, as such, it would have a moderate impact on the prices of agricultural products.

Significant wages hikes:

The likelihood of inflation between 2.0% and 4.0% in 2014 and 2015 is still high.

The unemployment rate has fallen steadily in the past four years. This trend has yet to generate inflationary pressures, but could do so in 2015 and 2016, which was not considered in the central forecast in this report. In 2013 and 2014, this was partly due to the impact the tax reform had the cost of hiring costs, by lowering payroll taxes and employer contributions to employee healthcare. However, these effects are temporary and will disappear in 2015. When combined with the downward trend in unemployment and a NAIRU that is already near to the current unemployment rate, this could exert additional pressure on inflation.

Considering the weight of the various risks illustrated in the fan charts, it is still quite likely that overall inflation will be within the 2%-to-4% range in 2014 and 2015. It is important to point out that the central forecast in this report assumes an active monetary policy, with interest rates that are adjusted to ensure compliance with the long-term target for inflation.

Box 3

THE FOURTH GENERATION CONCESSION PLAN (4G) AND ITS MPACT ON ECONOMIC GROWTH

Daniel Parra*

Background and Features

The 4G concession plan is a response to the difficulties the government faced during the last 20 years in contracting of the building of infrastructure. Under the system prior to the 4G concessions, the government paid for projects in advance, at least in part, regardless of whether or not the respective service had been provided. Investors put very little of their own capital into those projects and there were no clear mechanisms for resolving the difficulties caused by risks associated with environmental licenses, land purchase, soil studies, etc.[1] As a result, the incentives to guard against poor performance or lack of progress were totally inadequate and occasionally led to legal wrangling that went on for years, with no satisfactory progress towards the development of infrastructure.

In the case of the 4G concession plan, a legal framework was established to allow for contracts that are more efficient, ones where risk is assigned to the party who is best equipped to handle it. The Public-Private Partnership Act – PPP (Law 1508/ 2012)[2] and the Infrastructure Act (Law 1682/2013)[3] were created for that purpose. Secondly, institutions were established to strengthen the 4G concession process. Two of the most important ones are the Agencia Nacional de Infraestructura – ANI (National Infrastructure Agency) and the Financiera de Desarrollo Nacional – FDN (Finance Corporation for National Development).[4]

ANI is charged with evaluating and promoting concessions or other forms of PPP to develop Colombia's transport infrastructure, in addition to planning and working out the structure, contracting and execution of those initiatives.[5] This contributes to a better analysis of the technical, economic, financial and legal feasibility of a project. The function of FDN is to manage and promote the financing required for infrastructure projects contracted through bidding and their structuring. It plays a very important role by becoming an intermediary with responsibility for creating the conditions needed to mobilize all possible sources of funding for crowding-in the supply of resources.[6]

When implemented, this new scheme is expected to remedy some of the lagged physical infrastructure that faces the Colombian economy. In the medium term, it will help to improve the country's productivity and well being. An investment of 47 trillion pesos during the next five years (2015-2020) is estimated for the construction phase (known as Capex[7]). It will include 40 highway projects,[8] which would commit approximately 64 trillion pesos in future revenue and the State's contribu-

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1 Law 8081993 and Law 1150/ 2007 contemplated additions equivalent to up to 50% of the initial value of the contract and extensions limited to 60% of the estimated timeframe, in that order.

2 Law 1508/2012 introduced the following changes: i) there are no advances, ii) payments are made depending on provision of the service in question of the completion of operating units, iii) investors use their own capital to initiate the project, namely, between 25% and 30% of the total value of the contract, iv) risk is allocated efficiently when the project is being structured, and v) incentives are created to attract institutional and financial investors.

3 In this case, the objective is to streamline cumbersome procedures and to devise a scheme for resolving litigation. This law also is intended to improve the way projects are planned and structured, so as to make them more efficient.

4 These institutions support the work of the ministries of finance and transportation, the National Planning Department and several other government agencies that are concerned with matters related to the country's infrastructure.

5 Its duties also include: i) defining methods and procedures in the planning, pre-letting, letting, post-letting and evaluation stages of concession projects, and ii) performing the studies and actions needed to gather the property-related, environmental and social information required to structure and manage a project effectively.

6 Taken from a presentation by Clemente del Valle, President of FDN, at the ANIF seminar on "Avances en la financiación de la infraestructura en Colombia," September 24, 2014.

7 Capex: capital expenditure or capital expenses. All expenses required to construct, improve or refurbish infrastructure are included in this item.

8 Approximately 7,000 km of roadway will be built, including four-lane highways (over 1,370 km), 141 tunnels (125 km), and 1,300 viaducts (146 km). Program specifications are 80 kilometers per hour throughout most of the expanse.

tions to the contingency fund[9] during in the operation and maintenance stage (known as Opex[10]). Additionally, there are 16 private initiatives that would provide a total investment of around 11 trillion in Capex.

The new scheme requires a 4G licensee to finance the construction of the infrastructure (the Capex phase); this is its main feature. In short, the licensee will have to rely on a combination of its own resources (to cover 25% to 30% of the cost of construction) and financing (between 70% and 75%). When the infrastructure is ready or the functional units[11] specified in the contract are complete, the private party will be reimbursed through tolls,[12] contributions from the State,[13]and revenues from commercial use or operation.[14] These payments will depend on completion of the project according to schedule and compliance with the prearranged standards outlined in the contract. The intention, in this regard, is to generate appropriate incentives for the private licensee to build quickly and efficiently. This scheme also promotes the use of top-quality materials, since failure to do so implies: i) penalties that represent less payments from future revenues and ii) higher maintenance costs during the Opex phase, all of which would affect the licensee's cash flow.

The way the structure of the contractual arrangement operates and the relationships among the main parties are summarized in Diagram B3.1. As illustrated, the participants are linked through a free-standing trust or independent fund that will operate as an accounting and payment center.

9 Consejo Nacional de Política Económica y Social –Conpes Document No. 3760/2013.

10 Opex: operating expense. Expenses for infrastructure operation and maintenance are included in this item.

11 Each project segment or division is referred to as a functional unit, which is, a set of engineering structures and installations that are indispensible for providing a particular service, but are independent. In other words, they are able to operate individually.

12 Contractually guaranteed income, at rates adjusted to inflation, and collection distributed according the percentage of involvement or stake in each functional unit.

13 Annual installments backed by authorization for future revenue specific to the project; the option of a percentage expressed in dollars, with a limit for each project; the flow of annual installments defined contractually by functional units in constant pesos; a contingency fund to cover the risk assumed by the State.

14 Such as income from the lease of commercial space, the use of parking facilities and the use of advertising space.

The resources in a 4G project include the licensee's investment [15] (own capital, plus debt assumed with a lender through a loan agreement),[16] the State's contribution (mediated by ANI), and the revenue from tolls and commercial use. The independent fund is used to pay the licensee (remuneration) and its contractors, lenders (debt service) and the supervising engineer hired by ANI. It will be managed through a trust agreement between the licensee and a trust company. Finally, the group referred to as the "lenders" contemplates not only the participation of private and multilateral banks, but also is intended to attract long-term investors, such as pension funds and insurance companies.

As with any investment project, there are different types of risk to be assumed by the various parties involved in its implementation. This is an important point to bear in mind. For example, in the event of external financing, the risk involved in these projects will be assumed, in the first instance, by the resident investors who receive those resources. If the debt is domestic, the local financial intermediaries would face risk exposure that would have to be valued and backed by required levels of capital. For this reason, ANI will have to analyze the way risk is distributed in each 4G concession agreement, so as to generate inventor confidence.[17]

What progress has been made so far?

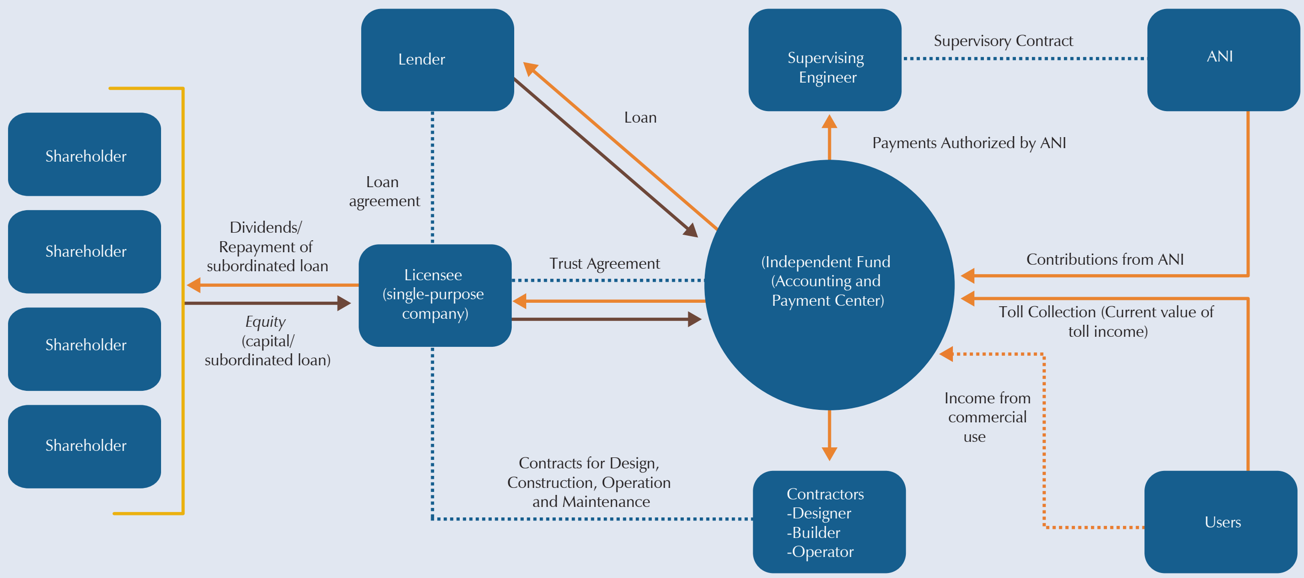
Contracts for the 40 projects proposed initially in the 4G concession plan and the 16 private initiatives are expected

15 Capital contributions from the licensee (or transfer of equity) are mandatory and must be deposited in the independent fund at predetermined installment dates to be decided between the lender and the licensee, or by ANI when the contract is being framed. The licensee may transfer this equity through capital contributions from the partners, the sale of shares or through debt that is acquired by the partners and subordinate to the rights of the senior debt (taken from Box 2 in the September 2014 edition of the *Financial Stability Report* published by *Banco de la República*).

16 The loan agreement is the contract between the licensee and the lenders. It is essential that the lenders establish conditions therein to mitigate the risk of debt service default on the part of the licensee and to encourage the latter to meet the deadlines set for the project. This can be done in a variety of ways, such as conditioning disbursements to the progress of the work, establishing clauses that give priority to payment of the debt, or requiring equity contributions in excess of the minimum amount established in the project agreement (taken from Box 2 in the September 2014 edition of the *Financial Stability Report* published by *Banco de la República*).

17 Some of the risks and they way they are distributed among the various parties involved in the concession are discussed in Box 2 of the September 2014 edition of the *Financial Stability Report* published by *Banco de la República*.

Diagrama R3.1
Relationships and Parties Recognized in 4G Contracts



Source: Agencia Nacional de Infraestructura – ANI (National Infrastructure Agency)

to be awarded between 2014 and 2015.[18] In the case of the former, three waves of projects have been announced. According to the information available at October, eight have been awarded and the remaining project would be in the process of structuring or bidding. As for the second wave of projects, prefeasibility studies have been approved for five, feasibility analysis is being completed for four, and three are in the process of securing approval from the Finance Ministry. Table B3.1 summarizes the projects in the first and second waves, with an estimated investment of approximately 27 trillion pesos in the Capex phase; the third wave would include ten additional projects adding up to more than 10 trillion pesos.

Given the size of these investments, FDN will try to create a combination of funding sources and instruments. The possible sources include private national banks, pension funds, capital funds, public b anks, multilateral lenders and international banks (Table B3.2). The instruments are based on medium- and long-term loans, securities or bonds to finance infrastructure-related projects, and refinancing pledges or commitments, among others.[19]

Impact on Economic Growth

Initially, the 4G investments would boost GDP economic growth; afterwards, once construction progress is evident, they would have a positive impact on potential GDP. The government's estimates suggest a multiplier effect of about 1.5% on GDP during the construction years, and an increase of 4.6% to 5.3% in potential GDP in the long-term.[20] However, the short-effect of the projects contracted by October and those that would be awarded at the end of this year is still uncertain.

A preliminary exercise using the information available at October on the projects that are shaded in Table B3.121[21] was conducted to arrive at an alternative estimate. It assumes scenarios for 2014 and 2015 in which execution,

18 For a detailed description of each project, see Consejo Nacional de Política Económica y Social – Conpes Documents 3760, 3761 and 3770 published in 2013.

19 Taken from the following presentations: i) Clemente del Valle, President of the Finance Corporation for National Development (FDN) at the ANIF Seminar on "Avances en la financiación de la infraestructura en Colombia," September 24, 2014, and ii) Luis Fernando Andrade Moreno, President of Agencia Nacional de Infraestructura (ANI), "Concesiones viales 4G ¿Cómo replicar en Colombia experiencias internacionales exitosas?" and "Hablemos claro sobre la 4G".

20 Presentation by Mauricio Cárdenas, Minister of Finance and Public Credit, "El impacto económico de la infraestructura de cuarta generación," November 2013.

21 The construction phase in most of these projects is between three and five years.

Table B3.1
Investment Amounts

	Projects	Capex (trillions of pesos)
First Wave	Honda-Puerto Salgar-Girardot [a/]	0.9
	Pacific Connection 1[a/]	1.8
	Pacific Connection 2[a/]	0.9
	Cartagena-Barranquilla [a/]	1.0
	Pacific Connection 3[a/]	1.3
	Cundinamarca Perimeter Road[a/]	1.1
	Río Magdalena 2 [a/]	1.4
	Mulaló-Loboguerrero	1.2
	North Freeway Connection[a/]	1.0
	Total: First Wave	**10.5**
Second Wave	Rio Magdalena Freeway1	2.1
	Freeway to the Sea2	1.6
	Freeway to the Sea1	1.6
	Neiva-Girardot	1.3
	Pasto-Rumichaca	1.6
	Villavicencio-Yopal	1.8
	Puerta de Hierro-Carreto-Palmar de Varela	0.4
	Santana-Mocoa-Neiva	1.6
	Santander de Quilichao-Popayán	1.2
	Bogotá-Villavicencio (sector 1)	2.0
	Bucaramanga-Barrancabermeja-Yondó	1.6
	Sisga Cross Road	0.4
	Total: Second Wave	**17.4**
Third Wave (10 additional projects) Over 10 trillion pesos		**Más de 10 billones**
Total: First Three Waves		**37.9**

a/Contracts awarded
Source: ANI (National Infrastructure Agency)

Table B3.2
Funding Sources

Type of Source	Range of Initial Financing
Private national banks	10 - 15 trillion
Pension funds	6 - 10 trillion
Public banks	5 - 7 trillion
Multilateral lenders	2 - 3 trillion
International banks	6 - 10 trillion

Source: Agencia Nacional de Infraestructura (ANI)

with respect to investments in the 12 projects, would come to about 1% in the first year and a sixth, in the second. In the two years thereafter, approximately 50% would be executed. These assumptions were incorporated into the general equilibrium model proposed by Cardenas and Velasco (2014),[22] which was used to develop simulations to observe the effect of that level of execution, per year.

The results suggest the additional effect on GDP growth in 2014 and 2015 would be 0.1% and 0.7%, respectively. For subsequent years, the average maximum effect would be an additional point above the percentage of growth economic indicated in the baseline scenario (without 4G). Importantly, this last impact could be greater if contracts for more projects are awarded, since this would raise the amounts executed during those years.

22 Velasco, A; Cárdenas, C. (2014). "A Macro CGE Model for the Colombian Economy," *Banco de la República*, pending publication.

V. Risks To Macroeconomic Stability

In the past decade, Colombia enjoyed favorable financing conditions and high terms of trade that bolstered its economic growth. These factors are changing and their impact on the nation's economy will depend on the speed, persistence, and extent to which they occur.

Colombia, like other Latin American countries, enjoyed extremely quite favorable terms for external financing and high terms of trade during the past decade. This resulted in larger growth rates than in previous decades. On average, GDP per capita (in constant pesos) rose 3.6% annually between 2003 and 2013, the highest value for a single decade since the fifties.

The external conditions that favored the country in recent years are changing. This means lower terms of trade and the prospect of external financing becoming more costly.

The external factors driving this growth are changing. So far in 2014, prices for commodities such as copper and other minerals have fallen, affecting the economies of the countries that produce those raw materials. Coupled with lower growth forecasts and the possible return to normal of interest rates in the United States, this could reduce capital flows (FDI and portfolio) to commodity-exporting economies.

Up to the first half of 2014, this situation had yet to materialize in Colombia. Crude oil prices remained at high levels, and significant financial flows into the country were observed after JP Morgan rebalanced its emerg-

The possibility that interest rates in the United States will return to normal, coupled with a worse outlook for emerging countries, could increase the cost of financing for emerging markets.

ing markets bond indexes.[16] However, towards the end of the third quarter, international oil prices fell to levels not witnessed in the last three years. These levels were still high compared to their historical averages; yet, if sustained, they would imply a serious decline in terms of trade and national revenue.

With respect to external demand, the outlook for global economic recovery in 2015 is generally mediocre, except in the case of the United States. The Fed has already tapered quantitative easing and is expected to begin raising its benchmark interest rate in the second half of next year. Coupled with the worsening economic outlook for emerging countries, this might drive up the cost of financing and could discourage capital flows to these economies, even if other central banks maintain a monetary policy that is exceedingly expansive.

In this context, the downside risks facing the Colombian economy in terms of the external sector are higher in this report. A sharp rise in the cost of external financing could discourage investment, affecting aggregate demand as a result. If higher financing costs are passed through to domestic lending, the impact would be even greater. Additionally, if oil remains below the price on record in recent years, it will imply less national revenue, apart from discouraging FDI in the hydrocarbons sector. Should these risks materialize, the flexibility of the exchange rate could act as a stabilizer by allowing for real devaluation, which would stimulate non-traditional exports at the expense of imports. Accordingly, the real exchange rate (RER) and the current account deficit could converge towards values more consistent with their long-term fundamentals.

There is great deal of uncertainty about the speed, extent and persistence of the changes in external conditions.

The sound macroeconomic management the country has demonstrated in recent years could enable it to assimilate and soften these external shocks. However, there is considerable uncertainty about their speed, magnitude and persistence, so it is crucial to watch for changes that might occur in certain key variables. This chapter looks at the behavior of the current account, the RER, lending and housing prices. Possible imbalances for these variables are estimated, together with a macroeconomic imbalance indicator (MII).[17]

16 For a detailed explanation, see *Reportes del Emisor*, No. 179, "Análisis del impacto en Colombia de la recomposición de los índices de JP Morgan de deuda local de paises emergentes," April 2014.

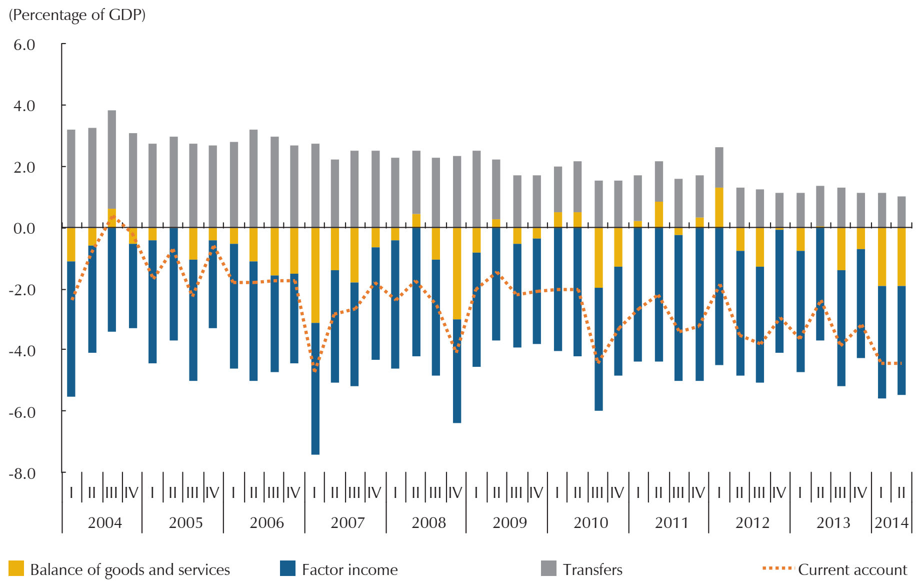
17 See Arteaga, Huertas y Olarte (2012). "Índice de desbalance macroeconómico", *Borradores de Economía,* No. 744, *Banco de la República*.

The increase in the current account deficit largely reflects the strength of domestic demand and the increase in external financing.

A. THE CURRENT ACCOUNT AND THE REAL EXCHANGE RATE

As mentioned in Chapter I, the current account deficit during the course of the year to June was 4.4% of GDP for the first six months (Graph 50), which is more than was forecast for the entire year in the previous *Inflation Report* (between 3.8% and 4.2% of GDP). Beyond short-term factors (such as problems with coal exports in the first quarter, shutdown of the Cartagena Refinery and reduced oil production), which account for much of the decline in the trade balance during the first half of the year, the increase in the deficit also reflects the dynamic performance of domestic demand in the past year.

Graph 50
Current Account

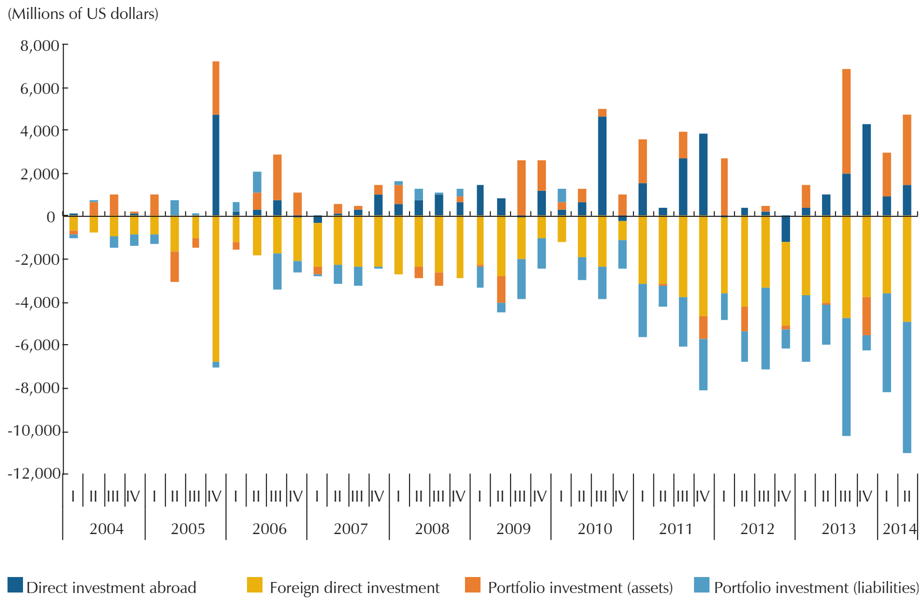


Note: According to the sixth edition of the Balance of Payments Manual proposed by the IMF, the financial account is presented with the same sign as the current account. Therefore, asset flows (constitution of assets abroad) are presented with a plus sign and liabilities, with a minus sign. For additional information and methodological changes, see http://www.banrep.gov.co/balanza-pagos
Source: *Banco de la República*

On the financing side, the country faced a positive shock with the announcement that JP Morgan would increase Colombia's share in both its emerging markets bond indexes. According to balance-of-payments figures for the second quarter, the inflow of foreign portfolio capital reached record highs (US $ 6,114 m), which were partially offset by the creation of Colombian financial investments abroad (US $ 3,259 m) (Graph 51). This shock explains some of the nominal appreciation registered during the second quarter and part of the third, beyond what happened in other countries in the region (Graph 12). More external financing and a stronger peso also helped to maintain the momentum in domestic spending.

In real terms, the exchange rate also gained strength between March and July of this year, thanks to the nominal exchange rate and to low inflation

Graph 51
Direct and Portfolio Investment



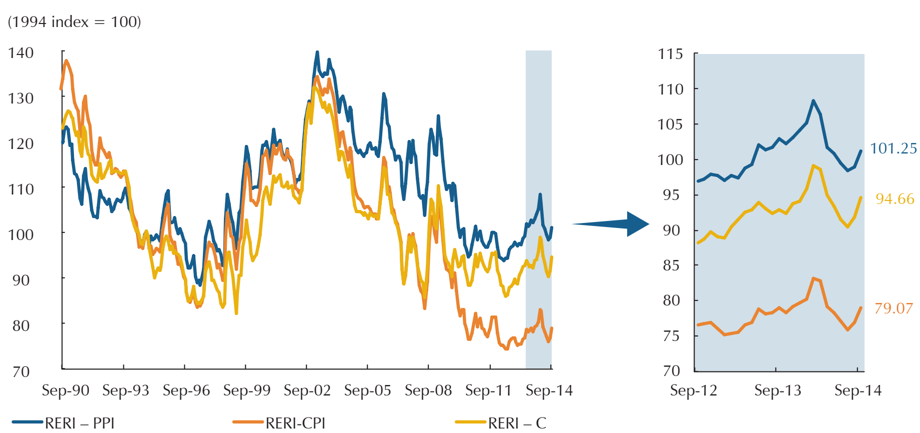
Note: According to the sixth edition of the Balance of Payments Manual proposed by the IMF, the financial account is presented with the same sign as the current account. Therefore, asset flows (constitution of assets abroad) are presented with a plus sign and liabilities, with a minus sign. For additional information and methodological changes, see http://www.banrep.gov.co/balanza-pagos
Source: *Banco de la República*

for our major trading partners, particularly the advanced countries. However, since August, the real exchange rate has reversed part of the appreciation witnessed in previous months (Graph 52)

The rate of investment has grown at an accelerated pace, favored by external factors.

As noted in previous editions of this report, the increase in the current account deficit between 2010 and 2013 was due to a rapidly growing rate of investment that has reached historically high levels. Propelled by favorable external financing conditions and high international commodity prices, this investment has been focused on the mining - energy sector and other

Graph 52
Real Exchange Rate Indexes



Source: *Banco de la República*.

The savings rate has increased as well, but more slowly than the rate of investment.

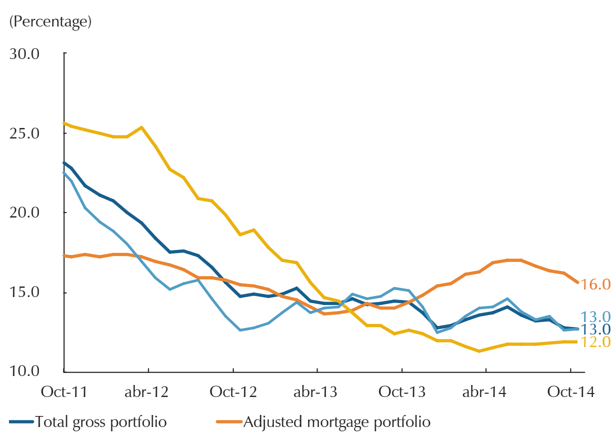
groups, such as services, commerce and industry. The savings rate rose at a slower pace, but is somewhat above its historical average. The new information on the first half of the year and the latest data suggest a similar pattern in 2014. These factors would explain the increase in the current deficit.

How the current account behaves in the medium term will depend mainly on external factors. One is the possible normalization of interest rates in the United States, which would increase borrowing costs and discourage the use of foreign savings. It also would influence the downward trend in commodity prices, especially for oil, and its negative effect on the country risk premium, foreign direct investment and national income. Finally, the change in the trend in the real interest rate, if it continues to depreciate, would stimulate the non-traditional export sector at the expense of foreign purchases. The magnitude, speed and persistence with which any of these factors materializes will depend on the current account deficit converging to levels that are more consistent with its long-term fundamentals.

B. BORROWING

The portfolio of lending institutions slowed during the third quarter of 2014 and expanded at annual rates near 13%, which is less than those observed between April and June (13.8% on average) (Graph 53). This slowdown is explained by the commercial portfolio, which accounts for about 60% of all outstanding loans in the financial system. Available information related to other sources of financing for companies, such as bonds or foreign borrowing, shows no evidence that bank lending is being substituted.

Graph 53
Gross Portfolio, by Type of Lending[a/]
(Annual change)



a/ Information at October 17, 2014. Includes the portfolio in domestic and foreign currency and mortgage securitizations. Does not include sale of receivables for management under trust rights.
Source: Colombian Superintendence of Finance; *Banco de la República*'s calculations

As to household borrowing between July and September, the pace of growth in consumer loans continued, while the increase in mortgages declined (Graph 53). According to the September edition of the *Report on the Credit Situation in Colombia*, banks perceive a good demand for these types of loans, but slightly less than in the second quarter. This is despite weak pass-through of the benchmark interest rate hikes to interest rates on loans. According to the same report, the lending institutions surveyed between July and September perceived an increase in the supply of credit, although less than a quarter ago, in some cases, and accompanied by an increase in the requirements for granting a loan.

As for the risks to macroeconomic stability, it is good to see the rise in borrowing in the real sector has slowed, particularly with respect to household loans. As indicated in the *Financial Stability Report*, the household financial burden (interest payments, plus depreciation) has increased in recent years and is now 9.1% of disposable income. Also, the extent of overall household borrowing, including credit and home leasing operations and consumer loans with lending institutions, with the National Savings Fund and with credit unions has reached record highs (17, 5% of GDP and 27.9% of disposable income). This places borrowers in a situation where they are vulnerable to changes in economic conditions (e.g., a higher rate of unemployment).

C. HOME PRICES

In June 2014, home prices in Colombia continued to increase more than inflation, starting at historically high levels. However, the past year has witnessed somewhat of a slowdown (Graph 54). In Bogotá and Bucaramanga, the cities where prices rose the most, this trend towards less of an increase in housing prices is clearer.

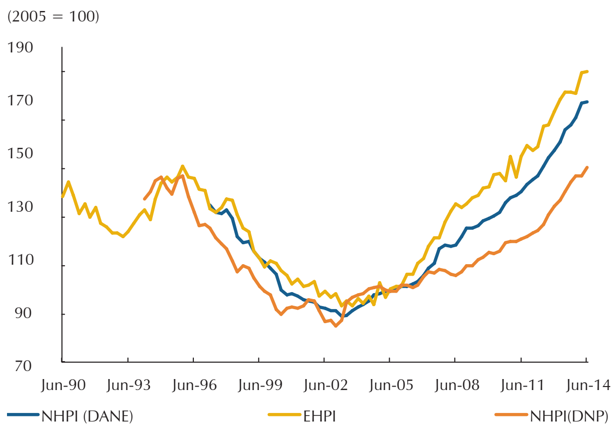
As for quantity, the figures released by the Colombian Chamber of Construction (Camacol) show new home sales in the segment other than low-income housing (non-LIH) have declined in recent months (Graph 55), with the number of units available for sale stabilizing (Graph 56). It is important to point out that non-LI housing accounts for around 60% of new housing market (in units).

In contrast, the momentum in low-income housing (LIH) has held and one continues to see significant positive growth rates (about 7% annually, according Camacol) (Graph 55). This is largely due to the government's housing policies.

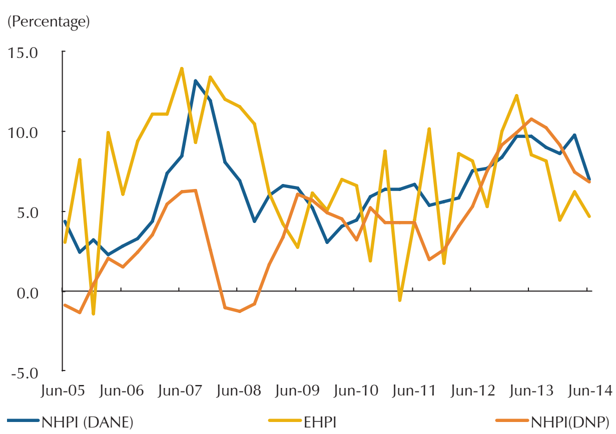
While many of the supply problems that contributed to the rise in housing prices still exist (e.g., a shortage of land or problems with building permits), some of the factors responsible for the upward pressure on the demand side have subsided in recent months. Specifically, i) the cost of financing has increased for a sizeable portion of the

Graph 54
Home Prices in Colombia Relative to the CPI

A. Indexes

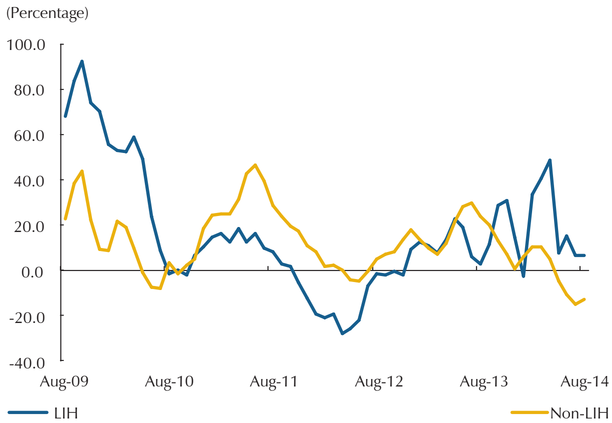


B. Annual change



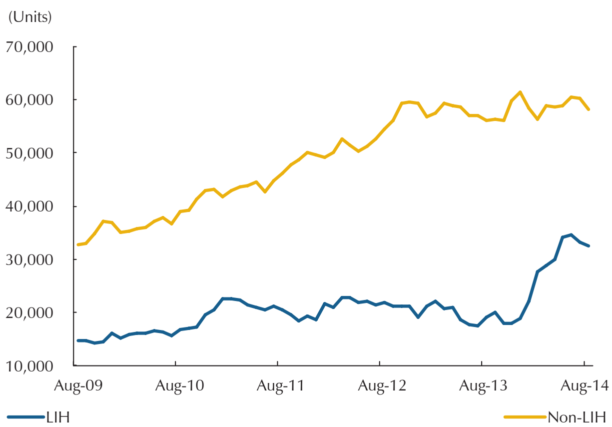
Sources: DANE, DNP and *Banco de la República*

Graph 55
New Housing Units Sold
(Three month moving average)
(Annual change)



Source: Camacol.

Graph 56
New Housing Units Available for Sale



Source: Camacol.

market, given the end of interest-rate subsidies for the purchase of homes priced at \$ 79 to \$ 197.5 million; ii) recent depreciation of the exchange rate makes investment in foreign currency more attractive, at the expense of investment in local real estate; iii) the decline in the annual variation in rental fees has reduced the return on rental housing, and iv) the reduced growth in home prices curbs expectations of future price increases and, therefore, lowers the anticipated return on housing as an investment.

As for the future, the robust momentum in low-income housing is expected to continue, thanks to stimulus programs announced recently by the government for this segment of the market. Mi Casa Ya is one example.[18] In the case of non-LIH, if the aforementioned factors remain in play and the hike in interest rates is passed through, the increase in prices should continue to slow.

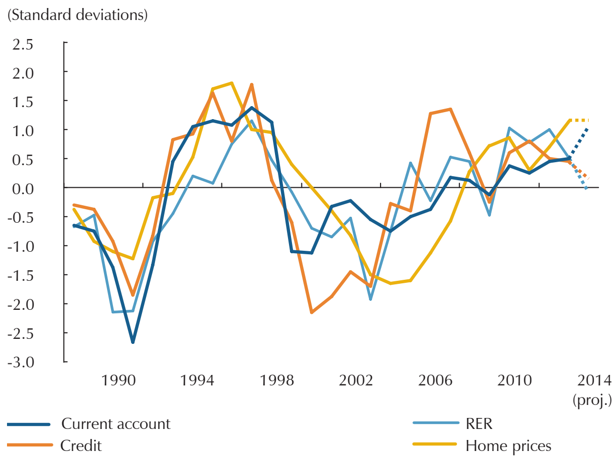
D. LONG-TERM ESTIMATES AND THE MACROECONOMIC IMBALANCE I NDEX

In keeping with the evolution of the variables presented in this chapter, the latest information at hand shows: i) the current account deficit widened during the first half of the year; ii) appreciation in the RER between March and July was partially corrected as of August, and iii) the growth in lending and housing prices declined.

The new calculations by the technical staff at *Banco de la República* show less of difference between the actual RER and lending and their respective estimated long-term levels, while that difference in housing prices would have remained the same. The current account gap would have widened (Graph 57) and, consequently, the macroeconomic imbalance index (MII) would be slightly less than it was a year ago (Graph 58)

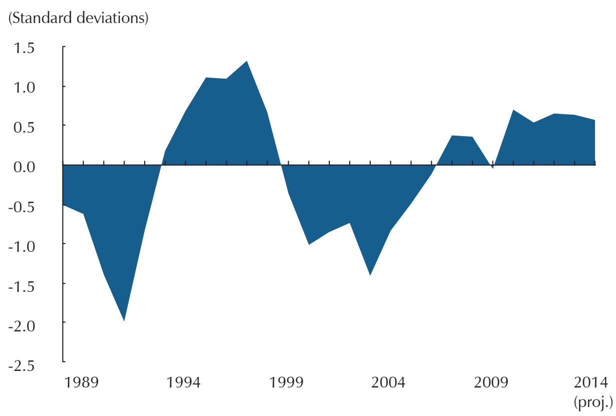
18 Mi Casa Ya (My House Now) is a program for households earning between two and four times the minimum wage. It provides support for the purchase of new housing valued at up to \$ 86 million: part is for the down payment and part is for interest payment.

Graph 57
Gaps in the Current Account, Real Exchange Rate, Home Prices and Credit



(Proj.) Projected
Source: *Banco de la República*

Graph 58
Macroeconomic Imbalance Index



(Proj.): Projected
Source: *Banco de la República's* calculations

As for the medium term, the occurrence of some of the external shocks mentioned in this chapter, such as normalization of interest rates in the United States, likely will push variables such as the current account, the RER, credit and housing prices towards their long-term levels. This convergence will depend largely on the speed, consistency and extent of those shocks.

Attachment

Macroeconomic forecasts by domestic and foreign analysts

The latest forecasts by domestic and foreign analysts on the major economic variables for 2014 and 2015 are summarized in this section. At the time they were consulted, the analysts had data up to September 2014.

1. Forecasts for 2014

The domestic analysts expect 4.8% economic growth, on average. This coincides with the estimate in the previous edition of the *Inflation Report.* The foreign agencies that were consulted expect GDP growth to average 5%.

Table A1
Macroeconomic Forecasts for 2014 by Domestic and Foreign Analysts

	Real GDP Growth (Percentage)	CPI Inflation (Percentage)	Nominal exchange rate end of:	Nominal DTF (Percentage)	Fiscal deficit (Percentage of GDP)	Unemployment Rate in the Thirteen Main Cities (Percentage)
Domestic Analysts						
Alianza Valores	5.00	3.40	2,100	4.80	n.d.	n.d.
Anif [a/]	4.60	3.30	n.d.	4.60	2.40	9.1
Banco de Bogotá	4.83	3.43	1,975	4.59	2.30	9.1
Bancolombia [a/]	4.70	3.30	2,025	4.60	2.40	8.5
BBVA Colombia [a/]	4.90	3.45	2,050	4.30	2.41	9.2
BGT Pactual	4.80	3.50	2,010	n.d.	2.30	9.0
Corficolombiana	5.00	3.20	1,875	4.75	2.40	n.d.
Corpbanca [b/, c/]	4.82	3.42	2,020	4.75	2.30	8.4
Corredores Asociados	4.80	3.63	2,000	4.45	2.40	n.d.
Correval	5.00	3.40	2,000	4.60	1.40	9.1
Davivienda	4.80	3.63	2,030	4.50	2.30	8.5
Fedesarrollo [a/]	4.70	3.30	2,061	4.87	2.40	8.9
Ultrabursátiles	4.80	3.31	2,093	4.50	n.d.	9.0
Average	**4.83**	**3.41**	**2,019.9**	**4.61**	**2.27**	**8.9**
Foreign Analysts						
Citi	4.80	3.20	2,050	4.50	2.30	9.5
Deutsche Bank	5.00	3.20	1,970	n.d.	2.40	n.d.
Goldman Sachs	5.00	3.50	2,000	n.d.	2.30	n.d.
JP Morgan	5.00	3.30	n.d.	n.d.	n.d.	n.d.
Average	**4.95**	**3.30**	**2,006.7**	**4.50**	**2.33**	**9.5**

n. d.: Not available
a/ The projected deficit is that of the national government
b/ Average rate of unemployment for the year
c/ Formerly Banco Santander
Source: *Banco de la República* (electronic survey)

Table A2
Macroeconomic Forecasts for 2015 by Domestic and Foreign Analysts

	Real GDP Growth	CPI Inflation	Nominal Exchange Rate
	(Percentage)		End of:
Domestic Analysts			
Alianza Valores	4.60	3.20	2,300
Anif	4.30	3.20	n.d.
Banco de Bogotá	4.62	3.00	2,025
Bancolombia	4.50	3.40	2,150
BBVA Colombia	4.76	3.30	2,080
BGT Pactual	4.50	3.30	2,100
Corficolombiana	4.70	3.00	1,975
Corpbanca [a/]	4.92	3.23	2,100
Corredores Asociados	4.70	3.42	2,075
Correval	4.70	3.20	2,050
Davivienda	4.50	3.41	2,125
Fedesarrollo	4.50	3.40	2,085
Ultrabursátiles	4.60	2.96	2,160
Average	4.61	3.23	2,102.1
Foreign Analysts			
Citi	4.50	3.00	2,075
Deutsche Bank	4.80	3.20	n.d.
Goldman Sachs	4.20	3.00	2,116
JP Morgan	4.50	3.00	n.d.
Average	**4.50**	**3.05**	**2095.5**

n. d.: not available
a/ Formerly Banco Santander
Source: *Banco de la República* (electronic survey)

In terms of inflation, the domestic analysts expect a 3.4% increase in prices by the end of the year, while the foreign analysts forecast 3.3%. These rates are within the target range for 2014 set by the Board of Directors of *Banco de la República* (JDBR) (2.0% to 4.0%).

As for the exchange rate, the domestic analysts expect the representative market exchange rate (TRM) to average COP$2,020 by the end of the year, compared to COP$1,948 estimated in the survey considered for the previous edition of this report. The foreign analysts expect the TRM to be near COP$2,007 by the end of the year.

With respect to the rate on time deposits (DTF), the domestic analysts forecast 4.6%, on average. They also expect 8.9% unemployment.

2. Forecasts for 2015

The domestic analysts forecast 4.6% growth in 2015; the foreign analysts expect 4.5%. As for inflation, the domestic and foreign analysts are forecasting 3.2% and 3.1%, respectively. In terms of the exchange rate, the domestic analysts expect it to average $2.102, while the foreign analysts anticipate an average of $2,096.

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