Inflation Report

March 2012*

*Submitted by the Technical Staff for the meeting of the Board of Directors held on April 30, 2012.

Central Bank of Colombia
Bogotá, D. C., Colombia

ISSN - 1657 - 7973

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 long-term growth in output. 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 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 variation in the consumer price index (CPI) is the inflation measurement used.

THE DECISION-MAKING PROCESS

Decisions on monetary policy are announced after meetings of the Board of Directors, through a press bulletin posted immediately on the Bank'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 mid-term determinants; ii) explain the implications of those determinants for monetary-policy management within the scope of inflation targeting; iii) describe the context and analysis justifying monetary-policy decisions made during the quarter; and iv) provide information that helps economic agents to form their own expectations about future developments with respect to inflation and growth in output.

COMMUNICATION AND TRANSPARENCY

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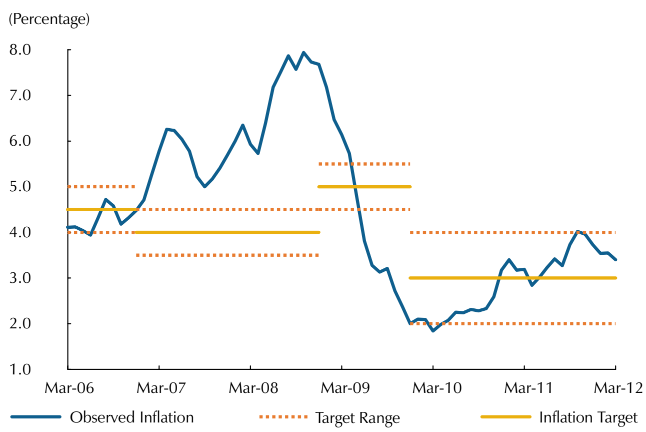
Overview

In March 2012, annual inflation was 3.4%. This is 15 basis points (bp) less than the rate recorded in December (Graph A). A decreasing trend in annual inflation started in October, when inflation reached its highest level in 2011 (4.0%).

Graph A
Annual Consumer Inflation



Sources: DANE and Banco de la República

More than half (58%) of the slowdown in annual inflation during the first quarter of 2012 was explained by the lower rate of growth in food prices. This group, which was negatively affected by weather factors, registered 4.6% annual growth in March, after increasing 5.3% in December. During the same period, annual growth in the consumer price index (CPI) for regulated items declined from 5.8% to 4.9%, and contributed 38% to the fall in inflation. Fuel prices saw substantial annual growth during the first quarter of 2012 (4.9% on average); however, it was below the level observed during the previous year (10.5% on average). This behavior explained the moderation in prices for regulated items.

The annual change in non-food CPI and other core inflation indicators calculated by Banco de la República was relatively stable during the quarter. In fact, between January and March, the average of these measurements remained at around 3%, after displaying an upward trend since mid-2010.

Within the CPI excluding food and regulated items, the annual change in tradable goods fell by 12bp in the first quarter and registered 0.7% in March. Appreciation of the Colombian peso in the last few months was responsible for a considerable part of this outcome. During the same period, the annual growth in non-tradable goods went from 3.6% to 3.7%. This mild acceleration was the result of the way rental fees behaved; the rate of their growth has increased since June 2011.

Lower inflation, together with monetary policy action taken by the Board of Directors of Banco de la República, explained the decline in inflation expectations throughout the first quarter. In mid-April, the different measurements of this variable showed rates between 3% and 3.5%. It is reasonable to expect the various measurements of these variables will converge towards the long-term target for inflation (3%). In terms of economic activity, the increase in real GDP during the fourth quarter of 2011 (6.1%) and throughout the year (5.9%) ratified the robust expansion of the economy. The momentum in local demand, which had exhibited an upward trend for several quarters, slowed during the final portion of the year and registered a growth rate of 7.9%, which is equal to the rate observed in the first part of 2011.

The latest information suggests the Colombian economy will grow at a favorable pace during the first quarter of 2012, but less than in the latter part of the previous year. Based on figures to February, the performance of national production and imports (in dollars) of capital goods indicate investment might slow. Similarly, the small coffee harvest and the reduction in oil production, due to problems with law and order, suggest exports will grow at a lower rate during the quarter.

Regarding private consumption, the data available for the first months of the year point to performance similar to what was observed towards the end of 2011. In January and February, retail sales (in pesos) and imports of consumer goods (in dollars) exhibited higher annual growth than the rates observed in the final quarter of last year. Similarly, the labor market performed well. In fact, between January and March the unemployment rate fell once again and salaried employment rose at an average rate of 5%.

The outcome for the consumer confidence index measured by Fedesarrollo confirms the favorable momentum in the various indicators associated with private consumption. Even though this index fell in February and March, its average was higher than what is was in the final quarter of 2011, thus registering a level that is within historical highs.

Consumption and investment continue to be supported by the high increase in credit, especially household loans. Between January and March, consumer loans and, to a lesser extent, mortgage loans grew at elevated rates in real terms, similar to those observed towards the end of the previous year. Meanwhile, commercial lending slowed, but remains on an upward trend that is considerably more than the expansion in the GDP. The interest rate, in real terms, on all types of credit (except for credit cards) has been below its historical average since 2000.

With respect to the external outlook, there has been an improvement in the prospects for global growth in 2012; nonetheless, there is still the risk of a sharp international slowdown, especially due to the European situation. The information at hand for the first quarter suggests a significant number of European countries remain in a recession; however it is less profound than the contraction seen between 2008 and 2009.

In the United States, the indicators of real economic activity for the first three months of the year show the economy continued to expand at a moderate pace that was better than expected, due to momentum in consumption and of industrial production. Even so, the labor market has exhibited new signs of weakness. Moreover, recent information on existing and new housing does not suggest this sector will recover any time soon. As for the emerging economies, China's GDP slowed during the first quarter of 2012, as expected, while some improvements in industrial activity and the export sector have been observed in the other emerging Asian economies. The major Latin American countries continued to grow at rates slightly below their potential, while their risk premiums fell due to the positive situation in the region at present. The aforementioned factors suggest the effect the contraction in the Euro Zone is having on emerging markets is still limited.

Regarding international prices, , rising geopolitical tensions in the Middle East and in North Africa pushed oil prices to high levels between December 2011 and March of this year. However, by mid- April, these tensions had subsided slightly, thereby allowing for some moderation in oil prices. Meanwhile, global food prices rose mildly in January due to adverse weather conditions. However, they have not exhibited a sharp upward trend such as the one in 2011. This helps to relief some of the inflationary pressures.

In this context, central banks in the major developed economies maintained an expansionary monetary policy. The current prospects and the announcements made by monetary authorities suggest their interest rates will remain low for some time, as inflation permits. In the emerging markets, most central banks have not altered their intervention rates. The notable exceptions are India and in Brazil, where authorities decided to reduce them.

In summary, the current year is likely to see an increase in external demand on the part of Colombia's major trade partners; however it is expected to be less than in 2011. Terms of trade should remain high, thereby providing a stimulus to national income, while international interest rates will be low and global risk premiums will continue to be affected by the events in Europe. Colombia's risk premium is at historic low levels.

Given this local and external outlook, the technical staff estimates annual growth in the Colombian economy for the first quarter of the year will be between 4.5% and 5.9%. For 2012, the range remained unchanged at 4% to 6%. The forecasts on the output gap suggest it will continue to be in positive terrain during 2012 and 2013.

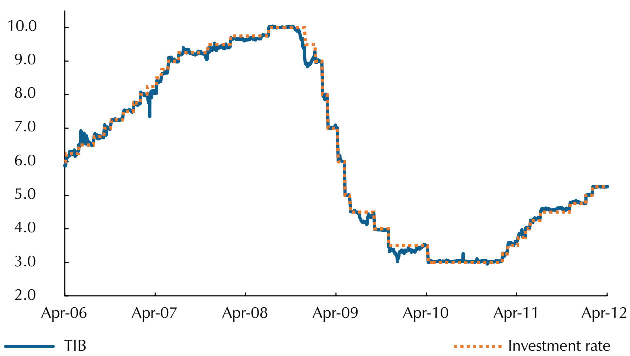
Throughout the first quarter, the main risk to the central forecasts for growth was, and still is, a disorderly adjustment in the European situation. If this risk materializes, global economic growth will be considerably less than expected, international commodity prices might fall, and international risk aversion will exacerbate. All these factors will adversely affect the Colombian economy. Furthermore, political tensions in the Middle East could push up oil prices.

This would elevate export income initially, but eventually would result in more moderate global growth. The main risks to inflation come from excessive growth in domestic demand or higher than expected costs, which would have a strong and persistent impact on expectations and on the credibility of monetary policy. In a longer time horizon, an excessive increase in credit or in asset prices might lead to financial imbalances, which would have negative consequences for the sustainability of output and employment growth.

After evaluating the balance of these risks, the Board of Directors agreed to raise its benchmark rate by 25bp in both January and February 2012. Consequently, the policy rate went from 4.75% in December 2011 to 5.25% in February. At the meeting held in March and April, no changes were made to this level (Graph B).

Graph B
Intervention Rate and Interbank Borrowing Rate

(percentage)



Source: Banco de la República.

Additionally, at the meeting in February 2012, the Board decided to extend its program of daily purchases of no less than US$20 million to at least August 4th of the same year. At the April meeting, this time line was extended to at least November 2nd.

The Board will continue to carefully monitor the international situation, as well as the behavior and forecasts for inflation, growth and asset markets. It reiterates that monetary policy in the future will depend on new information that becomes available.

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INFLATION Report

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I. International context and the balance of payments

The economy in the Euro Zone continued to weaken. However, the contagion to the rest of the world has been limited.

The remainder of the year is expected to see no further increases in the intervention rates of central banks in the developed countries.

Growth forecasts for Colombia's major trade partners improved with respect to the previous quarter.

International prices for Colombia's main export products will remain high; however, they will be lower than in 2011.

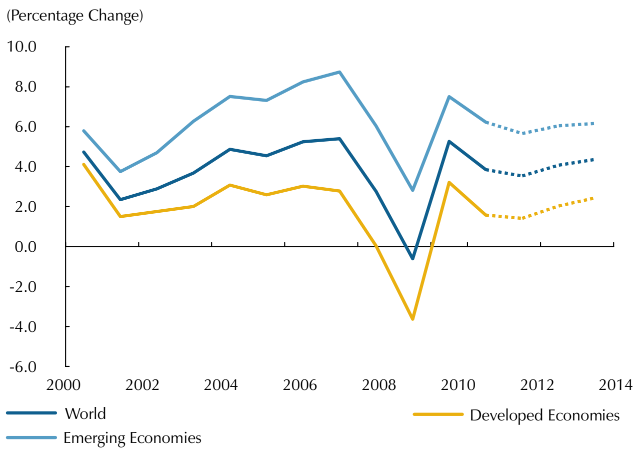
A. INTERNATIONAL CONTEXT

1. Real Sector

The global growth outlook for 2012 has improved slightly compared to what was expected three months ago, thanks to an improvement in European liquidity conditions, as a result of actions taken by economic authorities, and the fact that contagion of the Euro Zone recession to the rest of the world's economies has been mild. Nonetheless, downward risks are still latent, since the European situation has not been solved entirely and oil prices are still at high levels.

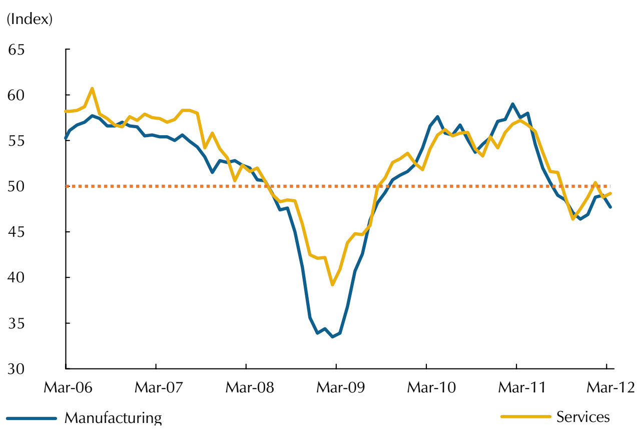
Most analysts and the International Monetary Fund (IMF) modified their growth forecasts for the developed economies and the emerging markets. The changes in the former obey an improvement in economic conditions in the United States and Japan, whose indices of real activity have been higher than expected. In the emerging economies, the mild contagion of the European

Graph 1
Economic Growth and Forecasts



Source: IMF

Graph 2
Manufacturing and Service PMI for the Euro Zone



Source: Bloomberg

situation would allow for a greater expansion of economic activity than was forecast three months ago (Graph 1).

As anticipated in the previous *Inflation Report*, gross domestic product (GDP) in the Euro Zone contracted 0.3% quarterly during the last quarter of 2011. This economy has been affected by an increase in the financial tensions associated with the solvency problems facing peripheral countries, which intensified during the final months of the year. The information available so far this year suggests GDP in the Euro Zone continued to fall in the first quarter, but the rate of contraction would be less than it was during the global financial crisis of 2008-09, when GDP dropped by 5.6%.

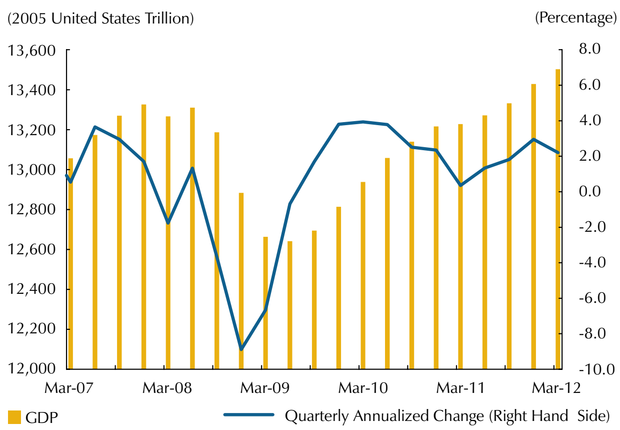
Industrial production is one of the variables leaning in that direction, as it declined in February, but by a low percentage. Similarly, confidence indices for the manufacturing and service sectors in April accumulated four consecutive months in contractive terrain, while business and consumer confidence in March remained below its average since 2000 (Graph 2). In the aforementioned cases, the drops have not been exceptionally steep, supporting the case for a mild contraction.

It is worth highlighting that the decline in production in the Euro Zone is affecting not only countries in the peripheral area, but also Germany, the main economy in the region, as is evident in the performance of its industrial production. Nevertheless, in this country, and in contrast with the rest of Europe, business and consumer confidence is still above its historical average, while the unemployment rate remains at low levels, hinting to a prompt recovery in the coming months. Therefore, countries such as Germany and France have offset the fall in the GDP in the peripheral economies, and should continue to do so.

In this context, economic authorities have adopted a series of measures intended to contain the sovereign crisis and to avoid a more profound contraction in production. Thus, in February, the European Central Bank (ECB) carried out a second round of its long-term refinancing operations (LTRO) for the commercial banks. In addition, the European Council approved a new bail-out plan for Greece and expanded the region's rescue funds. Meanwhile, the Italian and Spanish governments announced new fiscal austerity programs and began to implement reforms in their labor markets.

The effects of these measures on liquidity and the levels of uncertainty in the financial markets were positive, as it will be discussed below. However, the results of the real sector's performance in the peripheral economies have yet to be observed. According to the National Statistics Institute of Spain, production in that country fell by 0.3% during the first three months of the year. Meanwhile, the unemployment rate rose to a new high in the first quarter of 2012, while retail sales accumulated twenty-one months of decline. Similarly, Greece's and Italy's unemployment rates kept increasing, while their industrial and retail sales continued on a downward trend.

Graph 3
Real GDP in the United States



Source: Bureau of Economic Analysis

In contrast to the European situation, real activity indices in the United States for the first quarter of 2012 showed that the economy kept growing at a moderate rate, thanks to the momentum in private consumption and industrial activity. Therefore, GDP rose at a quarterly annualized rate of 2.2% (QAR) during the first three months of 2012 (Graph 3). Even though this growth figure represents a slowdown with respect to the last quarter of 2011 and was less than the market expectations, according to a Bloomberg survey (2.5% QAR), the behavior of private consumption was a positive surprise (2.9% QAR) and suggests domestic demand continued to strengthen. Meanwhile, the momentum in household consumption was offset by less growth in investment and the drop in public expenditure

In the United States, an increase in consumer confidence, a slight reactivation of credit and some improvements in the labor market prompted a rise in consumer spending in recent months. Exports continued to grow, but at a lower rate in annual terms, suggesting the European crisis has had some impact on that country's international trade.

With respect to the US labor market, the unemployment rate began to decline once again, and went from 9.1% in August 2011 to 8.2% in March 2012. This reduction is explained largely by an increase in payrolls of more than 200 thousand per month between December and February. Similarly, initial jobless claims were below 400 thousand in recent months, which is consistent with this context.

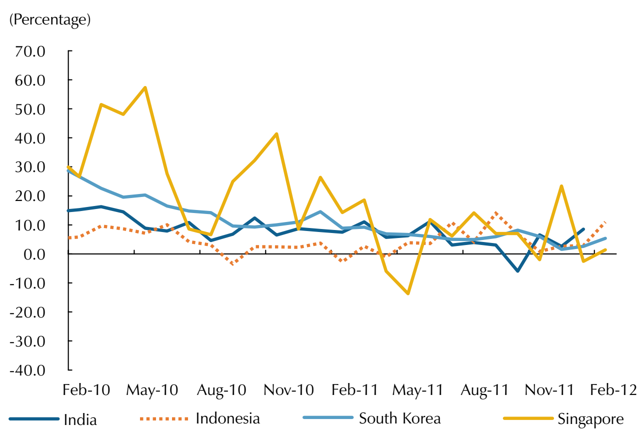
Despite the aforementioned factors, the figures for March and April were not by analysts, as they show a moderation in job creation and a mild increase in the initial jobless claims, indicating the recent momentum in the labor market might not be sustainable. In turn, the real activity indices in New York and Philadelphia grew less than expected, while high oil prices continued to pass through to the local prices for fuel. Finally, it is worth noting that the housing market is still weak and recent information on sales of new and existing homes does not signal a prompt recovery.

Although the economic prospects for the United States have improved in recent months, the outlook still suggests that this country will grow below its historical average (3.23% since 1949) as a consequence of the remaining imbalances.

With respect to the emerging economies, the growth in China's GDP slowed once again during the first quarter of 2012, going from an annual increase of 8.9% in the fourth quarter of 2011 to 8.1% in the first three months of the year. Nevertheless, some indices of real activity suggest that the country's economy will perform better in the coming quarters. Accordingly, the manufacturing sales index has begun to grow, while credit has accelerated in recent weeks.

Less growth in China pertains mainly to a shift in the composition of GDP, with domestic demand increasing its share, while the external sector is losing its relative importance. This would allow for more sustainable economic growth at the expense of less momentum in the coming years.

Graph 4
Annual Change in the Industrial Production Indices for Several Asian Economies



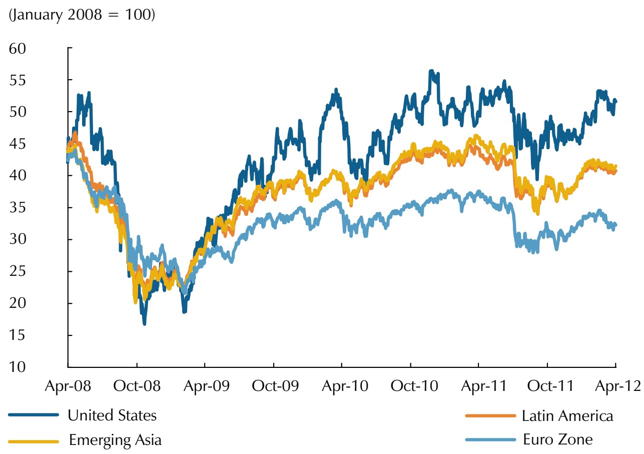
Source: Datastream

In the rest of emerging Asia, one sees a recovery in industrial production, exports and retail sales (Graph 4) that is associated with restoration of the supply chain in Thailand and the growth in internal demand in China and in the other countries of the region. This suggests the contraction in the Euro Zone is having a very mild effect on Asian economies; in fact, the impact is significantly less than the impact observed during the global financial crisis of 2008 and 2009.

Finally, the Latin American economies continued to grow at a rate below their potential, but the available indicators do not suggest further weakening. Therefore, industrial production in February accelerated in annual terms in Mexico and Chile, while the real activity index of Brazil rebounded that month. In the case of Venezuela and Ecuador, the increase in oil prices since the end of 2011 would be adding to national income in these countries, which might have a positive effect on their GDP in the first quarter.

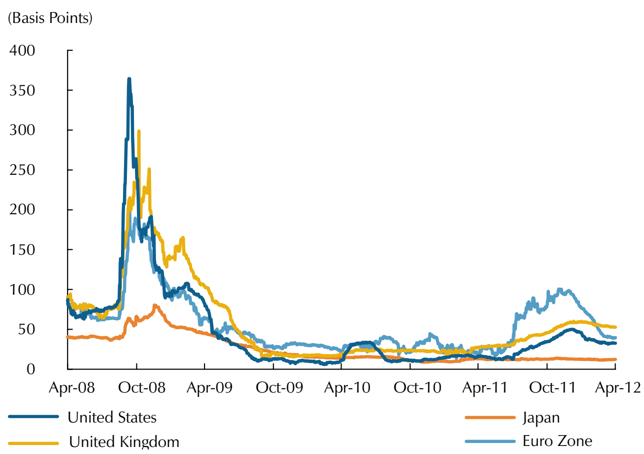
The positive moment for the region, especially South America, is favored by the ease of external financing, as a result of the abundance of liquidity in developed markets and by positive terms of trade, due to the momentum of the emerging Asian economies. In the case of the Central American and Caribbean countries, their external environment has not been as advantageous, because these economies are dependent on the behavior of demand in the developed economies and on imports of fuel and other commodities.

Graph 5
Morgan Stanley Capital Indices (MSCI)



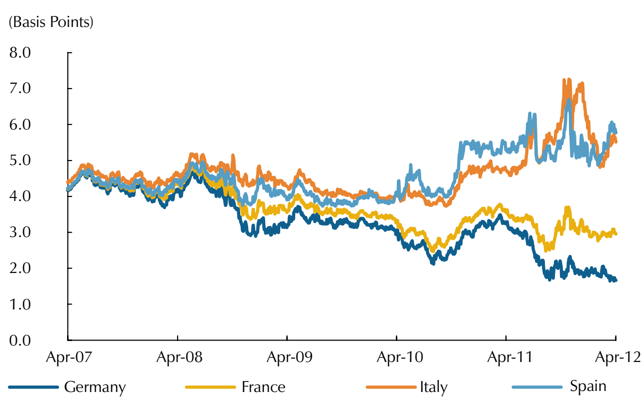
Source: Bloomberg

Graph 6
Spread on the Interbank Borrowing Rates and 3-month Overnight Swaps for Several Developed Economies (Libor vs. OIS[a/])



a/ OIS: Overnight Indexed Swap
Source: Bloomberg

Graph 7
Yields on 10-year Sovereign Bonds for Several European Economies



Source: Bloomberg

2. Financial Markets

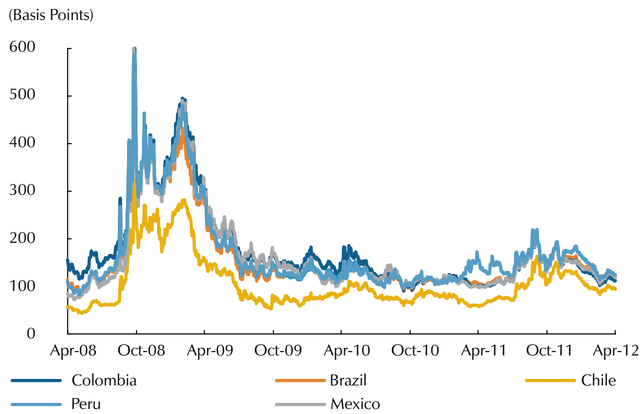
The improved economic data for the United States, and particularly the programs adopted to stabilize European sovereign debt markets, contributed to the positive performance of the leading financial markets during the first two months of the year (Graph 5). The ECB's long-term refinancing operations (LTRO) were especially important, as they allowed commercial banks to obtain resources at lower cost, in addition to favoring sovereign debt auctions in peripheral countries, especially those of Italy and Spain. These measures also helped to reduce the liquidity constraints facing banks (by relieving pressure in the interbank markets), which threatened to shut down financial intermediation operations in Europe (Graph 6).

In spite of the aforementioned factors, improved liquidity conditions have not led to a reactivation of credit in Europe. According to the latest ECB survey of credit conditions, commercial banks continue to tighten their loan requirements.

Similarly, financial market performance is still very sensitive to news coming from the countries in peripheral Europe. This was evident in the first week of April, when risk aversion escalated once again, owing to statements by the Spanish government regarding the Spain's failure to comply with its fiscal plan for 2011 and doubts about the current recovery of the economy. Likewise, ECB confirmation that Spanish and Italian banks acquired massive amounts of capital in the latest round of liquidity support was not well received by investors; they fear commercial banks might be relying too heavily on such operations for their short-term financing. These announcements resulted in a significant rise in the spread on 10-year sovereign bond yields between Spain and Germany, and also increased the risk perception of Italian sovereign debt (Graph 7).

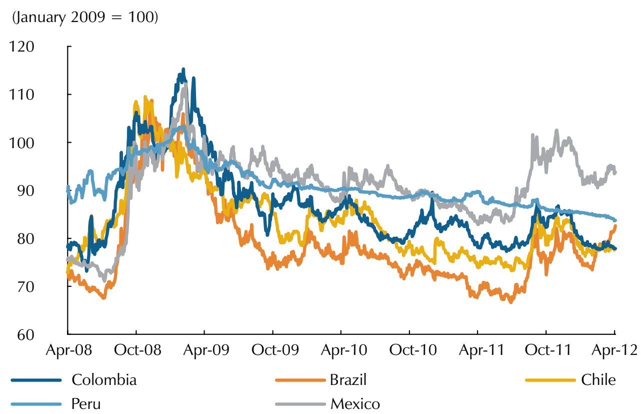
The growing uncertainty concerning whether or not the Spanish fiscal program will be fulfilled and the outlook for short-term economic growth, led the rating agency Standard & Poor's to lower Spain's sovereign debt rating by two notches on the scale. This change, although widely expected, generated an increase in risk aversion on financial markets.

Graph 8
5-year Credit Default Swaps (CDS) for Several Latin American Economies



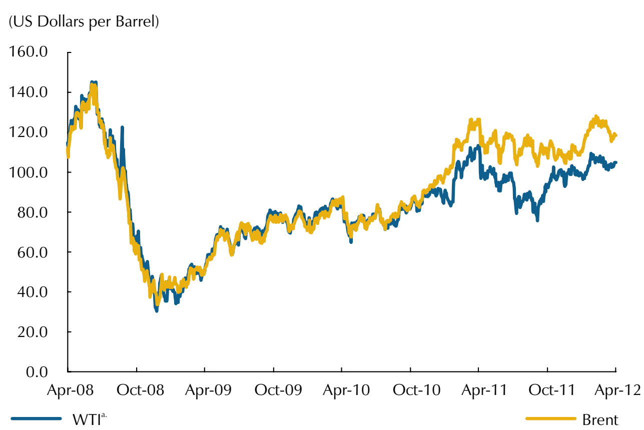
Source: Bloomberg

Graph 9
Nominal Exchange Rate Indices for Several Latin American Economies



Source: Bloomberg

Graph 10
International Oil Prices



a/ WTI: West Texas Intermediate
Source: Datastream

Finally, the performance of Latin America risk premiums is worth highlighting. Despite the turbulence of the past few weeks, they remained relatively stable at levels lower than those of the countries in peripheral Europe, such as Spain (Graph 8). This is explained by the relatively favorable economic context in the region, which has caused local currencies to appreciate with respect to the US Dollar. The only notable exception in this respect is the Brazilian real, which has depreciated in recent months due to the policies adopted by the country's economic authorities to control short-term capital flows (Graph 9).

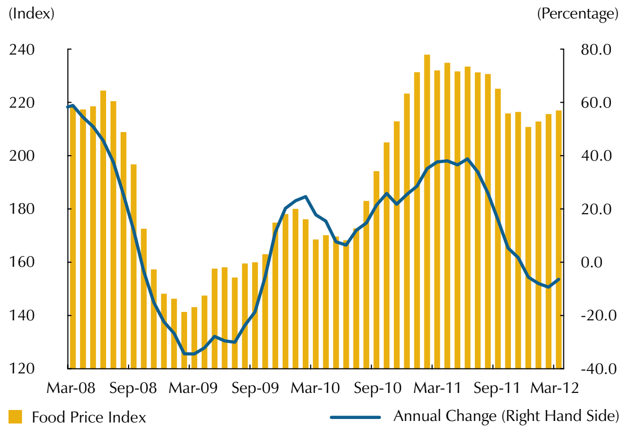
3. Inflation and Monetary Policy

As for international oil prices, the geopolitical tensions in the Middle East and North Africa raised global prices between December 2011 and March of the current year. However, when this report was written (mid-April), these tensions had partially subsided, thereby reducing the uncertainty on international markets and bringing down the high prices observed in March. The average for Brent oil was US$118 per barrel during the first quarter of the year, after reaching a maximum of US$128 in the first weeks of March (Graph 10).

The restrictions on transporting oil from Oklahoma (in the United States) to the Gulf of Mexico remained in place during the early months of the year, which is why the gap between WTI and Brent was close to US$15 in favor of the latter. This lead WTI to lose its status as an international benchmark, since its price responds mostly to supply and demand conditions within the United States.

International food prices fell from the levels reached at the beginning of 2011 (Graph 11), thanks to the slowdown in global demand; however, they still remain relatively high, benefitting the terms of trade for countries that export goods of this type. The increase in oil prices during the first quarter of 2012, coupled with several weather events at the end of 2011 and the first part of 2012, might be preventing more of a slowdown in global food prices. Nevertheless, if these shocks are temporary and global demand

Graph 11
FAO Food Price Index



Source: FAO

continues to slow, food prices cannot be expected to increase much in the next months. Thus, inflationary pressures coming from this front likely will decline.

Regarding monetary policy, the central banks of the major developed economies maintained their expansionary stance, with low interest rates and increases in their monetary base. The monetary authorities in Japan, the United Kingdom and the Euro Zone continued to provide capital to their financial systems in order to relax liquidity constraints and promote domestic credit. The United States Federal Reserve has made no new announcements of further monetary stimulus; however, the recent statements do not dismiss the possibility that they will adopt further action in coming months, depending on how the economy develops and especially the labor market.

The monetary authorities of most emerging countries left their intervention rates unchanged, due to the risks the European situation poses for their economies but also because their economies have shown no signs of weakening and inflation is still a long way from being under control. The central banks of Brazil and India are two notable exceptions to this strategy. They have adopted an expansionary policy in the face of evidence showing their growth, although positive, is still below its potential coupled with the limited increase in domestic prices.

4. Forecasts by the Technical Staff of Banco de la República

In this report, the technical staff revised its growth forecasts for Colombia's major trading partners in 2012 from 2.8% three months ago to 3.3% at present (Table 1).

The main change was in the United States, where the forecast went from 1.5% to 2.2% growth, due to limited contagion from the crisis in the Euro Zone and to the moderate increase in local demand. This growth rate is still below the historical average. However, in contrast to the previous three months, a modest acceleration with respect to 2011 is now expected. In 2013, the economy will continue to recover and will expand by approximately 2.5%.

In the case of the Euro Zone, a mild recession is still expected, which means a reduction of 0.5% in output this year and a recovery of 0.8% in 2013. These forecasts expect the fiscal discipline measures in Europe will have a short-lived negative impact on the growth of these countries and, in contrast, will reestablish household and business confidence throughout the year. Thus, the economy should begin to grow again in the second quarter, although very slowly.

In terms of risks a deepening of the sovereign debt crisis in Europe is still the main threat to regional and global growth. In this case, a stronger recession in

Table 1
Growth Forecasts for Colombia's Trading Partners

	2011	Forecasts for 2012 Scenario			Forecasts for 2013 Scenario		
		Minimum Expected	Central	Maximum Expected	Minimum Expected	Central	Maximum Expected
Main Partners							
United States	1.7	1.0	2.2	2.7	1.0	2.5	3.0
Euro Zone	1.4	(1.5)	(0.5)	0.0	0.0	0.8	1.5
Venezuela	4.2	3.5	4.5	5.5	2.0	3.0	4.0
Ecuador	7.8	3.5	4.5	5.5	3.0	4.0	5.0
China	9.2	7.5	8.5	9.0	7.0	8.0	9.0
Other Partners							
Japan	(0.7)		1.51			1.61	
Peru	6.9		5.57			6.00	
Mexico	4.0		3.40			3.81	
Chile	6.0		4.00			4.30	
Argentina	8.9		3.58			3.26	
Brazil	2.7	2.5	3.3	4.0	3.5	4.3	5.0
Developed Countries	**1.6**						
Developing Countries	**6.2**						
World Total	**3.9**						
Total Trading Partners	**3.0**	**2.6**	**3.3**	**4.0**	**2.7**	**3.5**	**4.0**

Sources: Consensus Forecast, IMF and Banco de la República

Europe is anticipated, coupled with less growth in the other developed and emerging economies. Given this assumption, the drop in output for the Euro Zone would be 1.5%, which means Colombia's trade partners would see 2.6% growth (0.77% less than in the central forecast). A more profound recession in Europe would diminish global trade and increase financial tensions. An additional downward risk would be a sustained rise in oil prices, due to greater geopolitical tensions in the Middle East and in North Africa.

Regarding the international price forecasts for the major Colombian exports, the expected price of oil is higher in this report for both Brent and WTI. Accordingly, the projected price of crude oil went from US$103.5 per barrel three months ago to US$114 per barrel.

The increasing substitution of natural gas for coal in the United States reduced the price of coal and, consequently, caused the forecasts for the price of that commodity to be revised downwardly. Similarly, the anticipated increase in the supply of coffee from Brazil pushed the forecasted prices down. The projections for the price of gold and ferronickel increased mildly.

Therefore, in 2012 and with the exception of oil and gold, a moderation in international prices with respect to those of the previous year is expected; however, they would remain at historically high levels, benefitting the country's

Table 2
Forecasts for Colombia's Main Export Commodities

Main products	2011	Forecasts for 2012 Scenario			Forecasts for 2013 Scenario		
		Minimum Expected	Central	Maximum Expected	Minimum Expected	Central	Maximum Expected
Coffee (ex dock) (dollars per pound)	2.87	2.00	2.23	2.50	2.00	2.27	2.50
WTI Oil (dollars per barrel)	95.0	95	104	110	90	105	115
Oil Averagea/ (dollars per barrel)	95.0	105.0	114.0	120.0	100.0	112.5	122.5
Coal (dollars per ton)	105.3	84.0	90.6	95.0	76.0	83.0	90.0
Ferronickel (dollars per pound)	3.28	2.76	2.99	3.23	2.64	2.87	3.10
Gold[b/] (dollars per troy ounce)	1,573	1,819	1,684	1,549	1,839	1,703	1,567

a/ Corresponds to the simple average between the benchmark prices of Brent and WTI oil. In 2012, these prices were US$124 and US$104 per barrel, respectively.
b/ Gold is assumed to be a safe haven, so its price is higher in the scenario that implies greater uncertainty (minimum expected).
Sources: Bloomberg; Banco de la República calculations

terms of trade. A reduction in all international prices (except for gold) is anticipated for 2013.

B. BALANCE OF PAYMENTS

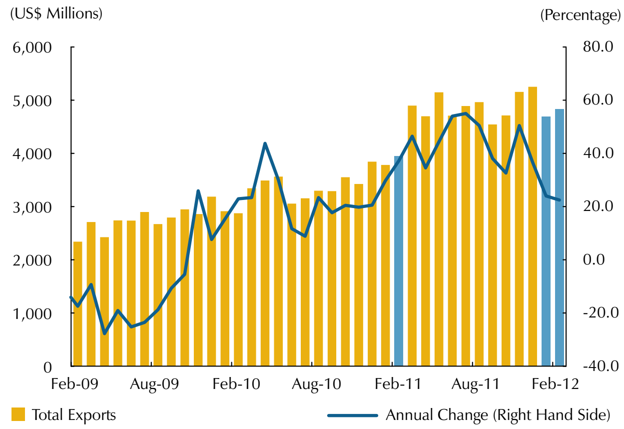
The current account deficit continued to widen during the final quarter of the year and came to US$9,980 million (m) (3.0% of GDP) in 2011 as a whole. This imbalance is explained by net external outlays of US$15,820 m for factor compensation and US$4,621 m for the trade in services. These amounts were offset, in part, by net income from goods exports (US$5,514 m and current transfers (US$4,948 m).

Compared to amount posted in 2010 (US$8,760 m), the increase in the deficit originated primarily with the rise in imports of goods and services (US$14,679 m), particularly intermediate and capital goods, as well as the increase in outlays to remit profits of firms with foreign investment in Colombia (US$4,422 m), especially from those in the mining, energy, manufacturing and financial sectors. For its part, the merchandise trade balance registered US$3,274 m more of a surplus than in 2010, mainly due to the increase in exports of oil and derivatives (US$11,471m).

The current account in 2011 was funded with US$13,234 m in resources from foreign direct investment (FDI), US$8,202 m from the foreign investment portfolio and US$5,579 m in foreign loans. However, these inflows were partially offset by outflows of Colombian capital to form US$13,693 m in assets outside the country. The sum of the aforementioned factors created a capital and financial account surplus of US$13,322 m (4% of GDP), which was higher than surplus registered in 2010 (US$11,770 m).

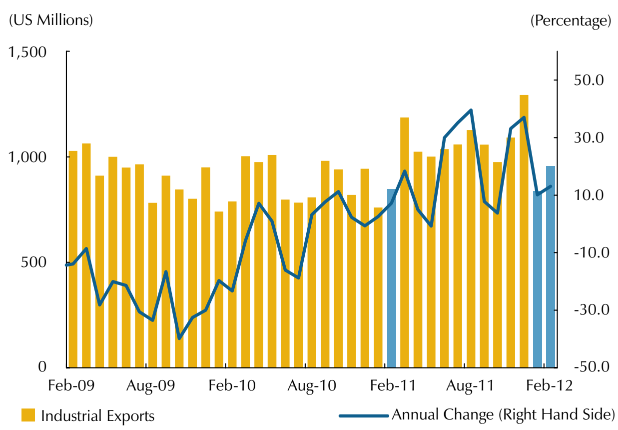
The information available for the year to date allows for some inferences on the performance of the trade balance, remittances and capital flows, according to the foreign exchange balance. Colombian exports and imports continued to

Graph 12
Total Exports
(Monthly)



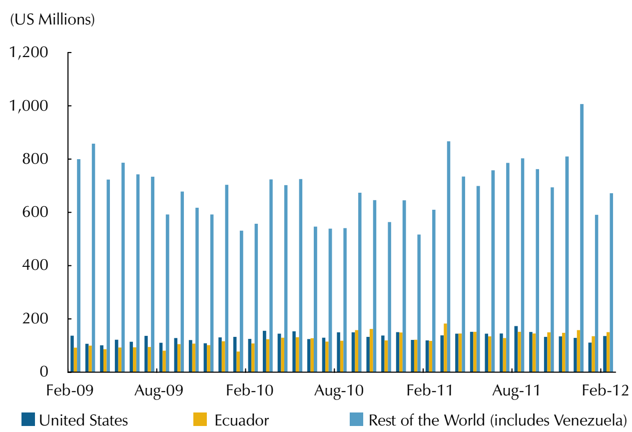
Source: DANE

Graph 13
Industrial Exports Excluding Commodities[a/]
(Monthly)



a/ Excluding coffee, oil derivatives, ferronickel and gold
Source: DANE

Graph 14
Industrial Exports Excluding Commodities to the United States, Ecuador and the Rest of the World[a/]



a/ Excluding coffee, oil derivatives, ferronickel and gold
Source: DANE

exhibit good momentum in spite of the uncertainty in international markets. As part of the cumulative figure for the first two months of 2012, DANE records show a positive trade balance of US$1,016 m, which is 77.6% more than the year before (US$572 m). This is a consequence of US$4,763 m in exports in dollars, which represent an annual expansion of 23.3% (Graph 12), coupled with US$4,255 m in imports (FOB[1]) in dollars, on average 4,255m, which rose 18.9% with respect to those on records for the same period the year before.

In January and February, mining commodity exports (coal, ferronickel, gold, oil and its derivatives) exhibited an average annual increase of 33.7% and represented 73% of the value of total exports. The strong expansion in these sales is explained primarily by higher prices than those observed during the same period in 2011, while the quantities exported remained on an upward trend. Regarding the main agricultural products (coffee, bananas and flowers), their sales overseas reflected an average annual decline of 21%, especially due to fewer coffee exports.

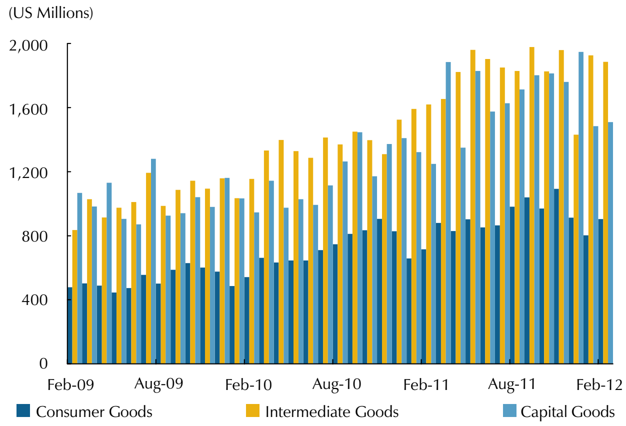
Industrial exports[2], which account for approximately 18.8% of the total, rose 12% annually (on average) in the first two months of the year as a result of larger export volumes (Graph 13). By destination, these sales in annual terms rose 53.4% to Venezuela, 19.1% to Ecuador, 2.5% to the United States and 6.2% to the rest of the world (Graph 14).

During January and February, FOB imports in dollars continued to grow at a good rate. This performance was the result of increased purchases of consumer goods, which rose at an average annual rate of 24.3%, intermediate goods (especially those targeted to the

1 In contrast to the balance of payments measurement, which considers the FOB value of imports, the GDP calculations, based on national accounts, use CIF imports, which include the cost of freight and insurance. The average total value of the latter, in dollars, came to US$4,474 m during January and February 2012, with an annual increase of 18.6%.

2 These exports exclude commodities such as coffee, oil derivatives, ferronickel and gold.

Graph 15
Import Goods (FOB)



Source: DANE

industry), which were up by 18.7%, and capital goods for industry, which increased by 18.5% (Graph 15).

So far this year to February, remittances from Colombian workers abroad exhibited an annual drop of 2.6% due to the deterioration in economic conditions in several developed countries, especially Spain, which is an important source of these resources. The foreign exchange balance between January and March[3] shows considerable momentum in the influx of private capital (mainly from FDI), thus maintaining the upward trend seen in previous months. These inflows, however, were offset by outlays caused by an increase in foreign direct investment by nationals.

What is described above, coupled with the forecast intervals for external variables and local growth (presented in various sections of this report), suggest a widening of the current account deficit in 2012 with respect to the one observed in 2011. In fact, it may be between 3.3% and 3.7% as a share of GDP, with imports in dollars growing in a range of 8% to 20% and exports increasing between 5% and 15% annually. The assumptions with respect to income from current transfers[4] and FDI vary according to the scenario. For 2013, a reduction in the current account deficit is expected, somewhere between 3.1% and 3.5% of GDP; it would continue to be financed mainly by FDI inflows and external resources from the public sector.

3 Although the capital flows registered in the foreign exchange balance do not exactly match those recorded in the balance of payments, as the former refer only to the inflows and outflows of currency, they give an idea of the tendency in capital flows.

4 Workers' remittances are the main component of current transfers. The behavior of this component will depend of the performance of the economies where these resources originate (the United States, Venezuela and Spain).

Box 1
RECENT MOMENTUM IN INDUSTRIAL EXPORTS

Joan Camilo Granados
Mónica Mahecha*

Colombia's foreign sales are concentrated heavily on commodity exports. In 2011, shipments of oil and its derivatives, coal, ferronickel, gold, bananas and flowers accounted for 78% of total exports. These sales tend to be very dependent on international commodity prices and, therefore, on the behavior of emerging markets, especially in Asia.

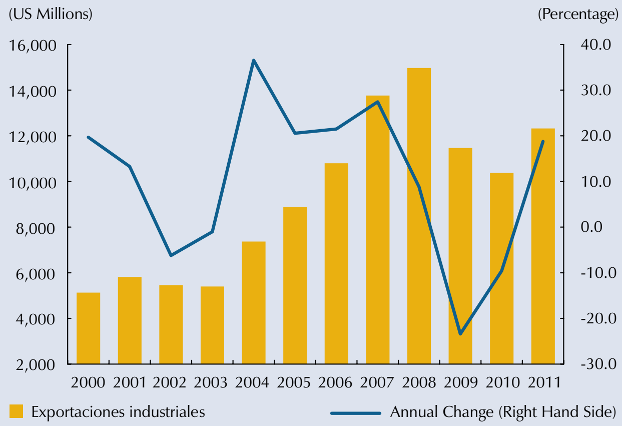
The remaining 22% corresponds to goods that have a more elaborated production process and are related to the manufacturing industry. This last group is known as industrial exports or exports excluding commodities, and tends to have an important impact on the country's productive structure .

From 1995 to 2003, sales of industrial products enjoyed a stable, but moderate rate of growth (6% on average for the 2000-2003 period). As of 2004, their behavior has been more volatile. In fact, between 2004 and 2008 these goods exhibited important increases (23% on average), but sales in the two years thereafter declined sharply, before mildly recovering in 2011.

The noteworthy expansion in sales of industrial products between 2004 and 2008 was associated with an increasing demand for imports in Venezuela, which was experiencing a boost, thanks to rising oil prices, while facing certain internal shortages. These factors, combined with geographical proximity and a set of preferential tariffs, resulted in 61% annual growth in industrial exports to Venezuela during that period. The boom in purchases by Venezuela lifted industrial exports to a record high of US$14.974 b in 2008, and that country's share of Colombian industrial exports rose to 40% as a result.

This favorable performance was reversed the following year, due to a drop in oil prices and an increase in Venezuelan import prices as a result of greater phytosanitary, administrative and tariff barriers. Thus, 2009 and 2010 saw an important contraction in exports to that country, particularly sales of vehicles, food (meat and fish), leather products, machinery and equipment, as well as clothing and textiles in general. This tendency was reversed in 2011, when growth came to 19%, but was less than the levels witnessed two years before.

Graph B1.1
Colombian Industrial Exports



Source: DANE; Authors' calculations.

1. Changes in the Relative Importance of Trading Partners

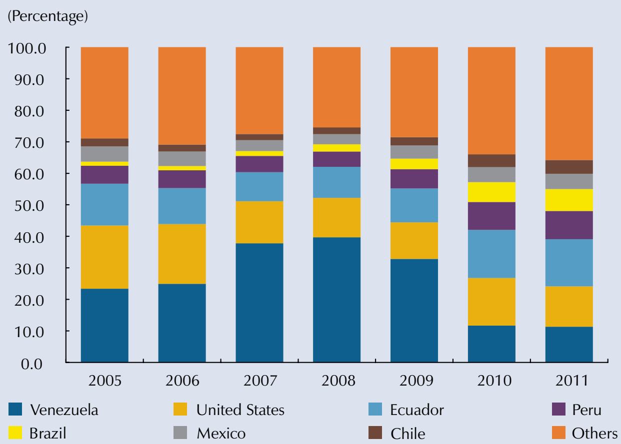
The drop in the exports to Venezuela has led to a shift in the composition of foreign sales of industrial products (Graph B1.2); thus, countries belonging to the Latin American Integration Association (ALADI in Spanish), such as Ecuador, Peru and Brazil, increased their share of Colombian exports, whereas the Venezuelan share declined significantly, although it still accounts for a non-negligible portion of the trade in industrial goods (11.33%). Meanwhile, the importance of the United States has fallen slightly, whereas that of other trading partners has increased, going from 28% in 2005 to 35% in 2012, conveying a diversification in the markets for these products.

In fact, a look at exports of industrial goods to all other destinations (Graph B1.3) shows they tended to increase during the last decade and reached historic highs in 2011. Graph B1.4 indicates exports in dollars to the ALADI countries have expanded significantly. The products shipped to these destinations are chemicals, food and beverages, rubber and plastic products, paper, vehicles and textiles.

Additional to the above, it also worth highlighting that industrial exports to the United States exhibited a reduction with respect to the levels observed in 2006, and their annual variation was 0% in 2011. The performance of these sales explains much of the drop in industrial exports during 2009, which was caused mainly by a reduction in the demand for clothing, chemicals, metals and non-metallic minerals, as a result of the global economic slowdown.

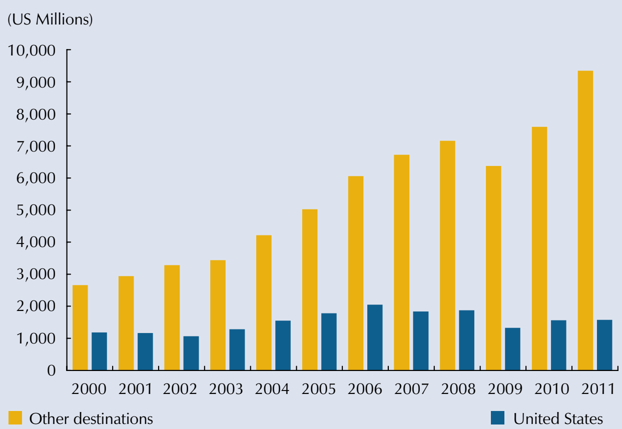
* The authors are a professional and a student intern of the Programming and Inflation Department, in that order. The opinions expressed are solely the responsibility of the authors and do not involve Banco de la República or its Board of Directors.

Grah B1.2
Colombian Industrial Exports, by Destination (Share)



Source: DANE

Graph B1.3
Colombian Industrial Exports, Excluding Venezuela

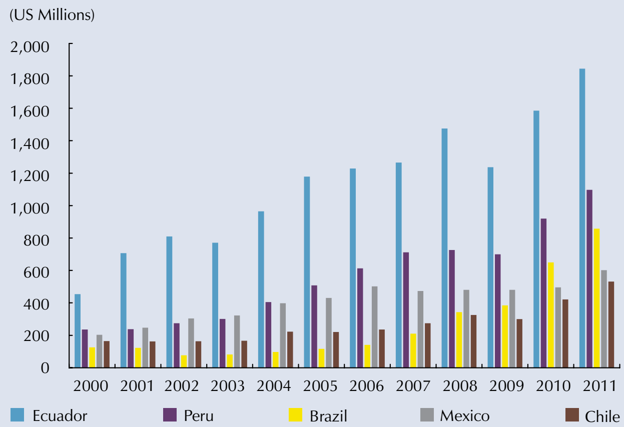


Source: DANE

2. Composition of Industrial Exports, by Product

The structure of industrial exports, by product, also has experienced major changes since 2008. In particular, there has been an increase in sales of chemical products (polypropylene, perfumes, medicines and beauty items), as well as food (sugar, candies and other food products). The principal destinations were Ecuador, Brazil, Peru, Venezuela and Mexico. It is worth highlighting, as mentioned in the previous Inflation Report, that these products have allowed for a slight recovery in industrial exports to Venezuela, which explains the annual growth of 15% in 2011.

Graph B1.4
Colombian Industrial Exports, by Destination



Source: DANE

3. Performance of the Sectors Most Affected by the Loss of Markets in Venezuela

Considering the average sales between 2006-2007 and 2010-2011, it is evident that the sectors most affected by the reduction in sales to Venezuela were those producing automobiles, clothing and textiles, machinery and equipment, and footwear and other leather manufactured goods (Table B1.1).

These sectors have seen their sales to Venezuela decline; they were 48% on average, but have fallen to 13% in the last two years. When examining whether or not these exports were absorbed by other countries, one sees that sales of food and beverages, automobiles and machinery and equipment rose; however, only the first sector mentioned was able to offset the fall in the sales to Venezuela.

Sales in the other affected sectors (footwear and leather manufactured goods and clothing and textiles) have experienced a shift in composition with respect to their trading partners, but have not increased enough to allow for a full recovery. Even so, it is worth noting that exports from all these sectors to other destinations registered a positive annual change in 2011 (21.6% on average).. This trend continued during the first quarter of 2012.

Table B1.1
Exports of the Sectors Most Affected by the Reduction in Trade with Venezuela
(US$ Million FOB, CIIU Classification, 3rd Revision)

Sector		Annual Average Exports		Change	
		2006-2007	2010-2011	Absolute	Porcentage
Automobile	Venezuela	747.0	32.9	(714.0)	(95.6)
	Others	195.9	348.3	152.5	77.8
Footwear and Leather Manufactured Goods	Venezuela	152.6	20.8	(131.7)	(86.3)
	Others	198.0	223.6	25.6	13.0
Clothing and Textiles	Venezuela	734.6	239.9	(494.7)	(67.3)
	Others	909.3	822.7	(86.6)	(9.5)
Machinery and Equipment	Venezuela	177.3	66.0	(111.3)	(62.8)
	Others	217.4	317.6	100.3	46.1
Food and Beverages	Venezuela	513.2	161.1	(352.1)	(68.6)
	Others	1.231.5	1.767.7	536.2	43.5

Source: DANE.

II. Domestic economic growth: the current situation and short-term outlook

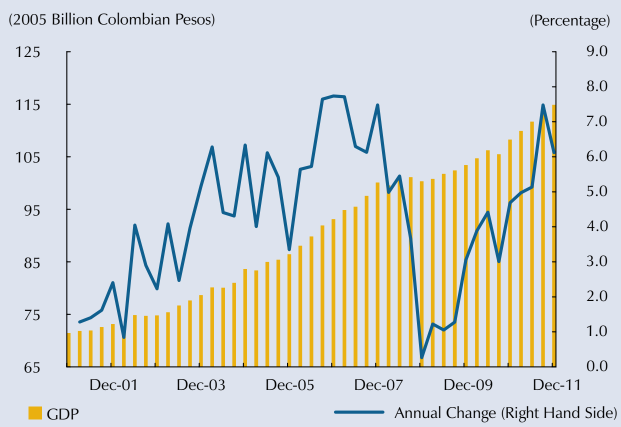
The Colombian economy grew 6.1% in the fourth quarter of 2011. This meant an expansion of 5.9% in 2011, which is one of the highest rates on record since 2000.

The first quarter of 2011 is expected to see the economy perform well, boosted mainly by private consumption. Investment would have slowed.

As for the different economic activities, the performance of the commerce and construction would have been a highlight and would have partly offset the slow start of the year in sectors such as industry.

A. GDP in the fourth quarter of 2011 and in all of 2011

Graph 16
Gross Domestic Product
(Seasonally Adjusted)



Source: DANE

The results for GDP growth in the fourth quarter of 2011, published by the National Department of Statistics (DANE in Spanish), confirmed the good performance of the Colombian economy in 2011. In that quarter, economic activity rose by 6.1% with respect to the level registered for the same period in 2010, which means 5.9% GDP growth throughout the year (Graph 16). Both figures were in the upper part of the forecast range presented in the previous *Inflation Report*. Moreover, the rate for 2011 was the third highest since 2000, surpassed only by the figures for 2006 and 2007, when the economy was experiencing a boom. In addition to publishing the figure for GDP, DANE revised its growth rate for 2009 from 1.5% to 1.7%, and for 2010 from 4.3% to 4.0%.

In 2011, the main driving force of economic growth was domestic demand, which rose by 8.8% thanks to several factors; namely, low interest rates in real terms, a high level of confidence among the economic agents, an abundant flow of foreign investment; high terms of trade, and relatively low risk premiums, despite the global economic turbulence created by the European situation in the second half of the year.

Thus, domestic demand accelerated for a second consecutive year following the mild growth observed during the 2009 crisis (Table 3). This expansion surpassed the average since 2000, and can be compared only to the rates in 2006, when the economy was clearly experiencing a boom. Nonetheless, and similar to almost all the other GDP components, domestic demand in the fourth quarter exhibited an annual variation that was slightly below the average for the previous three quarters.

In 2011, both components of domestic demand (consumption and investment) contributed equally to economic growth. Household consumption, which constitutes more than 66% of the economy, grew 6.5% in 2011. This figure was higher than the one observed in 2010 and is only less than the rate seen in 2007.

Table 3
Real Annual GDP Growth, by Expenditure
(Percentage)

	2010	2011				2011	Contributions to Annual Growth for 2011
	Full year	I Qtr.	II Qtr.	III Qtr.	IV Qtr.	Full year	
Total Consumption	**5.1**	**5.0**	**6.8**	**5.9**	**5.5**	**5.8**	**4.8**
Household Consumption	5.0	5.5	7.8	6.7	6.1	6.5	4.3
Non-durable Goods	1.8	2.4	6.2	4.9	3.7	4.3	0.9
Semi-durable Goods	9.8	13.6	19.4	13.8	13.7	15.1	0.9
Durable Goods	20.9	36.7	34.4	19.6	8.5	23.9	1.6
Services	3.5	3.3	4.4	5.1	5.3	4.6	0.7
Final Government Consumption	5.5	2.4	2.6	2.6	3.0	2.6	0.4
Gross Capital Formation	**7.3**	**16.0**	**18.3**	**22.4**	**12.4**	**17.2**	**4.2**
Gross Fixed Capital Formation	4.6	12.7	13.8	23.7	16.5	16.6	4.0
Agriculture, Forestry, Hunting and Fishing	5.5	3.0	3.1	1.9	1.3	2.3	0.0
Machinery and Equipment	20.2	26.7	28.9	28.0	20.2	25.8	1.9
Transport Equipment	12.0	51.9	52.2	40.5	39.1	45.2	1.3
Construction	(2.0)	1.1	5.2	13.2	2.3	5.3	0.3
Civil Works	(2.0)	(10.8)	(13.1)	22.2	15.5	6.7	0.5
Services	9.6	5.7	6.3	8.9	1.4	5.5	0.0
Domestic Demand	**5.6**	**7.9**	**9.7**	**9.8**	**7.9**	**8.8**	**9.4**
Export Total	**1.3**	**10.1**	**7.6**	**12.3**	**15.8**	**11.4**	**1.8**
Import Total	**10.5**	**21.1**	**24.7**	**20.3**	**20.1**	**21.5**	**(4.9)**
GDP	**4.0**	**5.0**	**5.1**	**7.5**	**6.1**	**5.9**	**5.9**

Source: DANE; Banco de la República calculations

Throughout the previous year, household purchases were boosted mainly by the acquisition of durable and semi-durable goods, which increased approximately 20% on average. Non-durable goods and services behaved more moderately, rising around 4.5%, which is still below the average since 2000. When analyzing the performance during the fourth quarter of 2011, one sees the slowdown in household consumption mostly obeys the decline in annual growth in durable goods, which went from an increase of 35% in the first half of the year to 14% in the second. This is closer to the average for the series since 2000.

In contrast to the momentum in private consumption, government expenditure exhibited low growth in 2011; in fact, it equaled half the average since 2000. This type of spending rose at a similar rate during the first three quarters and accelerated mildly in the fourth.

Investment grew 17.2% in 2011, driven by an important expansion in gross fixed capital formation (16.6%) and by considerable inventory accumulation, which was the highest in five years. The increase in investment in fixed capital was the second highest since 2000, inferior only to the rate in 2006. The main boost came from investment in transport equipment and machinery, which increased 35.5% on average. Building construction and civil works exhibited moderate growth, below the average since 2000; however, it did accelerate mildly in the fourth quarter.

Regarding international trade, 2011 was a year of record figures for in import and export growth in constant pesos. Last year, foreign purchases grew 21.5%, driven by capital goods, raw materials and consumer goods, in that order. As a result, imports completed two years of a vigorous recovery , following the drop witnessed in 2009, and their share of GDP rose from 21% in that year to 26% in 2011. For their part, exports grew 11.4% last year as a result of good sales of coffee, oil and ferronickel. Sales of manufactured products also were satisfactory, especially during the second half of the year; however, they did not grow to the same extent as sales of the aforementioned goods.

On the supply side, the most dynamic productive activities in 2011 were mining, transport and communications, and commerce, restaurants and hotels, in that order (Table 4). As in the previous four years, the mining sector exhibited the greatest pace of growth (14.3%), boosted by the production of coal and oil (which did not reach the target of a million barrels a day, but was very close to this number by the end of the year). Oil and mineral extraction continued to be favored by high international prices and by foreign investment in this sector.

The transportation and communications sector posted its highest growth rate since 2007 (6.9%), driven by telecommunications (due to an important expansion in Internet and subscription television) and by different types of transportation, particularly air transport. The good performance of commerce, restaurants and hotels (5.9%) was largely due to the behavior of retail sales, which was consistent with the favorable development in household consumption.

Table 4
Real Annual GDP Growth, by Economic Activity

Economic Activity	2010 Full year	2011 I Qtr.	2011 II Qtr.	2011 III Qtr.	2011 IV Qtr.	2011 Full year	Contributions to Annual Growth for 2011
Agriculture, Forestry, Hunting and Fishing	1.0	7.8	1.6	1.7	(2.0)	2.2	0.1
Mining and Quarrying	12.3	9.2	10.8	18.9	18.1	14.3	1.0
Manufacturing Industry	2.9	3.8	2.0	5.6	4.1	3.9	0.5
Electricity, Gas and Water	1.2	(0.8)	1.9	3.4	2.7	1.8	0.1
Construction	(1.7)	(1.9)	(3.4)	18.4	10.7	5.7	0.3
Buildings	(2.1)	1.4	5.1	12.4	1.6	5.0	0.1
Civil Works	(1.3)	(10.6)	(13.1)	21.9	15.1	6.5	0.1
Commerce, Repairs, Restaurants and Hotels	5.1	5.7	6.6	6.0	5.3	5.9	0.7
Transportation, Storage and Communication	5.0	6.4	7.0	8.1	6.0	6.9	0.5
Financial, Real Estate and Business Service Establishments	2.9	4.3	5.8	6.4	6.4	5.8	1.1
Social, Communal and Personal Services	4.8	2.4	2.9	3.7	3.2	3.1	0.5
Aggregate Value Sub-Total	3.8	4.4	4.4	7.3	5.9	5.5	5.0
Taxes Minus Subsidies	6.4	10.5	13.5	10.3	9.0	10.8	1.0
GDP	4.0	5.0	5.1	7.5	6.1	5.9	5.9

Source: DANE; Banco de la República calculations

Graph 17
GDP of the tradable Sector of the Tradable Sector Excluding Mining and of the Non-tradable sector

Source: DANE; Banco de la República calculations

Other activities that contributed to growth in 2011 were those related to financial, real estate and business service establishments, industrial production and construction. In the latter, it is worth noting the growth of the residential segment, especially in terms of social housing. It also is important to mention that no type of economic activity posted a contraction in aggregate value during 2011.

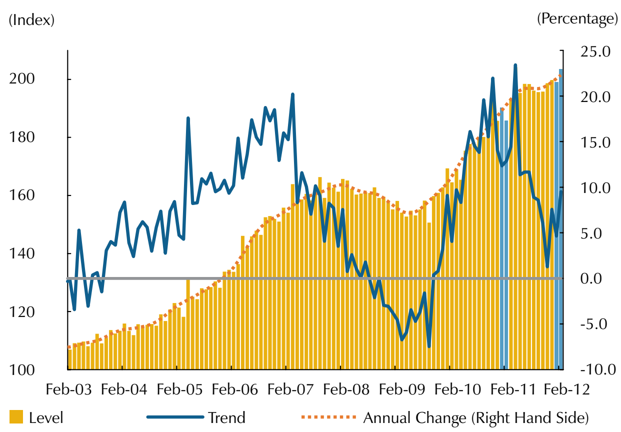
Therefore, GDP in the tradable sectors grew 6.8% during 2011, which is the highest rate in the last twenty years and above the one in the non-tradable sector, where growth (5.4%) was still above the average since 2000. The remarkable performance of tradable GDP was due largely to the mining sector; without it, tradable GDP growth came to only 4.9% (Graph 17).

B. GDPSHORT-TERM OUTLOOK

The good behavior of the latest indicators for the real sector, coupled with the presence of a macroeconomic environment that remains favorable, suggest the economy performed well during the first quarter of 2012. In these early months of the year, the country continued to experience good flows of foreign direct investment (as mentioned in the previous chapter), low risk premiums (despite the higher perception of risk in the financial markets), dynamic performance with respect to credit, and levels of consumer and business confidence that were above historical averages.

Until mid-April, fears of contagion in terms of the Colombian economy being affected by the European crisis, which emerged in mid-2011, have not materialized to any substantial degree. The effect of the international situation would have been felt in the form of a slowdown in the growth of exports excluding commodities[5]. However, momentum that would have continued to come from domestic demand, allows for the expectation that the expansion in GDP during the first three months of the year will exceed the average growth since 00, but will be less than the increase posted the end of last year.

Graph 18
Monthly Retail Sales Excluding Fuel
(Seasonally Adjusted)



Source: DANE

The contribution of domestic demand to the momentum in GDP during the first quarter would have been due mainly to the good performance of household consumption. In the first months of the year, this variable would have experienced an important increase, based on the evolution of various indicators such as those for retail sales, imports of consumer goods and credit growth, coupled with the developments in the labor marker. According to DANE, retail sales for January and February, in constant pesos, rose at an annual rate of 7.0%, which represents an acceleration with respect to their performance in the final quarter of 2011 (Graph 18).

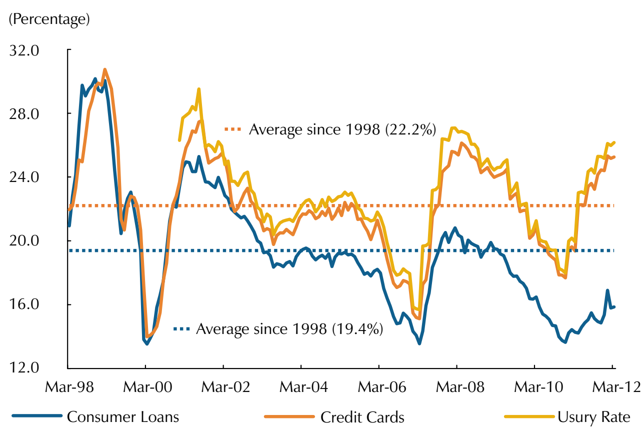
At February, as in the fourth quarter of last year, there was a slowdown in vehicle sales; however, it was expected due to the high levels of these sales in the first nine months of 2011. The data available so far this year indicates there is still an upward trend in sales. If it continues throughout the remainder of 2012, one can still expect this item to perform well. On the other hand, when vehicle sales are excluded, sales of the other products grew 8.3% on average in January and February, which is a significant rate of increase.

The good performance of consumption in the first part of the year was reflected in the momentum in of imports of consumer goods in CIF dollars[6] . DANE reported these had grown 23.4% on average during January and February, accelerating the already good performance witnessed in the fourth quarter of 2011 (14.6%).

5 Coffee, coal, oil and derivatives, flowers and bananas.

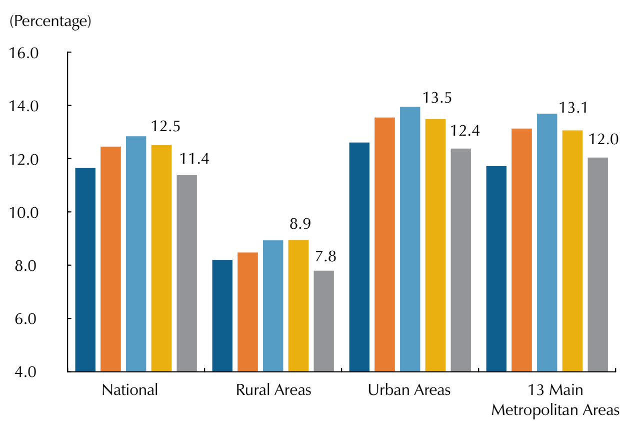
6 See footnote 1.

Graph 19
Real Household Interest Rates
(Deflated with the Non-food CPI)



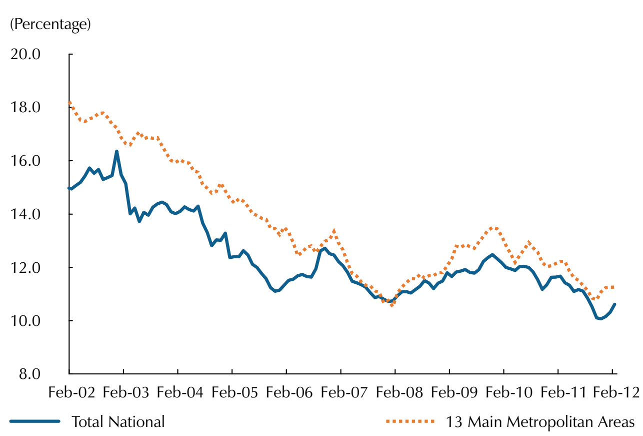
Source: DANE

Graph 20
Unemployment Rate
(December-January-February Moving Average)



Source: DANE (GEIH).

Graph 21
Unemployment Rate, National Total and for the 13 Main Metropolitan Areas (Seasonally Adjusted Moving Average)



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

The evolution in consumer loans, in real terms, which rose at high annual rates (close to 20%) during the first quarter, points to positive behavior for private consumption. However, the rate of expansion in credit has slowed for the second quarter in a row. To some extent, this is explained by the drop in the demand for loans reported by financial entities[7]. The less lax monetary policy that has been implemented gradually since February 2011, would account for part of this moderation.

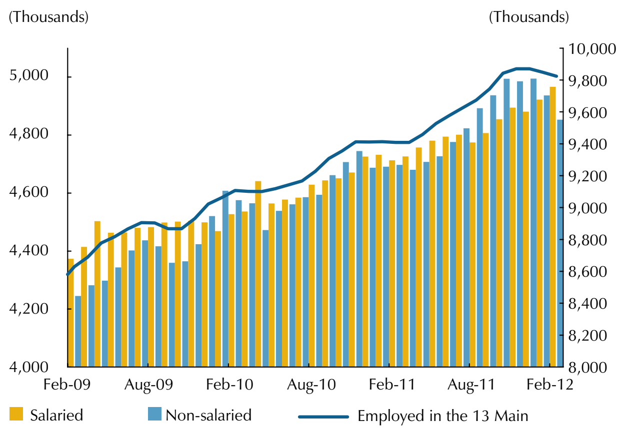
Despite the adjustments in the intervention rate, the pass-through to consumer interest rates has not been complete, thereby allowing them to remain at relatively low levels and to continue to stimulate credit and consumption. Specifically, taking the average into account, the consumer interest rates in real terms was 16.2% during the first quarter, which was below the rates observed since 1998 but above the one last year (14.8%). The real rates on credit card lending (which account for less of a share of consumer loans) continued to increase, along with the rise in the usury rate (Graph 19).

The performance of employment in the early months of the year also explains the good behavior of consumption. The indicators suggest an improvement in the labor market with respect to last year. The unemployment rate (UR) was 11.4% nationwide during the moving quarter ended in February and 12.0% for the major metropolitan areas. These figures are significantly lower than the ones seen in the same period of the previous year (Graph 20). Even though the levels obtained using seasonally adjusted data show no decline with respect to the fourth quarter, they are lower than those observed throughout most of 2011 (Graph 21).

The number of employed, both nationwide and in the 13 major metropolitan areas, continued to grow at a steady annual rate near 5.0%. Although the data on employed in the metropolitan areas shows the levels came to a standstill with respect to the end of the previous year, this was due exclusively to the drop in non-salaried

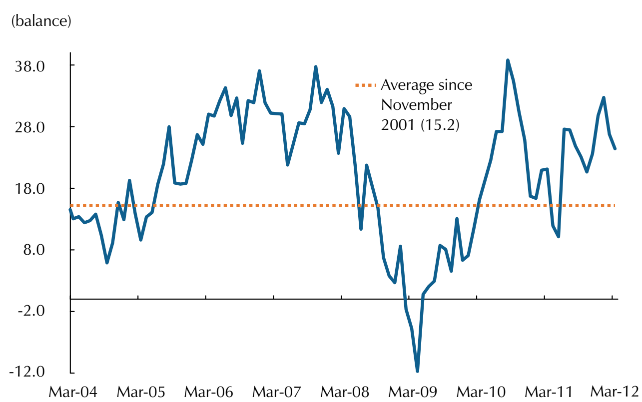
7 See "Reporte de la Situación de Crédito en Colombia," March 2010.

Graph 22
Salaried vs. Non-salaried Employment and Total Employed (13 Main Metropolitan Areas, Seasonally Adjusted Moving Average)



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

Graph 23
Fedesarrollo Consumer Confidence Index



Source: Fedesarrollo

employment, which mostly pertains to informal and poor- quality jobs. In contrast, salaried work continued to expand at a remarkable pace (4.7% annually in the first two months) (Graph 22). With this behavior, the number of salaried workers again surpassed the number of non-salaried workers, signaling an improvement in the quality of the employment, which tends to be associated with good performance in consumption.

The evolution of these indicators has kept consumer confidence high. As a matter of fact, according to Fedesarrollo, consumer confidence in the first quarter of 2012 was better than it was in the previous quarter and surpassed the average since 2001, despite several setbacks in February and March (Graph 23). This performance mainly explained mainly by an improvement in the perception of current economic conditions and, to in a lesser extent, by increases in short and medium- term expectations.

With respect to investment, which is the other component of domestic demand, the information is scarcer. Nonetheless, it still offers some favorable perspectives. According to available indicators, the growth in total investment would have slowed in the first quarter of the year, following the elevated rates posted throughout 2011. This can be concluded from the recent change in imports (in CIF dollars) of capital goods, which went from 39.2% growth in the final quarter of 2011 to 16.5%, on average, in January and February of this year. Additionally, nationwide production of these goods showed no significant changes with respect to the last part of the previous year. It is also possible that first-quarter announcements concerning the Free Trade Agreement (FTA) with the United States taking effect towards the middle of the year may have begun to produce somewhat more of a decline in inventories than is usual during this part of the year.

On the supply side, the balance of several available indicators of activity is mixed. On one hand, 2.6% average annual growth in industrial production during January and February confirms the evolution experienced by this sector during the last few quarters, with slow expansion that was less than growth in the economy as a whole (Graph 24). This diagnosis is ratified by the moderate increase in the demand for industrial energy during the early months of the year and by the relatively stable levels of the Fedesarrollo indicators of orders and inventories by February (Graph 25).
On the other hand, coffee and oil production were affected by supply shocks during the first quarter, which will result in less growth in the agriculture and mining sectors.

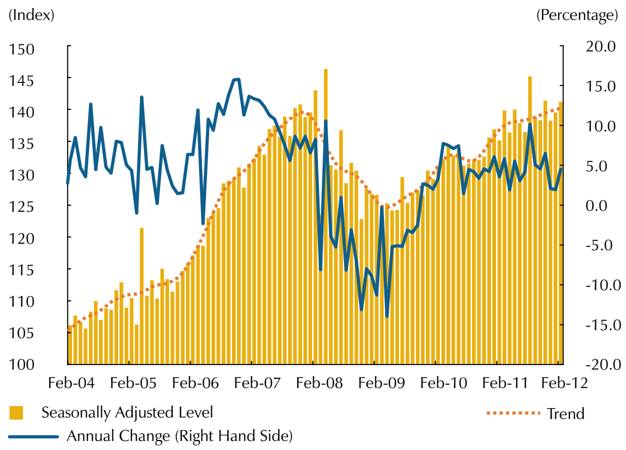
Quarterly coffee production fell to the lowest level in the last forty years, due to the adverse impact of heavy rains and the plantation renewal program. Oil production also experienced a setback in quarterly terms for the first time since 2003, as result of problems with law and order.

Nonetheless, despite the supply shocks to mining and agricultural GDP, as well as the modest degree of global growth, the high pace of growth in other sectors such as commerce, restaurants and hotels, transportation and telecommunications and, especially, construction (of both buildings and infrastructure, where there is a low basis of comparison) is expected to continue, thereby offsetting the slowdown in the first two sectors. The rise in cement production during the first quarter (8.3% annual growth) and the increase in real income for hotels during January and February (12.4% annual growth) support this outlook.

The foregoing indicates Colombia's GDP could be between 4.5% and 5.9% in the first quarter of the year. In addition to the aforementioned factors with respect to consumption and investment, a significant slowdown in export and import growth rates is expected during the period, particularly in the case of the latter. Even so, these two components would have continued to demonstrate positive momentum similar to their averages since 2000. As for the different types of economic activity, the most dynamic sectors would be construction and mining, even despite the slowdown in oil production as a consequence of the momentum in the extraction of coal and metallic minerals.

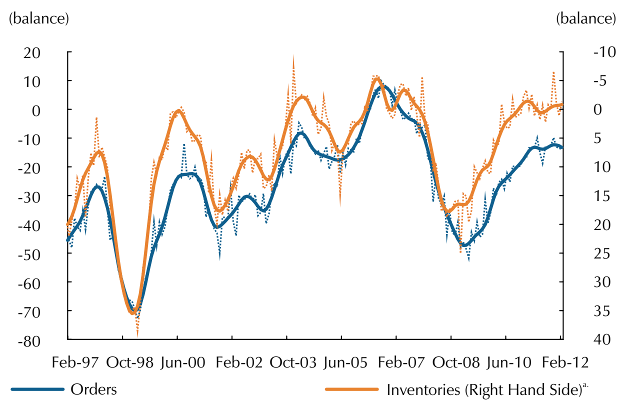
Finally, the leading indicator of economic activity in Colombia (Imaco), calculated on the basis of several sector variables using the information available up to February, points to what appears to be a break in the trend towards accelerated growth of the economy (Graph 26). This is consistent with the forecast range for the first quarter, as considered in this Report. However, the level of this indicator points to a figure near the lower part of the range. Nonetheless, it is important to note this methodology has underestimated the economic growth figures in recent quarters. This can be explained by the fact that the data used is not completely representative, because it ignores key sectors such as mining and construction.

Graph 24
Industrial Production Index Excluding Coffee Threshing
(Seasonally Adjusted, Trend and Annual Change)



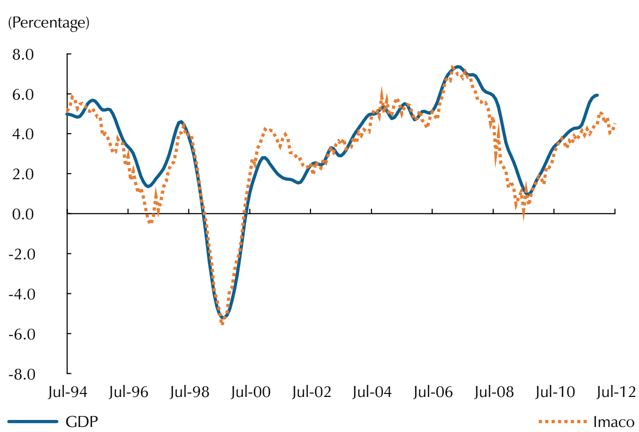
Source: DANE; Banco de la República calculations

Graph 25
Industrial Orders and Inventories



a/ Inverted Axis
Source: Fedesarrollo

Graph 26
Imaco: 5-month GDP Leading Indicator[a/]



a/ Annual accumulated growth at twelve months
Source: Banco de la República calculations.

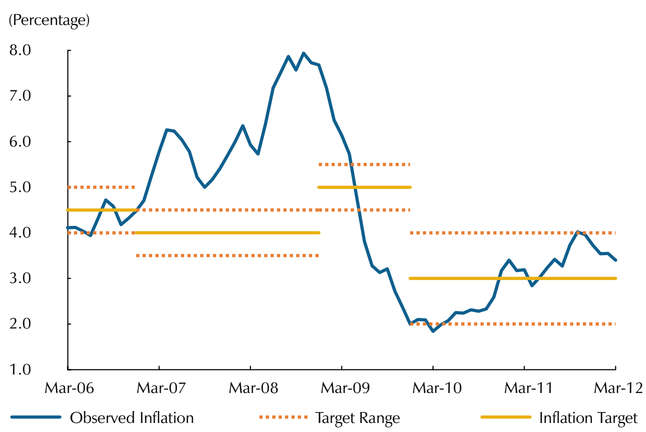
III. Recent developments in inflation

Inflation in the first quarter exhibited better than expected behavior and fell to 3.4%

Core inflation stopped increasing and stood at 3.0%.

Inflationary pressures stemming from the exchange rate declined and helped to offset some of the pressure coming from the momentum in domestic demand.

Graph 27
Annual Consumer Inflation



Source: DANE; Banco de la República

At the end of the first quarter, annual consumer inflation was 3.40%, which is below the figure observed in December of 2011 (3.73%) (Graph 27 and Table 5). So far this year, consumer inflation has moved closer to the middle of the target range established by the Board of Directors (JDBR) for 2012 (2% to 4%), thus reversing the upward trend observed between May and November 2011.

The results at March were less than the projections included in the previous report, since annual inflation was expected to remain close to the level reached at the end of 2011. This improvement in inflation extended to the main sub-baskets of the Consumer Price Index (CPI) and was the result of various factors, such as fewer exchange rate pressures than experienced three months ago, good conditions in terms of the food supply, and smaller adjustments in the prices of some regulated services. Likewise, the monetary policy adopted since February 2011, with cumulative interest rate hikes of 200 basis points (bp) by March, helped to reduce inflation expectations (as illustrated in Chapter IV of this report) and thus moderated the rise in prices.

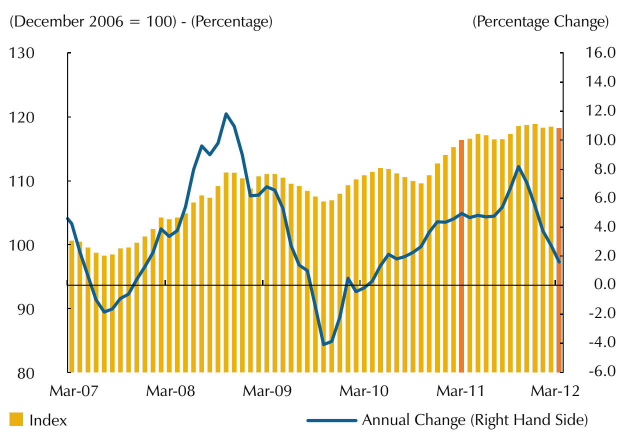
Table 5
Consumer Inflation Indicators

Description	Annual growth				Percentage-point Share in the Downswing (Year-to-date)
	Dec-11	Jan-12	Feb-12	Mar-12	
Total	**3,7**	**3,5**	**3,6**	**3,4**	**100,0**
Excluding Food	**3,1**	**3,0**	**3,1**	**3,0**	**41,4**
Tradable	3,8	0,7	0,7	0,7	9,9
Non-tradable	3,6	3,6	3,7	3,7	(6,4)
Regulated	5,8	5,3	5,6	4,9	38,2
Food	5,3	4,9	4,7	4,6	58,3
Perishable	7,7	6,4	5,7	5,2	27,8
Processed	4,5	47,1	3,9	3,7	38,6
Eating Out	5,6	5,9	5,7	5,9	(8,1)
Core Inflation Indicators					
Excluding Food	3,1	3,0	3,1	3,0	
Core 20	3,9	3,8	3,8	3,8	
CPI Excluding Perishables, Fuel and Utilities	3,2	3,0	2,9	3,0	
Inflación sin alimentos ni regulados	2,4	2,4	2,4	2,4	
Average of the Indicators	**3,2**	**3,0**	**3,0**	**3,0**	

Source: DANE; Banco de la República calculations

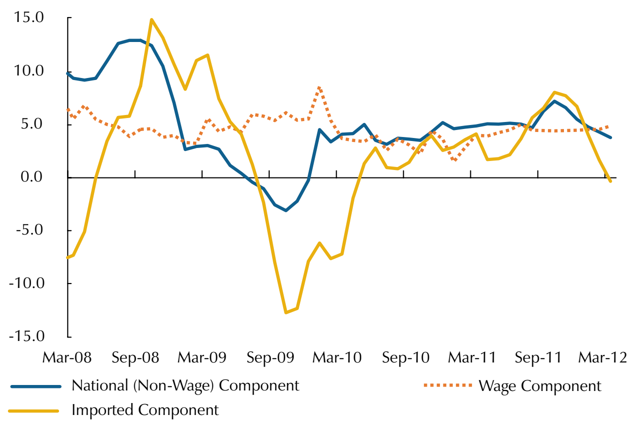
Regarding non-wage costs, the pressures that surged in the second half of last year, mainly due to depreciation of the peso, have subsided substantially in the first part of 2012. The annual change in the producer price index (PPI) fell sharply between December (5.51%) and March (1.56%) as a result of exchange rate appreciation , but also because the international price of commodities, excluding oil, posted mild increases (Graph 28). As for wage costs, the 5.8% increase in the minimum wage meant some upward pressure, although it was limited to the less-skilled jobs. In fact, with the information available in March, the pass-through of this adjustment to other segments of the labor market that demand more specialized work in activities such as commerce, manufacturing and construction, has yet to be observed. In these cases, wage adjustments were close to 4.0%. In the aggregate, the wage cost index rose by 4.5% in March, with an annual increase that was slightly higher than the one observed in December (4.0%) (Graph 29).

Graph 28
Total PPI



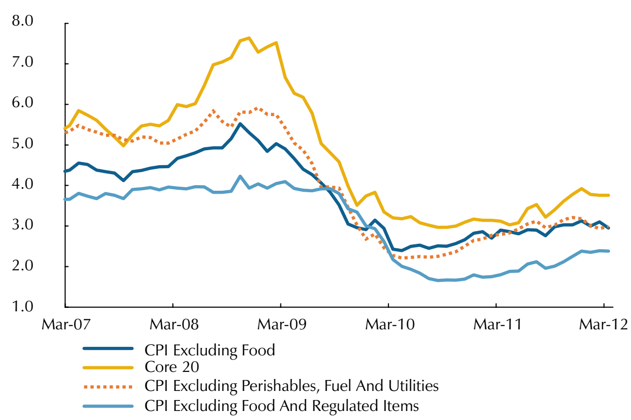
Source: DANE; Banco de la República

Graph 29
Indices of Wage Costs, Non-wage Costs and the Imported Component, Based on the Social Accountability Matrix



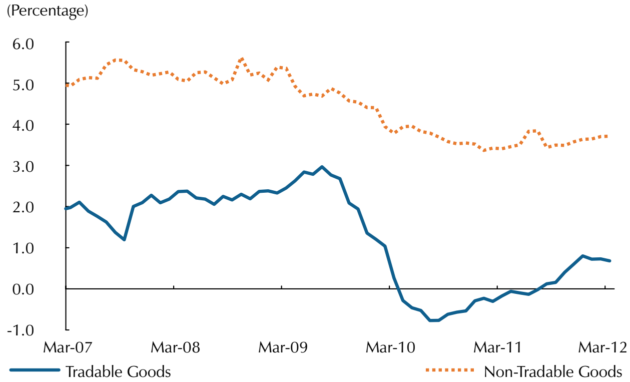
Source: Banco de la República calculations

Graph 30
Annual Core Inflation Indicators



Source: DANE; Banco de la República calculations

Graph 31
CPI for Tradables and Non-tradables, Excluding Food and Regulated Items
(Annual Change)



Source: DANE; Banco de la República calculations

The aforementioned circumstances significantly offset the upward pressures that have been witnessed so far during the year and were caused by higher international prices for fuel and by the vigor of domestic demand.

As for the consumer baskets, food drove most of the slowdown in annual inflation during the first quarter, given the downward adjustments in the prices for perishables and processed goods. Meanwhile, the behavior of regulated items and tradable goods, excluding food and regulated products, was similar. Finally, the annual change of non-tradable goods was the only one to reflect a mild increase.

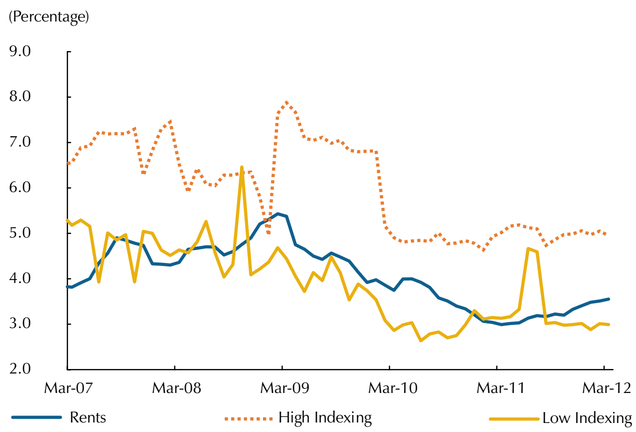
A. CORE INFLATION

Core inflation between December and March fell slightly and offset much of the increase seen in the previous year. By the end of the first quarter, the average of the four indicators monitored by Banco de la República registered 3.0%, as opposed to 3.2% in December.

The CPI excluding food and regulated items (2.38%) was the only one that did not decline during these three months; however, it continued to exhibit rates significantly below the mid-point of the target range (Graph 30). The other core inflation indicators were down with respect to the figures observed last December. In particular, the non-food CPI was 3.0%, falling 18 bp from December, while the CPI excluding agricultural food, fuel and utilities (3.0%) closed out the first quarter at the middle of the target range, while the core 20 (3.8%) continue to be the highest of all of the measurements analyzed.

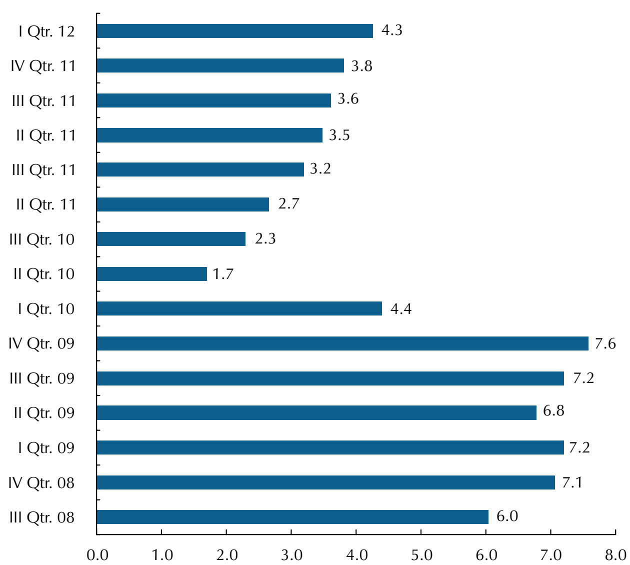
Within the non-food CPI, the sub-basket of non-tradable goods (excluding regulated items) was the only one to push annual inflation up in the first quarter, although less so than forecasted in the previous report: its annual variation went from 3.6% in December to 3.7% in March (Graph 31). This increase was a result of the acceleration in rental fees, which went from 3.4% to 3.6% during that period. Even though the rise was modest, it is important to mention this item has shown an upward

Graph 32
CPI for Non-tradables
(Annual Change)



Source: DANE; Banco de la República calculations

Graph 33
Average Increase in Rent Charged for f Unoccupied Houses Recently Rented



Source: Lonja de Propiedad Raíz de Bogotá

trend, which has been uninterrupted for a year and coincides with the recovery in domestic demand. The figures compiled by Fedelonjas ratify this behavior; , according to their measurements, new rents for the last quarters, new rents have occurred with increasing rates that were above 4.0% in the beginning of 2012 (Graphs 32 and 33).

As for the other segments of the non-tradable CPI excluding food and regulated items, namely the high and low indexed components, they exhibited minor heir annual variations and remained close to 5.0% and 3.0%, respectively (Graph 32). In the first of these subgroups, the rate continued virtually unaltered, notwithstanding the decree that made primary education free of charge[8] and the controls imposed on fees for financial services[9]. These changes were offset by the rise in health care fees (prepaid medical care, private insurance, complementary payments and protective services).

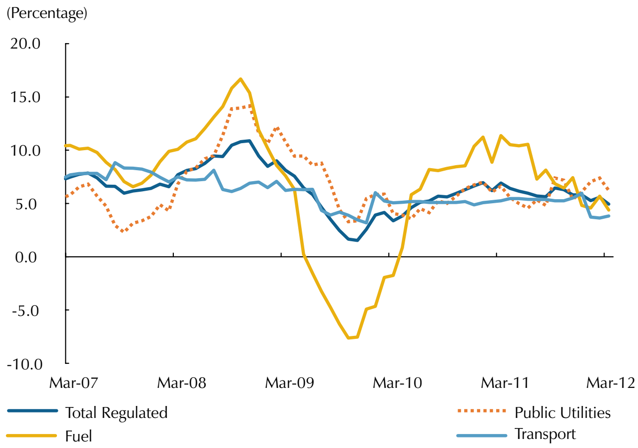
The other two CPI sub-baskets, excluding food, regulated items and tradable goods, posted annual declines. The upward inflationary pressures on the regulated CPI originated with high international fuel prices, which explain the important adjustments in the price of gas (14.5% annually). However, the increasing cost of transportation, due to the bottleneck effect resulting from the insufficient capacity of existing pipelines, also induced some price hikes for this item. Meanwhile, energy fees (7.1%) and domestic fuel prices (4.4%) exhibited important annual changes (Graph 34). In the case of the latter, the adjustments have been milder than the ones observed last year, given exchange rate appreciation.

The tradable CPI excluding food and regulated items went from 0.8% in December to 0.68% in March (Table 5 and Graph 31). This decline was unexpected and meant a significantly lower rate than the one forecasted in the last edition of the *Inflation Report*. The appreciation of the peso relative to

8 See Decree 4807 issued by the Ministerio de Educación Nacional (Ministry of Education) - (December 20, 2011)

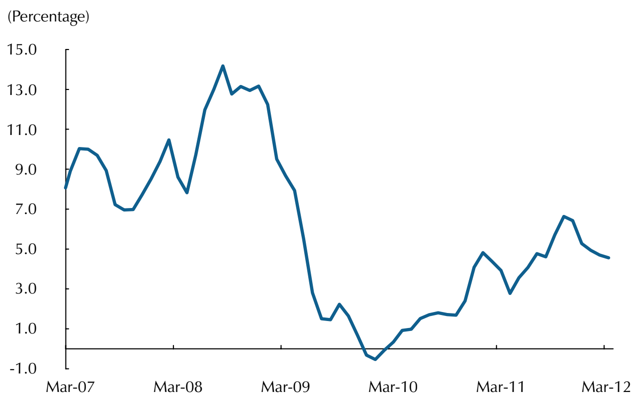
9 See Decree 4809 issued by the Ministerio de Hacienda y Crédito Público (Ministry of Finance) - (December 20, 2011)

Graph 34
CPI for Regulated Items and Its Components
(Annual Change)



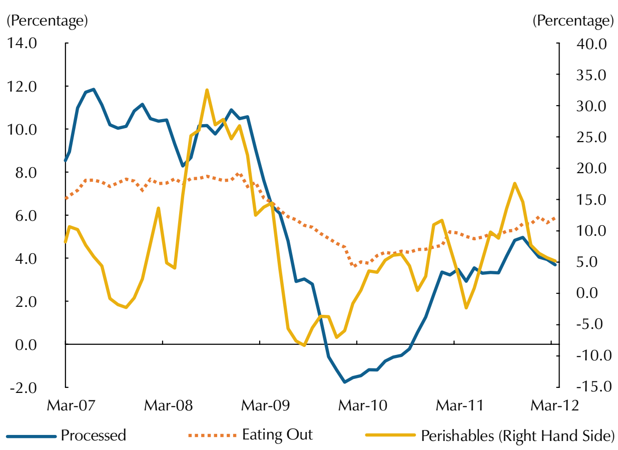
Source: DANE; Banco de la República calculations

Graph 35
Food CPI
(Annual Change)



Source: DANE; Banco de la República calculations

Graph 36
Food CPI, by Groups
(Annual Change)



Source: DANE; Banco de la República calculations

the US dollar so far this year (8.7%) favored lower price adjustments in this subgroup, thereby reversing the upward trend observed during the second half of the year. Prices for vehicles, some household appliances, communication equipment and airline tickets experienced reductions.

B. FOOD INFLATION

A significant part of the decline in of consumer inflation throughout the year was the result of less of an increase in food prices. Their annual variation went from 5.27% in the end of 2011 to 4.56% in March. The performance of this subgroup was better than anticipated in the previous edition of this report (Graph 35).

In the last three months, the prices of perishable and processed food grew less than during the same period last year, prompting a reduction in the annual change in their respective CPI: in the first case, it went from 7.7% in December to 5.2% in March; in the second, it went from 4.5% to 3.7% (Table 5 and Graph 36). This favorable performance suggests a tendency in the agricultural supply to normalize, thanks to the good climatic conditions in the first part of the year, which contrasts with the events of the two previous years. The appreciation of the peso also helped to contain increases in the prices of imported goods.

The prices of perishables such as potatoes, vegetables and legumes, which tend to be very volatile, continued to lead the reduction in the annual variation in food prices. However, the first of these items exhibited some increase in March, which suggests the downward phase in these prices has come to an end. Rice and imported cereals are the processed or semi-processed foods that contributed to the fall in inflation. Meanwhile, the increase in the cost of eating out was one of the components of the food basket that exerted upward inflationary pressure, having gone from 5.6% in December to 5.9% in March. This can be explained by the momentum in domestic demand, as well as the increase in various costs such as rental fees, the minimum wage, energy and gas.

IV. Medium-term Forecasts

The forecasted range for GDP growth in 2012 was unchanged in this report and remains between 4.0% and 6.0%.

Consumption and investment are expected to perform well this year, but less so than in 2011.

The one and two year inflation forecasts **declined.**

The cumulative increase in the intervention rate will help to ease demand-side inflationary pressures.

A. ECONOMIC GROWTH

At the time this report was written, the economic growth outlook for 2012 had improved with respect to the previous quarter. On one hand, the European recession had not worsened and the measures adopted by economic authorities seemed to be working, so some signs of recovery are expected on the second half of the year. On the other hand, the moderate setback in the Euro Zone has not spread significantly to other economies in the world, which suggests the reactivation of the United States economy will be faster than initially expected. This, coupled with good performance by the country's other trade partners throughout 2012, will provide a favorable external context for Colombia, which would allow the national economy to grow at a rate above the regional average (3.5%[10]), but below that of 2011.

Given the aforementioned international context, domestic growth in 2012 will be supported by the elevated terms of trade. However, they will be under the

10 The figure anticipated for Latin America and the Caribbean according to the International Monetary Fund (IMF), World Economic Outlook, April 2012

levels observed in the previous year. Moreover, Colombia will continue to receive inflows of FDI, as investor confidence is not expected to deteriorate significantly throughout the year. Meanwhile, the slowdown in the industrialized countries will be felt in Colombia via fewer remittances throughout the year compared to the previous one, in particular those from Spain, due to the precarious situation of that country's labor market. The forecasts mentioned below do not assume a considerable impact on GDP when the FTA with the United States takes effect during the second half of the year.

To estimate the growth of GDP and its components, several forecasting exercises were done taking into account the aforementioned balance of payment scenarios. Several assumptions on the behavior of local variables were adopted as well. In the case of government expenditure, an expansion between 3.8% and 4.8% is expected. This represents a considerable increase (almost double) with respect to the rate posted in 2011. Meanwhile, investment in civil works is expected to grow between 6.8% and 8.8%, which is higher than the rate seen last year and takes into account several factors that are mentioned below.

The different scenarios forecast in this report suggest private consumption will remain dynamic throughout 2012; however it will decelerate with respect to 2011. After the relatively high growth rate demonstrated by this variable in the first quarter of the year, as noted already in Chapter II, a lower annual pace of expansion is expected as of the second trimester. Accordingly, consumption will converge towards rates closer to the average for the last 12 years (4.0%) in response to the rise in intervention and market rates and to a slowdown in credit growth. Once again, the most dynamic components of private consumption in 2012 will be expenditure on durable goods and services, but purchases of durable goods will lose speed. Even so, they will continue to perform well and reach historically high levels, due to the elevated growth rates in 2011.

Government expenditure, as mentioned already, will register higher growth than in the previous year. Based on historical experience, public expenditure tends to accelerate after the first year of mandate, which is a point worth mentioning. Additionally, the most recent projections suggest the national government will have more resources in 2012, due to more tax revenue than in 2011[11].

A slowdown in investment also is expected and would be more pronounced than the one in consumption. Factors such as FDI will continue to boost this type of expenditure, although less so than in 2011, since the amount of anticipated growth, as mentioned in Chapter I will barely surpass the 92% increase (in dollars of gross FDI) posted last year. Even so, its performance will still be favorable.

11 Ministerio de Hacienda y Crédito Público (Ministry of Finance), Financial Statement 2012, March 2012.

On a component basis, the performance of domestic investment will be driven by less momentum in purchases of machinery and equipment for transportation, which will not affect other components. In the case of investment in transportation, growth is expected to be below the average for the last 12 years, due to the fact that firms invested heavily in this area during 2011, which implies a higher base of comparison. Nonetheless, this report might underestimate the growth in this type of expenditure, especially in the second half of the year, since the FTA with the United States could have a positive impact on these variables by reducing the cost of renewing and expanding the productive factors of the firms in different sectors of the economy.

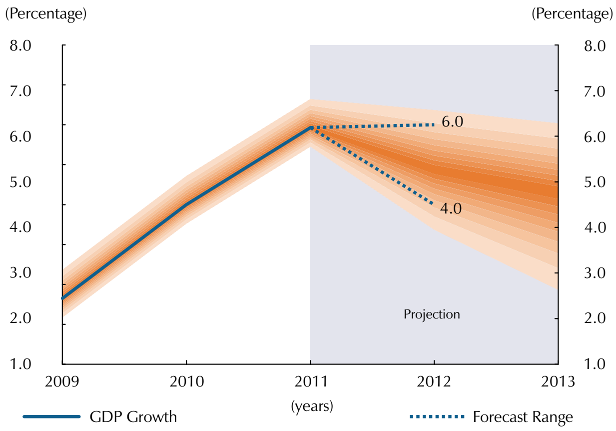
The construction of buildings and civil works is expected to increase. The improved performance of this first component in 2012 is based on several factors; namely on the high amount of building permits granted in the last twelve months; announcement of the construction of new shopping malls in intermediate cities; and particularly the government's plan to stimulate the construction of socialhousing. In 2012, this variable should exceed its maximum level, which was reached in 2008.

The outlook for civil works is also favorable. In the current year, this variable has been driven by the momentum in work to restore the roads affected by the heavy rains, by the construction of new roads (especially of tertiary roads) and by the construction of ports, airports and railways.

The expectation in this report is that the pace of growth in exports and imports, in real terms, will decline throughout 2012, after reaching historical highs during 2011. This is particularly true for imports, which had a slow start to the year. Even though more momentum is expected in the other three quarters, the increase during those periods will be close to half the rate witnessed last year. Exports, on the other hand, also will experience a slowdown throughout the year, although less so. This forecast considers the development of the coffee and mining sectors, which will be explained below. It also assumes exports to Venezuela will continue to recover, but at lower levels than the peak observed in 2008, and industrial exports will perform better than in 2011. It is worth noting that the forecasts for imports and exports do not incorporate the entry into force of the FTA, which means the current forecasts might be underestimating the results of these variables.

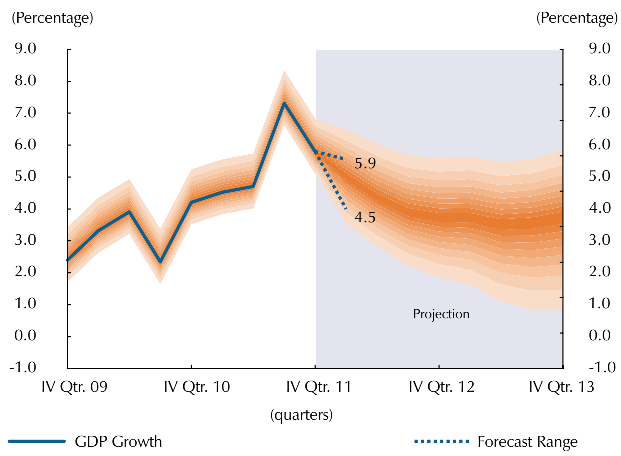
The forecasts on the supply side suggest mining and construction will be the most dynamic economic activities during 2012, as they are both expected to grow at rates above 8.0%. In the mining sector, oil production should exceed one million fifty thousand barrels per day by the end of the year, assuming the problems with law and order and the bottlenecks in crude oil transport are solved. Additionally, coal production might reach 95 million tons, which means a growth rate above 10% with respect to the previous year. These two figures would be the highest rates in the series and would imply outstanding performance on the part of the mining GDP, as has been the case in the past

Graph 37
Fan Chart of Annual GDP Growth



Source: DANE; Banco de la República calculations

Graph 38
Fan Chart of Quarterly GDP, Annual Growth
(Annual Average)



Source: DANE; Banco de la República calculations

Graph 39
Fan Chart of the Output Gap

Source: DANE; Banco de la República calculations

four years. On the other hand, the favorable growth in construction would be a consequence of the rising investment in the sector due to the aforementioned factors. Moreover, the forecast suggests coffee production would come to approximately one million bags more than in 2011.

The foregoing information does not provide enough elements to modify the forecast range presented in the previous *Inflation Report* with respect to growth of the nation's economy in 2012. Therefore, the estimate for GDP growth is still between 4.0% and 6.0%. The most probable path indicated by the balance of risks, and one that is consistent with the central forecast scenario, is exactly in the middle of the range (Graphs 37 and 38).

In this report, the risk balance shows more equilibrium than three months ago, due to the improved outlook for the global economy. In the December edition of this report, the risks were biased to the downside. In the current exercise, downside risks stemming mainly from the international context, which would be transmitted through external demand and transfers, are offset by some upward risks. The latter are associated particularly with better performance on the part of the domestic demand, especially due to a possible underestimation of investment (including FDI) and to a larger reductions in the cost of imported raw materials as a consequence of less pressure towards the depreciation of the peso and a reduction in customs tariffs.

Regarding the output gap, it should be noted that the estimates in this *Inflation Report* are different than those of the previous quarter, partly because of the updating and adoption of new methods to calculate the output gap (see Box 2 on page 55 of this report for more information). The data available for the fourth quarter of 2011 confirms the output gap last year was clearly in positive terrain, although less so than was calculated in the previous report. This can be explained by the fact that, despite high growth rates (6.1% for the fourth quarter and 5.9% for 2011); the increase in potential output was high and above what was calculated initially.

Based on the growth outlook for 2012, as illustrated in this chapter, the trend in the output gap is expected to continue and would be above what it was last year. Graph 39 shows the course of the output gap is between -0.8% and 2.4% and the greatest likelihood is around 0.8% for 2012. This is slightly less that the course outlined in the last edition of this report, because the macroeconomic projections for potential growth were also revised upward.

The labor market gap closed in 2011. Last year´s average unemployment rate was below what is consistent with stable inflation (NAIRU). This occurred faster than anticipated in the previous report. For the rest of 2012, this gap would still be in negative terrain, due to expected economic growth and to other factors boosting the demand for workers, such as the entry into force of the FTA with the United States. Thus, with a tighter labor market, it is possible that wages will tend to rise, thereby increasing the probability of higher inflationary pressures.

B. INFLATION

1. Forecasts

The prospects for inflation one and two years out are better in this report with respect to those presented three months ago. The forecasting exercise showed a path for inflation that favors achievement of the long-term target (3.0%) for both 2012 and 2013. This is despite the fact that the economy continued to expand at a rate above its historical average and that the outcome for the GDP in the fourth quarter of 2011 was significantly higher than expected.

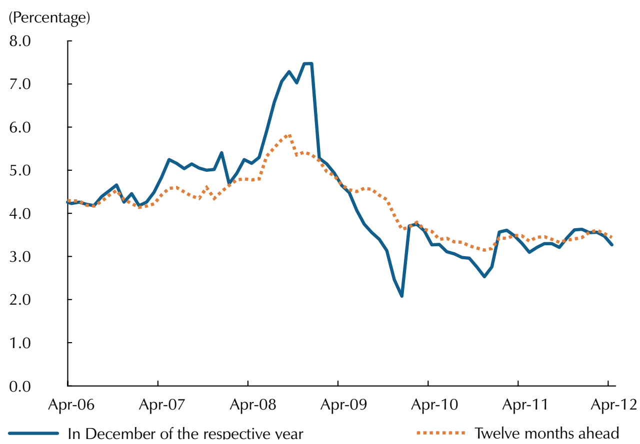
These results, which are apparently contradictory, can be explained by several changes in expectations for the economic conditions in the short and the medium term. One of the most important variations concerns the prospect of less depreciation in the exchange rate, due to the behavior of this variable throughout the year and the limited impact of the events in Europe and other developed economies on business and investment confidence in Colombia. Three months ago, the problems with the European sovereign debt threatened to have considerable repercussions in emerging economies, including Colombia, suggesting that the peso would depreciate significantly with respect to the dollar. At these levels it was likely the movement in the exchange rate would pass through to consumer prices, thus bringing upward pressure on inflation throughout the year and in 2013.

Nonetheless, the measures adopted by the European authorities brought a degree of calm to the markets. This factor, coupled with the rise in raw material prices and the increase in FDI, helped to maintain the low risk perception of the country and caused the peso to appreciate by 7.7% in the first quarter. With this level, as well as the stability expected for the exchange rate during the rest of the year, pressure on the price of tradable goods is significantly lower in this report compared to what was contemplated in December.

Moreover, peso appreciation not only halted the rise in prices of imported consumer goods, it also reversed the upward trend of the cost of raw materials, as demonstrated by the sharp slowdown in producer inflation. Therefore, in an environment of less expected depreciation, the pressures generated by projected costs for the rest of the year will contract. Similarly, the extent to which the increase in the oil-price forecasts in this report would pass through to consumer and producer inflation would be less. .

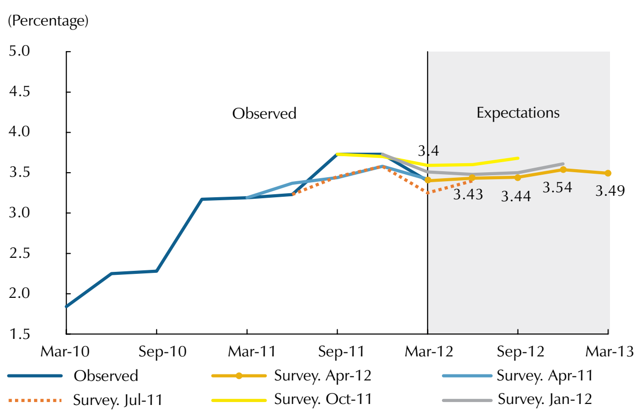
Another change in the economic environment concerns the reduction of inflation expectations so far this year, based on measurements made by Banco de la República. According to a monthly survey applied to financial market participants, expected inflation in December 2012 went from 3.6% at the beginning of January to 3.4% in the first part of April (when this report was written) (Graph 40). Inflation expectations twelve months out also fell similarly and stood at 3.5% in April. The quarterly survey conducted with businessmen, analysts and trade unions, among many others, shows a similar contraction in inflation expectations at different horizons , particularly, the one twelve months out, which went from 3.5% in January to 3.4% at the beginning of April (Graph 41).

Graph 40
Annual Inflation Forecasts, by Banks and Stock Brokers



Source: Banco de la República

Graph 41
Quarterly Inflation Expectations Survey
Observed Inflation and Inflation Expectations
(Three, Six, Nine and Twelve Months Ahead)
(Annual Inflation)

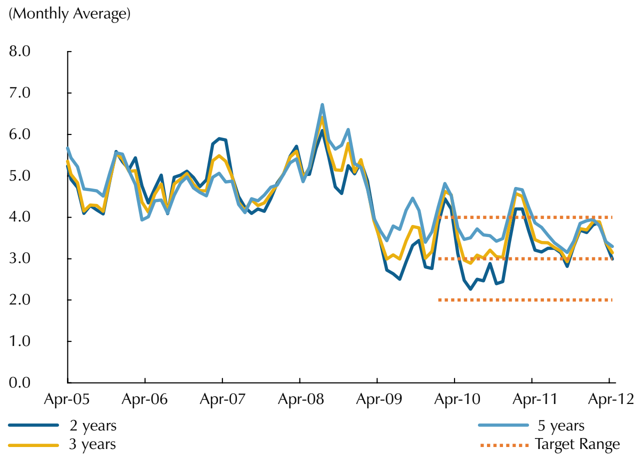


Source: DANE and Banco de la República

Inflation expectations for longer horizons (two, three and five years out) also contracted, as seen in the breakeven inflation obtained from the yields on Colombian treasury bonds (TES). In the previous report, with the figures at mid-January, the expected inflation in these cases was close to 4%, but it has fallen in the last three months. So, by mid-April, it was very close to 3%, which is the long-term target set by the BDBR (Graph 42).

Less pressure on the aforementioned prices contrasts with certain upward factors for the rest of the year, given the anticipated momentum in demand according to the growth forecasts presented at the beginning of this chapter. As mentioned, the estimate done by Banco de la República suggest the economy is not exceeding its productive capacity and the output gap will be in positive terrain for the next four quarters. Notwithstanding, the increase in interest rates during of the last three quarters should avoid an overflow of the demand, and thus prevent the gap from widening in the second half of the year. The current exercise also led to an upward

Graph 42
Two, Three and Five-Year Breakeven Inflation (Obtained From TES)[a/]



a/ Nelson & Siegel Methodology. Source: Banco de la República

revision of the economy's potential growth as a result of the investment efforts of previous years, which should continue at least through 2012.

This being the case, and according to the forecasts in this report, demand-side inflationary pressures will be moderate in the coming quarters and will be offset by the effects of peso appreciation and lower inflation expectations. However, this does not imply that some increases above the target range will not occur, due to the emergence of bottlenecks in some specific sectors. Nevertheless, these would not pose a risk to the stability of inflation during the rest of the year.

The circumstances mentioned above resulted in a reduction of the central forecast for total annual inflation with respect to the forecast in the December edition of the *Inflation Report*. The new central projection contemplates inflation that is relatively stable at the March levels and converges towards the long-term target (3.0%) as of the fourth quarter.

On the other hand, the core inflation forecast for the rest of the year and for 2013, as represented by the non-food CPI, also was reduced. In the current exercise, this indicator remains very close to the long-term target in the next four quarters, with a marginal drop at mid-2013.

As for the CPI components, , the biggest change in the forecasts was the annual variation in tradable goods, excluding food and regulated items, since its forecast eight quarters out fell significantly, due to strengthening of the peso during the quarter and less of a tendency towards peso depreciation in the rest of the year. As a consequence, the current projections no longer foresee a buildup in the annual change in this category and give less weigh to demand-side pressures on these prices. The central path of this forecast contemplates an annual change that subsides during the course of the year and would increase only in 2013.

Another important change was in the annual variation in the food CPI. The improvement in agricultural supply due to the normalization of weather conditions should keep food inflation below the path projected three months ago. In this case, it is expected to fall towards 4.0% in the coming months, and to rebound slightly in 2013 as result of the usual fluctuations in the agricultural cycle. The decline in peso depreciation also contributes to the lower forecast.

Two major changes in this report concern the prices of regulated goods. The first, which is associated with the increase in the forecast for international fuel prices, implies larger adjustments in the domestic price of gasoline and in t the rates households are charged for natural gas. It is worth noting that this rise considers less anticipated depreciation of the peso. Moreover, in the case of natural gas, it includes all of the bottlenecks that are present with respect to its transport to the areas where it is consumed. This problem will not be solved during the remainder of the year. The second change consists of a reduction of rates charged for water, as a result of a decision by the major of Bogota to reduce these rates for low-income households (by at least 26%). These lesser adjustments will be passed through to the CPI as of May.

With these changes, the annual variation in the CPI for regulated goods would remain, for the rest of the year, at levels similar to those seen in March and would only fall below 4.0% at the end of the fourth quarter and in the first quarter of 2013. In the previous report, the convergence towards the target was expected to occur more quickly.

Finally, the forecast for the non-tradable CPI, excluding food and regulated items, fell with respect to the previous report, due to lower inflation expectations and to the increase in the market interest rate and the intervention rate. Similarly, the course of the central scenario considers an output gap that is somehow lower by the end of 2011 and for all of 2012, compared to the one presented three months ago, due to all of the aforementioned reasons. This implies lower demand-side pressures on the prices. As already mentioned in other reports, non-tradable goods constitute the segment of the CPI that is most sensitive to the behavior of demand. It is worth noting that the course of the forecasts described herein does not consider the impact of entry into force of the FTA with the United States on May 15 of this year. It is clearer in the case of food, because a large part of the agricultural products that can be imported from that country face a very slow schedule for tariff reduction, so the drop in prices might be very limited. In the case of other types of goods, this might be less likely.

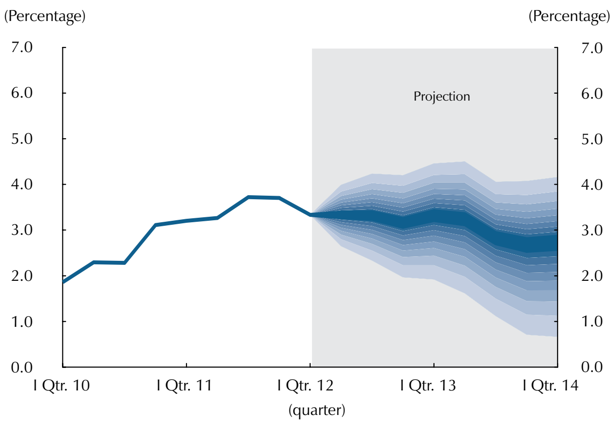
2. Risks Balance

The risk balance estimated for total consumer inflation and non-food inflation is shown in Graphs 43 and 44. Due to the persisting uncertainty regarding the international situation, the breadth of the intervals is still elevated and larger than usual. Additionally, and contrary to the previous report, the risk balance is biased slightly towards the downside. One of the reasons for this is the effect of the FTA with the United States on domestic prices, as this is not considered in the central forecast.

In particular, the main upside risks are:

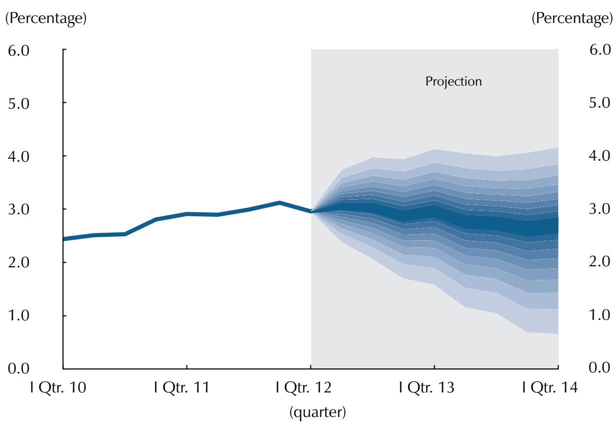
- *Domestic demand might show greater than expected momentum.* Although some sectors exhibit some signs of moderation in their growth rates, the behavior so far this year of most of the indicators for expenditure suggest domestic demand might display growth in 2012 that exceeds the central forecast. In particular, the greatest risk comes from the likely underestimate of investment, mainly in the components involving infrastructure and

Graph 43
Fan Chart of Total Inflation



Source: DANE; Banco de la República calculations

Graph 44
Fan Chart of Non-Food Inflation



Source: DANE; Banco de la República calculations

buildings, given recent announcements by the government concerning a boost to the construction of social housing. Additionally, entry into force of the FTA with the United States might imply an additional tailwind to FDI and, therefore, to investment as a whole, as has been the case in other countries with similar agreements. On the other hand, the rise in the interest rate during the first quarter would have very little effect on credit, especially household lending, which continues to grow at elevated rates. This momentum in credit might stimulate domestic demand beyond the estimate of the central forecast presented in this report, which might lead to an additional widening of the output gap, with an additional impact on consumer prices.

- *Shock from a possible tax reform.* Even though the draft tax reform has not been released, nor in its final version, news has been made public that indicate the government intends to present it during the second semester. One of the likely modifications would be to tax with the value added tax (VAT) some of the products that were previously exempt. If this happens, it would result in a transitory shock to the prices in 2013. In the case that this rise affects the expectations of the agents, the effects on inflation would be long-lived.

- *Greater than expect wage adjustments, which would* pass through to prices. As already mentioned in the first part of this chapter, the gap in the labor market has closed, so increases in the demand for workers might easily result in salary adjustments. Moreover, greater upward pressure from the minimum wage on all other salaries and on prices cannot be ruled out. Wages can pass through to prices directly, through higher production costs, but also indirectly, through the indexing mechanisms found in price contracts, which link their adjustments to changes in the minimum wage.

The main downward risks are:

- *Lower prices due to entry into force of the FTA.* The reduction of tariffs for a large variety of input and final goods, due to entry into force of the FTA with the United States, might exert additional downward pressure on consumer prices, especially those for tradable goods. Notwithstanding, the other goods and services in the basket might also be impacted as a result of a decline in the cost of input. This would happen even if imports with lower tariffs take some time to materialize, since the threat of greater competition might generate a revision of prices for existing inventories. On the other hand, if the FTA results in added FDI, the pressures towards depreciation of the exchange rate might subside even more, thus further pushing down domestic prices. The downside risks associated with the FTA have been assigned the most weigh in this report.

- *Deepening and prolongation of the crisis in Europe and in other developed economies.* As already mentioned in previous chapters, the central forecast path assumes Europe will face a mild recession in the first half of 2012, which will have little impact on the Colombian economy. This situation would improve in the second half of the year. However, the risk that economic contraction in the region might accentuate and endure beyond the first six months of the year are not negligible, due to the strong fiscal adjustment programs and to the fact that labor markets are quite deteriorated. Furthermore, the viability of a bail-out for Greece is still unclear. Materialization of these risks would weaken external demand, with the subsequent effects on the terms of trade, which might directly push down prices for regulated items and indirectly lower other domestic prices, as a consequence of the reduction in available national income. These effects will prevail over the impact of peso depreciation, as they did during the crisis of 2008-09.

In conclusion, although the different risks weighed in the fan charts show a downside bias, the probability that total inflation will be within the target range in 2012, and will converge towards the long-term target (3.0%) in 2013 is still high. The same applies to the risk balance for non-food inflation. It should be noted that both forecasts assume an active monetary policy, where the intervention rate is adjusted to drive inflation towards the long-term target (3.0%).

Box 2
TWO NEW METHODOLOGIES TO MEASURE THE OUTPUT GAP[1]

Andrés González
Sergio Ocampo
Julián Pérez
Diego Rodríguez[2]

One of the indicators of economic activity most commonly used to analyze monetary policy is the output gap, which measures how far the economy is from its potential. This is the level of output that is consistent with the absence of inflationary pressures. Therefore, the output gap plays an important role in monetary policy decisions, as it is one of the determinants of the behavior of inflation. A positive output gap (observed output is higher than potential output) means the economy is overheating, which generates inflationary pressures. In this case, the monetary authority should raise its intervention rate to regulate ("cool") the economy. In the opposite scenario, when the output gap is in negative terrain (observed output is lower than potential output), the central bank might provide monetary stimulus (by reducing the intervention rate) to boost growth.

Nonetheless, despite its usefulness in diagnosing the current state of the economy and the likelihood of inflationary pressures, the output gap cannot be measured directly, as the level of the potential output is an unobservable variable, so it must be deduced from available macroeconomic information. This makes these estimates highly uncertain. Consequently, the technical staff of Banco de la República uses several models and methodologies[1] to gather different information, so as to obtain a more precise measurement of this indicator.

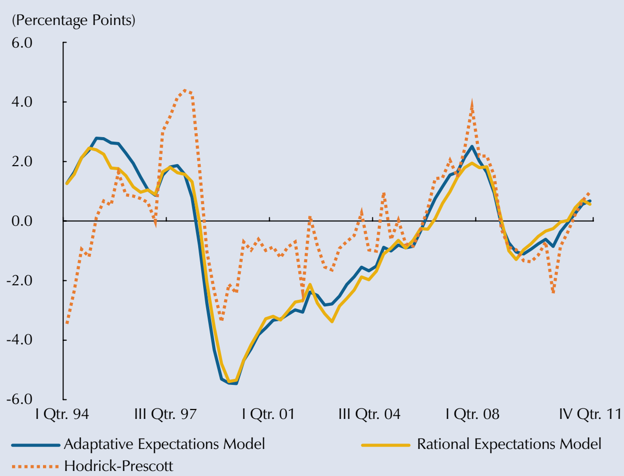
For this *Inflation Report*, two models to estimate the output gap are proposed. The two methodologies, which are semi-structural Keynesian models adapted to a small open economy, incorporate the information from macroeconomic series (other than the observed GDP) and study the structural links between variables such as inflation, the interest rate and several foreign variables (the foreign interest rate or the real exchange rate). This is a clear advantage in identification of the gap with respect to univariate statistical filtering (such as the Hodrick-Prescott filter), where the observed GDP is the only source of information.

The difference between the proposed models lies in the assumptions on how agents generate their expectations about the value of the macroeconomic variables in the future. The first model assumes agents act rationally and, consequently, incorporate all the available information (including the structure of the economy and the past and present values of all the variables) when forming their expectations. The second relaxes the rationality assumption and considers that agents respond to fixed behavioral rules when generating their expectations. These rules depend on the present and past value of the variables on which they will form an expectation.

Both models are estimated using quarterly data for Colombia and the United States between 1994 and 2011. The results for the output gap are presented in Graph B2.1, which also shows, as a reference, the cyclical component of the output (obtained using the Hodrick-Prescott filter).

The results show the output gap in Colombia has a very smooth and persistent performance, with drastic changes occurring during the crisis period in 1998-1999 and in the last quarter of 2008, which coincides with the international turbulence generated by the recent global financial crisis.

Graph B2.1
Output Gap



Source: Authors' calculations

* This document is based on González, A.; Ocampo, S.; Pérez, J.; Rodríguez, D. (2012). "Output Gap Measures for Colombia Based on Semi-structural Models" (mimeo), Banco de la República, Subgerencia de Estudios Económicos. (Department of Economic Studies).

** The authors are, in the following order, director and professional of the Macroeconomic Models Department, assistant of the Programming and Inflation Department, and head of the Macroeconomic Models Department. The opinions expressed are solely the responsibility of the authors and do not involve Banco de la República or its Board of Directors.

1 For more details, see Torres, J. (2007)," La estimación del brecha del producto en Colombia", *Borradores de Economía*, no. 462, Banco de la República.

One also sees the measurements of the output gap tend to indicate whether the economy is operating above or below its potential. However, they usually do not show the magnitude of the cycle. These differences are larger when comparing the statistical method (Hodrick-Prescott filter) to the economic models, thus displaying the high uncertainty of the value of the output gap.

With respect to the movements in the output gap obtained from the two models, Graph B2.1 shows the negative gap that followed the period of high growth between 2006 and 2007 has already closed. The estimates for the last few quarters show a positive, yet small, gap. This suggests demand side inflationary pressures are still moderate.

V. Risks to long-term macroeconomic stability

The current account deficit has widened in recent years, despite more of a surplus in the mining and energy sector.

The widening of the deficit, based on national accounts, is the result of more of an increase in investment than in savings. Less growth in savings was due to the major expansion of private consumption. In the long run, rising investment might increase the country's productive capacity.

During the first quarter of 2012, credit continued to increase, especially consumer loans.

Housing prices, in real terms, remained on an upward trend in 2011, particularly the price of housing for medium and high-income groups.

The Colombian economy is in a stage of high growth and important capital inflows. Several authors suggest that, in the presence of these events[12] the likelihood of macroeconomic imbalances being generated (such as unsustainable current account deficits, credit excesses or asset overvaluation) increases.

In this context, it is vital for the country's economic authorities to identify these vulnerabilities in a timely manner, so as to prevent these imbalances from forming. . Therefore, as in previous reports, this chapter constitutes a follow-up on performance of key variables to detect the possible risks to the country's macroeconomic stability.

Timely publication of the results of monitoring of these risks can be considered a macro-prudential policy measure, as it provides agents with more information to make better decisions and reduces the likelihood of a crisis occurring in the future.

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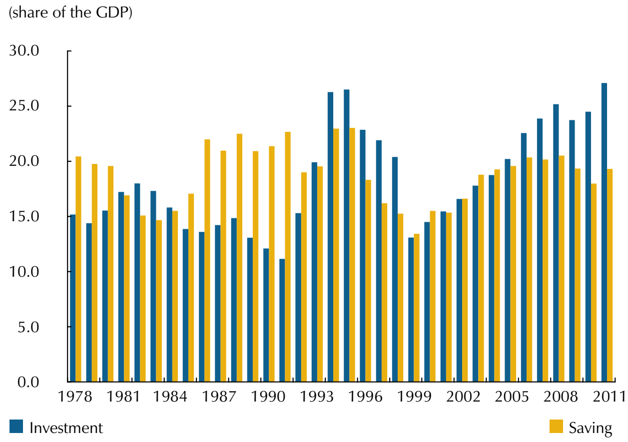
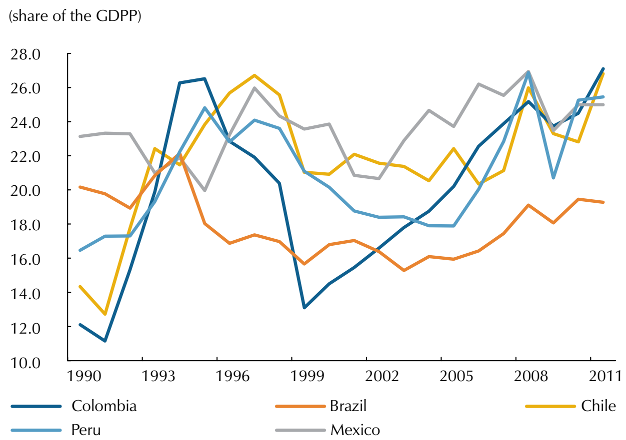
12 See, for instance, Calvo (2011) and Agosín and Huaita (2009).

Graph 45
Investment and Savings as a Share of GDP in Colombia



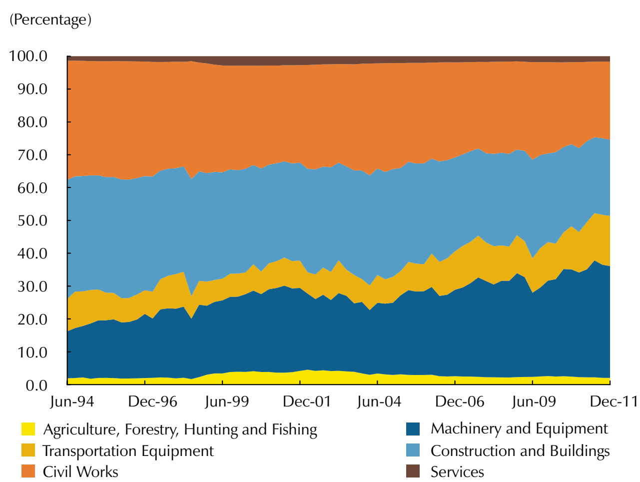
Source: DANE; Banco de la República calculations

Graph 46
Investment Rate in Several Latin American Countries



Source: Central bank of each country

Graph 47
Investment, by Sectors



Source: DANE; Banco de la República

A. CURRENT ACCOUNT DEFICIT

In recent years, Colombia's current account deficit as a share of GDP has persistently widened, going from around 1% in 2004 to approximately 3% in 2010 and 2011. According to information on the national accounts, the increased deficit can be explained by the acceleration in investment in recent years, which was not accompanied by a similar increase in domestic savings. This meant foreign savings were used to finance expenditure, which widened the current account deficit (Graph 45).

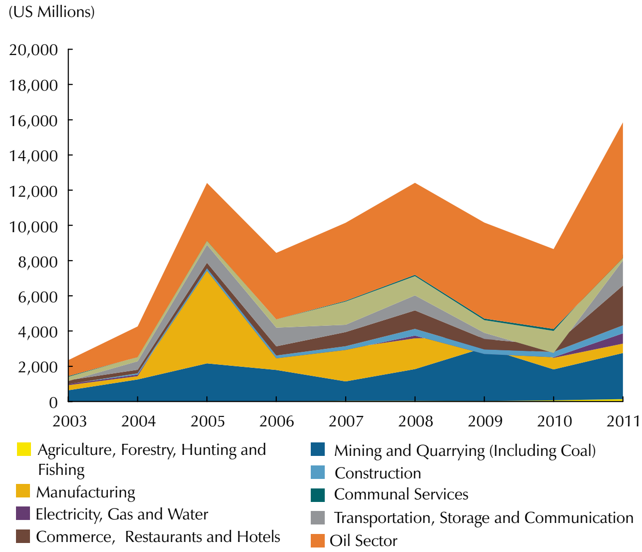
The build-up in private investment started at extremely low levels, due to the crisis of the late nineties. Additionally, as seen in Graph 46, Colombia´s investment rate lagged significantly with respect to other countries in the region between 1999 and 2003.

If investment increases the country's productive capacity and, hence, tends to generate current account surpluses in the future, the added use of foreign savings to finance domestic expenditure would not pose a risk to macroeconomic stability. As shown in Graph 47, the destination of investment in recent years might have these characteristics. First of all, and in contrast to the nineties when investment in construction was very important, purchases of machinery and equipment, and of transportation equipment have gained a significant share. Similarly, FDI in Colombia has grown in different sectors, especially in mining and energy (Graph 48). As will be explained below, this sector has been a source of surplus in the current account.

Graph 49 shows a breakdown of the current account in the balance of payments into two sectors: mining and energy and the rest. As observed, the widening of the deficit has occurred in a context with increasing surpluses in mining and energy (6.8% of GDP in 2011), along with significant deficits in the other sectors (11% in 2011).

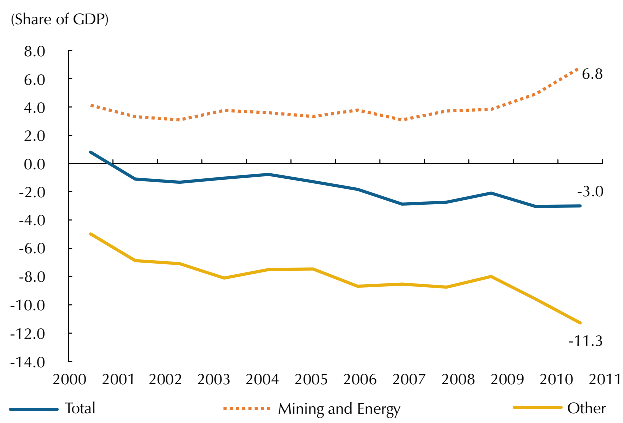
The good performance of the mining and energy sector has been reflected in a significant increase of

Graph 48
Foreign Direct Investment, by Sectors



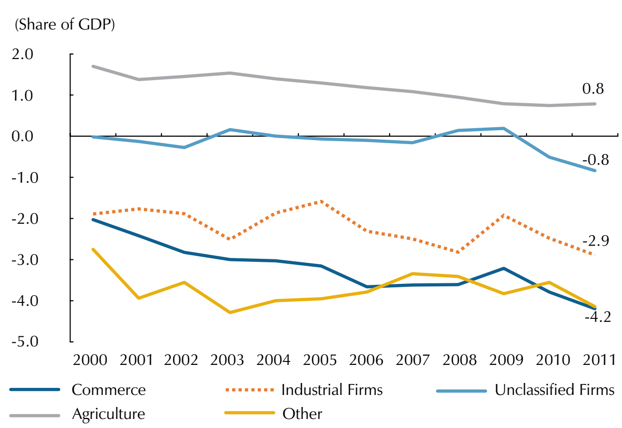
Source: Banco de la República

Graph 49
Current Account in the Balance of Payments, by Sectors



Source: Banco de la República

Graph 50
Current Account, by Sectors (Excluding the Mining and Energy Sector)



Source: Balance of payments; Banco de la República

its exports (56% in 2011), which led to an increase in its share of total foreign sales in the last five years, which went from 43% in 2007 to 70% in 2011. This occurred in a context of unusually high international oil prices in the last two years. It is worth mentioning that the surplus in the mining and energy sector has two components: the first is generated by foreign firms and partially offset by the remittance of off-shore profits to their headquarters, while the second is comprised of exports by national firms like Ecopetrol.

With respect to the other sectors (Graph 50), commerce stands out, having posted a deficit of 4.2% in 2011, which implies a widening of 1.0% of the GDP between 2009 and 2011. Industrial production has maintained a stable deficit equal to approximately 4.0% of the GDP. Meanwhile, the group of unclassified firms, which are mainly small importing companies, accounted for a widening of the current account deficit by 1.0% in the last two years[13].

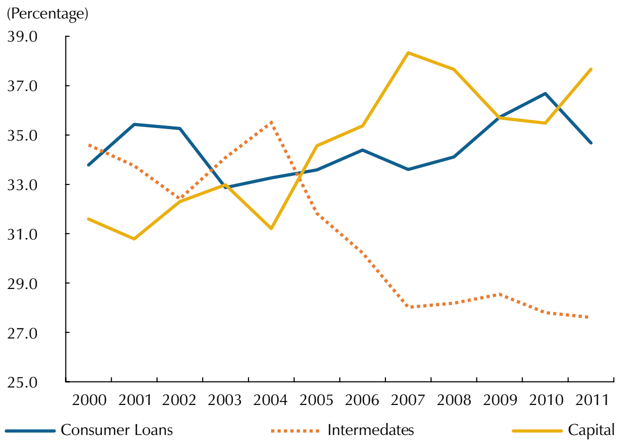
The growth in imports was the component of the current account that did the most to widen the deficit of all sectors (excluding mining and energy). Thus, between 2009 and 2011, purchases of foreign goods rose significantly in commerce, industry and the group of unclassified firms: 67%, 57% and 110%, respectively (Graph 51). This was particularly true in the acquisitions of consumer and capital goods.

Regarding the sustainability of the current account, the deficits observed in the last two years and the forecast for 2012 (between 3.3% and 3.7% of GDP) are greater than the estimates for the long-term, which means a widening of the gap (Graph 52). Accordingly, if the mid-point of the forecast materializes, the current account deficit will reach a range in which rates of this type have occurred only 30% of the time since 1981.

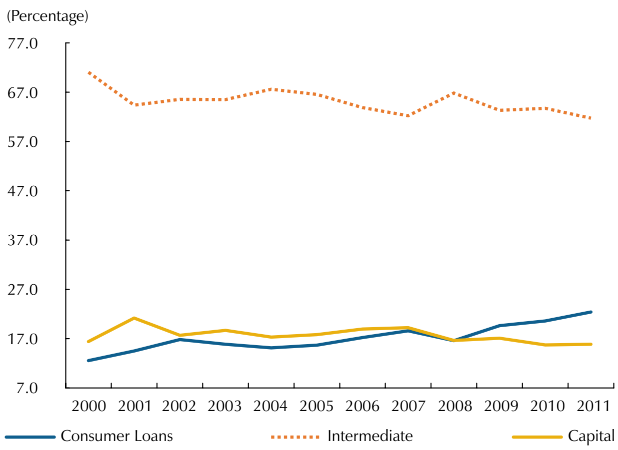
13 This information corresponds to a preliminary exercise, which is subject to revision.

Graph 51

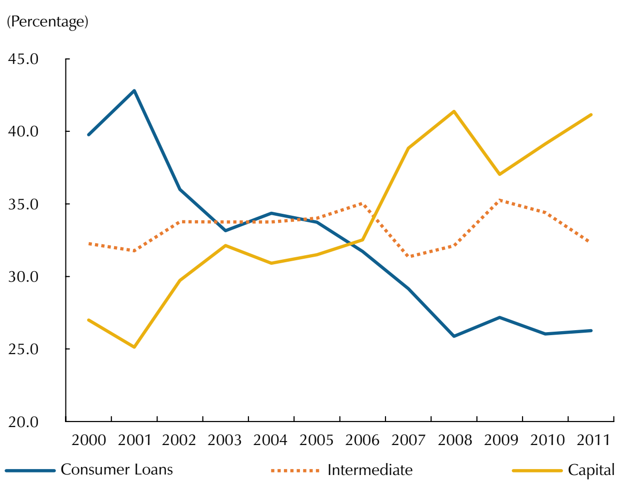
A. Commercial Imports, by Type of Goods



B. Industrial Imports, by Type of Goods



C. Unclassified Firms' Imports, by Type of Goods



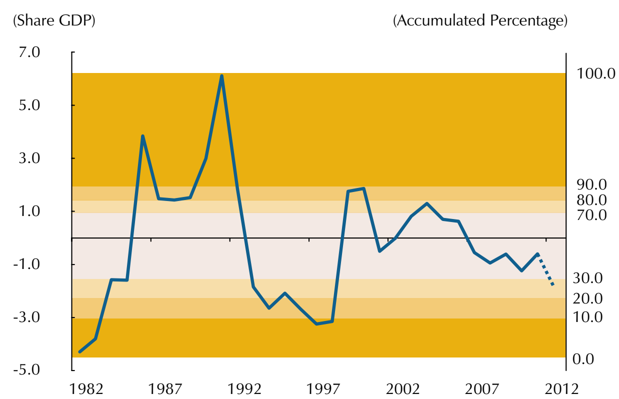
Source: DANE

As noted above, much of the widening of the aforementioned gap in the current account is a result of a build-up in investment that might increase productive capacity and generate external income in the future. With respect to the capital account, the figures for the balance of payments show that financing is coming mainly from FDI[14]. These factors are fundamental to the sustainability of the current account deficit.

Notwithstanding, the widening of the deficit also has occurred in an environment where terms of trade are favorable. This has stimulated national income and contributed to the increase in the purchases of consumer durables and semi-durables.

Due to the above, there is a risk of the increase in national income being perceived as permanent, in which case agents would bring forward their consumption decisions by using high levels credit to finance it. If these expectations do not materialize and terms of trade decline, the less disposable income might be insufficient to maintain the expenditure. In this scenario of macroeconomic vulnerability, the current account might reverse rapidly and GDP might fall significantly.

Graph 52
Current Account Gap and Percentilesa[a/]



a/ The gap is calculated as the observed current account/GDP minus the average of the equilibrium estimate of the current account/GDP. The percentiles are calculated with information since 1981.

Source: Banco de la República

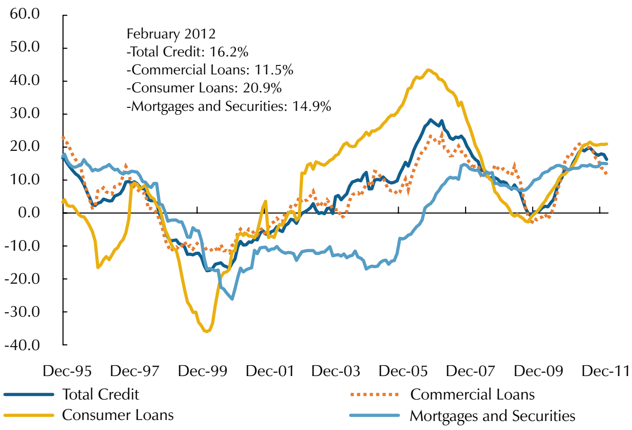
14 Short-term debt has been used to finance imports in advance.

B. CHANGES IN CREDIT AND HOUSING PRICES

1. Credit

Graph 53
Real Annual Growth in Credit

(Percentage)



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

During the first three months of the year, credit stayed on the upward trend that started more than a year ago. All the sectors have exhibited high rates of growth, but most prominently consumer credit. So far this year to March and in real terms, the annual growth rates were 16.0% for total credit, 21.3% for consumer loans, 13.0% for mortgages, and 10.7% for commercial loans (Graph 53).

Therefore, household debt continued to rise , mainly as a result of the momentum in consumer credit. The labor market improvements , especially in the formal sector, might have bettered expectations of job stability, which stimulated both the supply and demand for credit. On the other hand, given the figures for the national accounts up to 2010, disposable household income has increased significantly. However; consumer credit is growing even faster, which implies a rise in household debt levels.

With respect to mortgages, the level of indebtedness has been smaller, unlike what happened in the crisis of 1999. Loan-to-value (LTV) (which is the ratio of the value of disbursements to the value of the collateral) rose during 2011, but is a long way from the high figures seen before the crisis.[15] Nonetheless, it is important to bear in mind that LTV is very sensitive to an eventual overvaluation of housing prices and, if this happens, LTV might not reflect excessive leveraging when this actually occurs.

In the case of industry and commerce, the rise in credit in these sectors has been accompanied by an improvement in their balance sheets. The good figures for economic activity, along with low real interest rates on commercial loans, have stimulated credit supply and demand in these sectors.

Regarding credit risk, the quality indicator[16] (QI) and the delinquency indicator[17] (DI) have remained at moderate levels and, in February 2012, they were 6.8% and 3.2%, respectively. These are slightly above the figures observed in December 2011 (QI: 6.7% and DI: 2.8%), although lower that those witnessed in February of last year (QI: 7.8% and DI: 3.5%). The nonperforming loan portfolio has begun to

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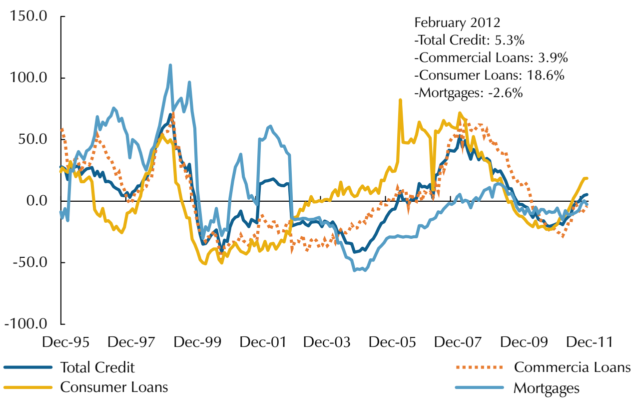
15 See the March 2012 edition of the *Financial Stability Report.*

16 The ratio of loans rated B, C, D and E to the total loan portfolio.

17 The ratio of nonperforming loans to the total loan portfolio.

Graph 54
Real Annual Growth in Nonperforming Loans

(Percentage)

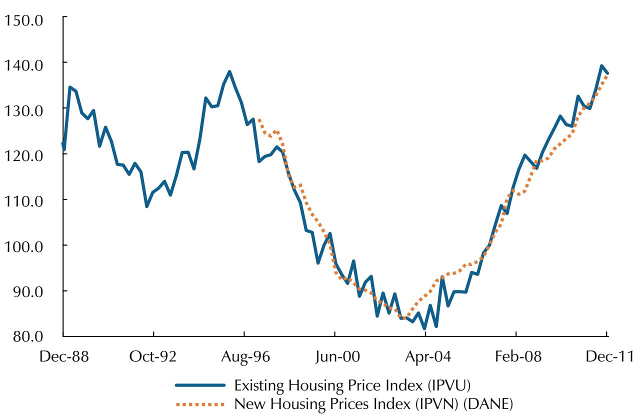


Source: Financial Superintendence of Colombia; Banco de la República calculations

Graph 55

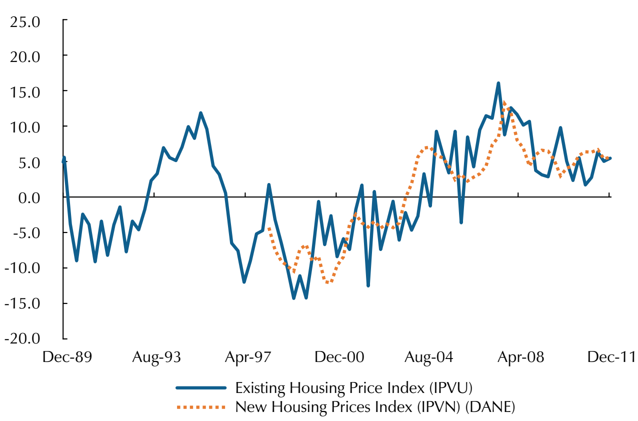
A. Housing Price Indices Relative to the CPI

(December 2006 = 100) - (Percentage)



B. Annual change in the Existing Housing Price Index (IPVU) and in the New Housing Price Index (IPVN)

(Percentage)



Source: DANE; Banco de la República

show positive growth rates in real terms, mainly due to the behavior of consumer credit, which exhibited a nonperforming loan portfolio that grew at a real annual rate of 18.6% in February 2012 (Graph 54). Nonperforming mortgages continued to fall in annual terms.

2. Housing Prices

In the fourth quarter of 2011, Colombian housing prices, in real terms, continued their upward trend: the annual change was 5.5% for existing homes[18] and 5.6% for new ones (Graph 55). In 2011, and in the same order, these prices grew 4.9% and 6.0%. Thus, in the last four years, these indicators have registered an average annual increase of approximately 5.0%, in real terms. By income[19], the behavior of prices for existing homes was explained largely by the middle and high levels, which rose 5.8% and 9.7%, respectively[20] in 2011 (Graph 56).

As mentioned in previous reports, the behavior of housing prices might be explained by long-term factors, such as restrictions on the supply of land, migration to the cities, among many others. However, short-term variables, such as investors looking for greater and more stable returns due to the uncertainty in the financial markets, might also explain this behavior. In this context, valuation is a fundamental determinant of the momentum in supply and demand for homes.

The experience of the resent real estate crisis in the United States is a good example of the risk that might materialize when price expectations are high and there

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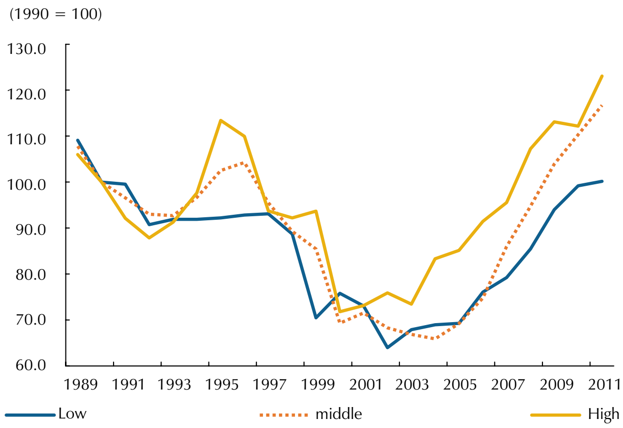
18 The data from the Existing House Price Index (IPVU, in Spanish) are provisional and subject to changes.

19 The current monthly minimum wage (SMMV, in Spanish) is taken as a reference in order to classify by income level. Therefore, a low level pertains to housing prices less or equal to 125 SMMV, The *middle* level pertains to prices between 125 and 135 SMMV; while *high* prices are above 135 SMMV.

20 The latest estimate of the prices of existing homes meant an increase in the 2011 figure for low income. This data is shown annually, because the quarterly figures are not especially representative.

Graph 56
Real IPVU, by Income Levels in Bogota



Source: Banco de la República

is an ample supply of credit. In that case, the upward trend in prices for these assets generated the perception that these increases would be permanent. Hence, it stimulated greater levels of mortgage debt. As these expectations did not materialize and prices fell instead, the level of credit surpassed the value of homes and caused a financial crisis due to mortgage default. . In this sense, although mortgage debt in Colombia as a share of GDP is low, it is important to continue to monitor this risk.

Similarly, alternative measurements of housing prices in the long run must be considered to identify possible overvaluations. An exercise of this nature is presented in Box 3.

Box 3
PANEL ESTIMATE OF HOUSING PRICES*

Carolina Arteaga Cabrales**

Houses are assets that concentrate a great part of household wealth. Therefore, it is vital to monitor possible misalignments in their prices, which might prompt agents to make decisions that could affect long-term macroeconomic stability. Large inflows of capital, such as those recently observed in the country, might induce misalignments in housing prices due to an increase in risk taking and in the amount of liquidity available in the economy. The financial accelerator theory tries to explain one of the channels whereby an elevated inflow of capital might result in an imbalance in asset and credit markets.[1] According to this theory, large flows of capital into a country may increase the demand for assets and stimulate their prices, consequently generating an income effect on agents. This also raises the capacity and willingness of agents to borrow in order to buy more assets. In this scenario, asset prices may reach unsustainable levels. If the flow of capital reverses and asset prices fall, indebted firms and families might default on their obligations and cause a financial crisis.

The main objective of this section is to use a panel estimate to identify the housing price components that can be explained by movement in the determinants of supply and demand in the sector. In this context, observed prices that are different than the estimates may be the result of appraisal expectations which, if not met, would imply an overvaluation. It Prices that only move according to their fundamentals might also be vulnerable to abrupt declines, since recessions, capital outflows and demographic changes might heavily affect the housing market.

On the demand side, the most important factors found in the literature on this subject are household income and financial wealth, interest rates, demographic factors, appraisal expectations, and the anticipated rate of return. Recently, Calvo (2012) and Favilukis et al. (2012) found a positive link between the demand for houses and capital flows, due to greater liquidity and credit availability.

As to the supply of housing, the most relevant variable is the anticipated rate of return on projects, which depends positively on housing prices and negatively on production costs. In the latter, the price of land, wages and construction materials are particularly important factors.

Due to limitations in the availability of information, several proxy variables were used in this exercise to approximate the determinants of demand, such as GDP and salaries (income), the average interest rate, the economically active population divided by the total population (EAP/TP), the rental fees divided by the interest rate on fixed-term deposits (as the rate of return relative to the opportunity cost), and the level of the financial account as a share of GDP. For the supply, the housing construction cost index (ICCV, in Spanish) was used.

Based on this information, a panel was estimated for seven countries: Colombia, the United States, the United Kingdom, Spain, Ireland, Australia and Finland, using quarterly data between the first three months of 1987 and the third quarter of 2011[2]. In this period, overpricing was observed in Colombia during 1996 and real estate bubbles were registered in the United States, the United Kingdom and Ireland in 2007, in Spain in 1990 and 2007, and in Finland in 1989. Australia, on the other hand, did not register any housing bubble.

Table B3.1 shows the descriptive statistics of the data used in the estimate. According to these, the highest average annual increase in housing prices, in real terms, was registered in Ireland and Australia, with rates above 4%, whereas the rate in the United States and Spain was below 1%. Regarding the rise in real wages and GDP, Ireland showed the largest increase during the period, the United States posted the lowest hike in salaries, and the United Kingdom and Finland, the smallest amount of GDP growth. Colombia exhibited the highest interest rate.

To control for the endogeneity that can exist between housing prices, GDP and construction costs, the last two variables were instrumented using lags. Table B3.2 shows the results of the panel estimate with fixed effects. All of the variables have the correct sign and, except for rental fees/rate on fixed-term deposits and capital flows, the estimated coefficients were statistically significant.

According to the estimates, an increase of 1% in GDP generates a rise of 1.59% in housing prices. An increase of

* This exercise is part of a research paper developed with Carlos Huertas and Sergio Olarte, which is soon to be published.

** The author is a specialized professional who works with the Programming and Inflation Department. The opinions expressed herein are solely the responsibility of the author and do not involve Banco de la República or its Board of Directors.

1 Los primeros en introducir el concepto del acelerador financiero fueron Bernanke, Gertler y Gilchrist en 1989.

2 For some countries, the panel starts at earlier dates.

Table B3.1
Descriptive Statistics

	Percentage Change						Change	
	Housing Price	GDP	Wages	EPA	ICCV	Rental Fees/ Rate of fixed-term Deposits	Capital Flows	Interest rate
	Promedio							
Colombia	1.84	3.59	1.73	1.40	-0.03	0.78	0.06	11.61
United States	0.54	2.58	-0.02	-0.21	-0.18	0.13	-0.01	4.35
United Kingdom	3.96	2.17	1.88	0.07	2.11	0.06	-0.01	2.93
Spain	0.93	2.68	0.92	1.51	-0.14	0.24	0.28	4.61
Ireland	4.50	4.51	1.96	0.75	1.46	0.17	-0.16	3.63
Australia	4.35	3.33	1.46	0.48	-0.06	0.28	-0.13	6.65
Finland	3.41	2.17	1.92	-0.12	0.29	0.24	-0.12	4.35

Source: Author's calculations

1% in real wages means an expansion of 0.12% in housing prices. This is explained by growth in the disposable income and more purchasing power on the part of households. On the other hand, an increase of 1% in the interest rate reduces the demand for housing and, consequently, prices fall by 0.34%. Larger capital inflows and a better rate of return on rental fees above the opportunity cost interest rate, have a positive effect on prices that is not statistically significant. With respect to the variable of supply, an increase of 1% in the housing construction cost index results in 0.79% growth in housing prices.

In the case of Colombia, according to the estimate, there are periods in which there was an important difference between observed housing prices and the estimates (Graph B3.1). Before the crisis in the late nineties, the registered prices were 18% over the estimates. Between 2000 and 2007, the supply and demand variables justified a higher level of housing prices. After 2008, as a result of the global financial crisis, GDP and wages fell, so the estimated price index also showed reductions, while the observed prices maintained their upward trend. Starting at that point, there has been a positive gap between them, which has stabilized at high levels.

Table B3.2
Results

Fixed-effects regression			Number of Observations			629
			Number of Groups			7
R^2	*within*	0.4832				
	between	0.4653	Observations per Group		Minimum	76
	overall	0.4770			Average	90
					Maximum	96
				F(7, 615)		82,26
				Prob > F		0,000

Percentage Change in Housing Prices		Coefficient	Standard Error	*t*	P > Itl	[95% Confidence Interval]	
Percentage Change	GDP	1,592	0.148	10.79	0.000	1,302	1,881
	ICCV	0.789	0.217	3.64	0.000	0.364	1,214
	Wage	0.124	0.076	1.63	0.104	-0.025	0.274
	EPA	0.523	0.171	3.07	0.002	0.189	0.858
	Rental *t*-4	0.067	0.065	1.02	0.308	-0.062	0.195
Rental Fees t-4		-0.339	0.094	-3.61	0.000	-0.524	-0.155
Change in Capital Flows t-2		0.064	0.102	0.62	0.532	-0.136	0.263
Constant		-1,207	0.683	-1.77	0.077	-2,546	0.133

Source: Author's calculations

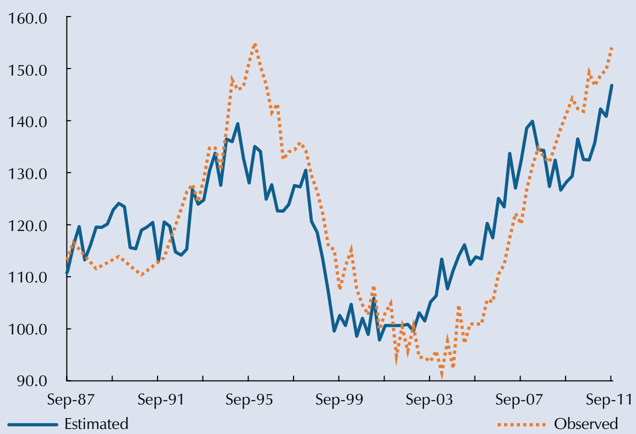
In the United States, the estimate shows the drop in prices during the early nineties was based on a correction of the high levels observed previously. Then, prices fell below the equilibrium level and, since 1998, they have registered a positive slope that was greater than the one suggested by the fundamentals (Graph B3.2). In December 2005, there was a gap of 23% between the observed and estimated housing prices. Said difference was corrected in 2008, when the prices were close to the estimate. Since December 2010, prices have been below those suggested by the fundamentals. Meanwhile, during the nineties, prices in the United Kingdom were below the equilibrium estimate. In the first part of the decade, they showed negative growth rates, which were not based on evolution of the fundamentals of this estimate. This behavior was reversed in 1997, when the observed prices experienced larger growth rates than the estimate and were already higher by 2002. Starting at that point, a positive gap emerged that has not disappeared, even with the most recent corrections.

In conclusion, the results show there has been a positive gap in Colombia between observed and estimated prices since 2008. Although the extent of the gap did not equal the high levels witnessed prior to the crisis in the nineties, the accumulation of positive gaps for more than three years means it is necessary to continue to monitor the behavior of this variable.

Graph B3.1

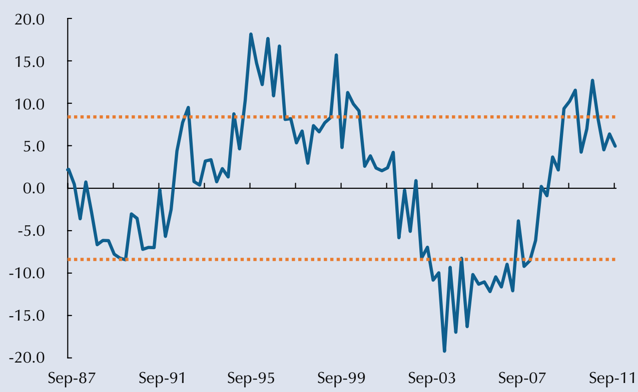
A. Existing Housing Price Index (IPVU) In Colombia

(December 2006 = 100) - (Percentage)



B. Housing Price Gap in Colombia (Difference Between Observed and Estimated Prices)

(Percentage)

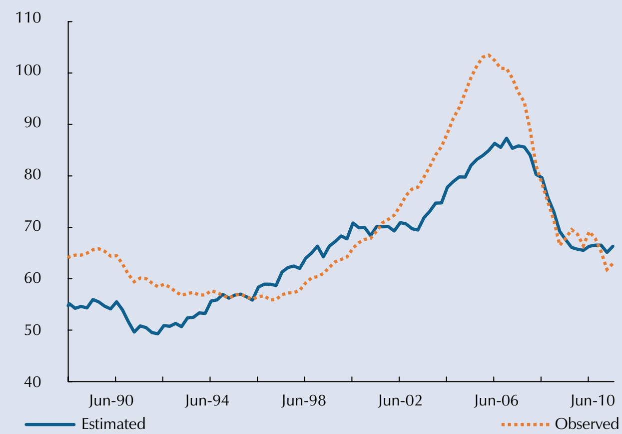


Fuente: cálculos de la autora.

Graph B3.2

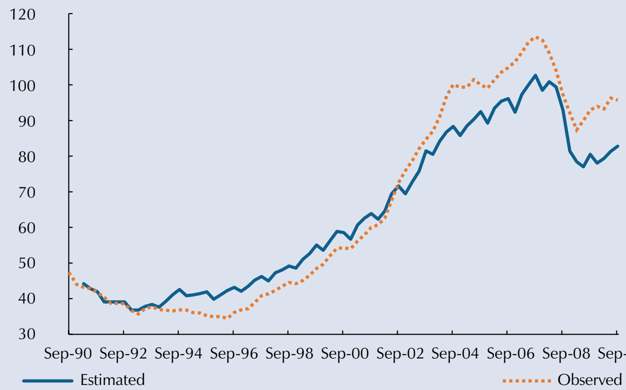
A. Housing Price Index in the United States

(Index)



B. Housing Price Index in the United Kingdom

(Index)



Fuente: cálculos de la autora.

Annex

Macroeconomic forecasts by local and foreign analysts

On average, the local analysts expect 4.9% economic growth, as opposed to 4.8% estimated in the previous Inflation Report. Similarly, the foreign analysts who were consulted forecast an average increase of 5.1% in GDP.

1. Forecasts for 2012

With respect to the inflation forecasts, the local analysts foresee an increase of 3.2% in prices by the end of the year, while the foreign analysts expect 3.5% growth. These values are within the target range for 2012 set by the Board of Directors of Banco de la República (between 2.0% and 4.0%).

Table A1
Forecasts for 2012

	Real GDP Growth (Percentage)	CPI Inflation (Percentage)	Nominal Exchange Rate (End of)	Nominal	Fiscal Deficit (Share Of GDP)	Unemployment Rate In the 13 Main Cities (Percentage)
Local Analysts						
Alianza Valores	5.0	3.5	1,800	5.7	(2.0)	10.3
Anif[a]	5.0	3.3	n.a.	6.3	(2.8)	9.9
Banco de Bogotá	5.2	3.2	1,770	5.5	(0.9)	10.2
Banco Santander[b]	5.0	3.1	1,850	5.6	(2.0)	11.0
Bancolombia[a]	4.9	3.4	1,719	4.6	(2.6)	9.4
BBVA Colombia	5.0	3.4	1,800	5.9	(2.9)	10.3
Corficolombiana[a]	4.8	3.2	1,750	5.6	(2.8)	n.a.
Corredores Asociados	4.9	3.0	1,796	5.8	(1.8)	9.4
Correval	4.6	3.4	1,850	5.8	(1.5)	10.3
Davivienda[a]	4.7	3.1	1,820	5.3	(2.6)	9.5
Fedesarrollo	5.2	3.0	n.d.	n.d.	n.a.	10.3
Ultrabursátiles	5.0	3.2	1,820	5.7	n.a.	9.8
Average	4.9	3.2	1,798	5.6	(2.2)	10.0
Foreign Analysts						
Citi[a]	5.0	3.6	1,850	5.5	(3.0)	10.0
Deutsche Bank	5.5	3.6	1,750	n.a.	(1.8)	9.4
Goldman Sachs	4.7	3.5	1,750	n.a.	(2.2)	n.a.
JP Morgan	5.0	3.2	n.a.	5.3	(1.2)	n.a.
Average	5.1	3.5	1,783	5.4	(2.1)	9.7

n.a. Not Available
a/ The forecast for the deficit is the same as the one of the central government.
b/ Unemployment Rate (Annual Average)
Source: Banco de la República (electronic survey)

Table A2
Forecasts for 2013

	Real GDP Growth	CPI Inflation	Nominal Exchange Rate (End of)
	(Percentage)		
Local Analysts			
Alianza Valores	4.2	4.4	1,950
Anif	5.0	3.5	n.a.
Banco de Bogotá	5.0	3.0	1,745
Banco Santander	4.8	3.0	1,750
Bancolombia	4.8	3.2	1,780
BBVA Colombia	5.2	3.4	1,810
Corficolombiana	5.5	3.5	1,700
Corredores Asociados	5.2	3.4	1,750
Correval	5.5	3.3	1,850
Davivienda	5.0	3.5	n.a.
Fedesarrollo	4.9	3.0	n.a.
Ultrabursátiles	4.5	3.2	1,800
Average	**5.0**	**3.4**	**1,793**
Foreign Analysts			
Citi	4.5	3.4	1,836
Deutsche Bank	5.5	3.3	1,730
Goldman Sachs	5.1	3.0	1,850
JP Morgan	5.0	3.5	n.a.
Average	**5.0**	**3.3**	**1,805**

n.a. Not Available
Source: Banco de la República (electronic survey)

Regarding the exchange rate, the local analysts, on average, expect the representative market exchange rate (TRM, in Spanish) to end the year at $1,797 pesos per US dollar, rather than the $1,822 pesos estimated in the previous edition of this report. The foreign analysts project a TRM close to $1,783 pesos by the end of the year.

For the DTF, the local analysts expect an average value of 5.6%. Additionally, they forecast an unemployment rate of 10%.

2. Forecasts for 2013

For 2013, both the local and foreign analysts expect a growth rate of 5.0% on average. As to inflation, the local and foreign analysts forecast 3.4% and 3.3%, respectively. Regarding the exchange rate, the local and foreign analysts project average values of $1,793 and $1,805 pesos, respectively.

The Publications Section of the Department of Economic and Financial Education was responsible for coordinating, editing and diagramming this Report, in Times New Roman font, 10.5 point.